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Preface

The Cross-Cultural Occupational Health Psychology Forum was successfully held on the campus of Wuhan University in Wuhan during 24 - 25 October 2015. Wuhan City, the home of a well-known university amid pleasant surroundings, was a fascinating place for the event. October is one of the most beautiful seasons in Wuhan when tree leaves in the forests turn orange and yellow in the Luojia Mountain, and the atmosphere is very inviting. This forum was sponsored by the Department of Psychology of Wuhan University, and jointly organized by the Social Psychology Subcommittee of Psychology Society of Hubei Province, Cultural Psychology Subcommittee of the Chinese Association of Social Psychology and related supporting enterprises.

Occupational Health Psychology (OHP) was the main theme of the forum, a new research field in psychology that is gradually emerging and growing strong. Applying the theory and the research methods of psychology and uniting them with the related branches of psychology, OHP researchers aim to create a safe and healthy working environment and promote employees' performance. While trying to solve the problems related to occupational diseases and job insecurity in the work place and concerned with in organizations, OHP research also evaluates the effectiveness on interventions that improve and/or protect worker health (Adkins, Kelley, Bickman, & Weiss, 2011).

More than one hundred domestic and overseas scholars and students had many fruitful discussions and exchanges that contributed to the success of the forum. Well-known professors from abroad and home that presented on the first day highlighted the forum and provided ample discussions and suggestions. Among them were Prof. Tammy Allen from the University of South Tampa in the United States and Prof. José Peiró from the University of Valencia in Spain and Chinese Professors from Beijing University, Wuhan University and other organizations. Prof. Allen and Prof. Peiró both have served as chairman of SIOP and IAAP, respectively.

Remarkably, this was the 10th anniversary of the establishment of the Department of Psychology of Wuhan University and a formal session was held at the opening ceremony to honor the event, as well as those faculty, staff and students who were instrumental in the building and development of the Department. Xu Yan, the president of the Chinese Association of Social Psychology, and Professor Fang Fang from Peking University delivered celebration speeches. Chen Zuliang, Secretary of the party committee of the Department of Philosophy shared development stories of the Department while Associate Dean Hao Changchi pointed out that psychological research is becoming more and more important, and how the development and popularization of psychology was the requirement of the time. The Department of Psychology in Wuhan University needs to further broaden its channels on cooperative research, and exchange opportunities for teachers and postgraduate students under the perspective of internationalization. The goal is to build an international Department of Psychology with its own characteristics.

More than thirty academic papers were presented covering different areas, for example, cross-cultural psychological research on the work-family balance and facilitation, work stress and work stressors, emotional labor and emotional management in the workplace, uncivilized behavior and irrational behavior in the work place, psychological research on safety climate in the workplace, work stress and job burnout, cross-cultural psychological research on job involvement and occupational diseases, pressure intervention in the workplace, and employee assistance programs, as well as other related research.

Associate Professor Lu Changqin from Peking University highly praised the value and impact of this forum for the future study of Psychology. Of the total number of presented papers, 31 papers are included in the proceeding to be published.

In a word, *The Cross-Cultural Occupational Health Psychology Forum* was very successful.

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Keynote Speech I

Work-Family Balance: What We Know from Occupational Health Psychology

Tammy D. Allen

University of South Florida, Tampa, FL, USA

I am pretty honored to be invited to this meeting today. My topic is about work-family balance, and that is what we know from occupational health psychology. My speech will focus on the following four aspects: Firstly, I will give a brief overview of OHP as a discipline, following a brief overview of work-family research and its importance. Next, I will introduce some researches about work-family, such as work-family, health, and health behaviors, work-family and mindfulness, and Work-family episodes. At last, I will give some directions for future research.

What is OHP?

Ok, then what is OHP? It means the application of psychology and occupational health science to enhance the safety, health and well-being of workers in all occupations. It is multi-disciplinary and contains psychology, medicine, public health, business, ergonomics, and also includes stressors and strain, human factors and safety, health, health behaviors, and well-being, incivility, and work-family issues. The development of OHP discipline derives from NIOSH who recognized psychological disorders as a leading occupational health risk during 1987-1988. The first APA/NIOSH “work and well-being” conference was held in 1990, followed by the Journal of Occupational Health Psychology in 1994. Eleven universities in the U.S. were funded to develop OHP curricula for grad students during 1998-2001, and EA-OHP was founded in 1999. Twenty-six stakeholders met at the University of South Florida to discuss the emerging field of OHP in 2001, and the Society for Occupational Health Psychology was founded in 2004. Now, the EA-OHP and SOHP have begun to coordinate, global interest is growing, and this is the first summit in China. We can see that the future of OHP is very bright!

There has been explosive growth in work-family research during 1970-2014. And work-family is being researched across the globe. There are demographic shifts in the workforce as dual-earner couples are growing, along with the generational differences in concern over life balance. The study showed that the top three reasons for people to leave a job are: the increase in responsibility, the increase in compensation, and work-family balance, so the importance of work-family balance can be easily figured out.

Is there still a talent war in China? A recent MRI China Group survey shows that the talent war is as strong as ever as Chinese professionals strive for more responsibility and money. The survey results also reveal a subtle shift toward more work-life balance (in which employees attempt to balance their work and personal lives in the face of China’s typically long hours for managers) is emerging. The shift is taking place as mid- and senior-level talent in multinational corporations and fast-growth Chinese companies begin to reevaluate their options in China’s rapidly expanding economy.

One possible reason that work-life balance is ranking higher could be the rapid increase in compensation for mid- to senior-level talent in China over the past five years, which may put people in a more comfortable position to take a broader, more holistic approach in their career choices. Those born

between 1975 and 1987 make up a significant portion of this highly sought-after talent pool and have reached a stage in life when many are getting married, buying a house, and having a child during a critical phase of their professional career. As the competitive intensity and pace that characterizes business in China has created a highly stressful environment for this generation of professionals, it is understandable that they would want to slow down. Conflicts may occur, however, when professionals want more responsibilities, promotions, and pay for work, but also request better work-life balance. Many professionals may not yet realize that their motivations conflict with each other.

Employees' desire for increasing responsibilities and for work-life balance could create a significant problem for companies that seek to attract and retain top talent. China's development pace and companies' high year-on-year growth combine to produce long work hours for senior management. In addition, the high matrix structures (multiple reporting lines internationally, regionally, and locally) of companies require China-based mid- to senior-level talent to be engaged in late night and early morning calls to corporate offices in the United States and Europe. If a manager is no longer willing to work the long hours required of a job, a conflict could occur.

Like all challenges, striving to achieve a work-life balance may be turned into an opportunity. Companies should be aware of potential derailment in this area and develop initiatives after internal consultation. Since work-life balance is a relatively new concept in China, some business leaders may even want to build a strategy around it as a core company value, as part of the company culture, or as a staff benefit.

Work-Family Research and its Importance

Work-family research started with the research of the work-family conflict. Greenhaus and Beutel referred to the work-family conflict as "A form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect" (1985, p. 77), and it can be divided into family interference with work (FIW) and work interference with family (WIF). The research of work-family balance continued growing, taking an integrative, rather than causal, construct, and it also began reflecting overall appraisal regarding one's effectiveness and satisfaction with work and family life (Greenhaus & Allen, 2010), such as "I am able to balance the demands of my work and the demands of my family, and I am satisfied with the balance I have achieved between my work life and my family life".

So what is the relationship between work-family conflict and health? Research has found that work-family conflict is associated with a variety of health and well-being outcomes including physical health (e.g., Allen, et al., 2000; Mesmur-Magnus & Viswesvaran, 2005). And what is the relationship between work-family conflict and health behavior? Research has found that less WIF will lead to eating more healthy foods (fruits, vegetables), and more FIW will lead to eating more fatty food, and less exercise. So both FIW and WIF will influence health behavior, thus leading to different health outcomes. And what is the relationship between work and the family dinner? As we all know, gathering for family meals is a universal ritual practiced across all cultures, and it can help fulfill our two basic needs: Need for nourishment and the need for connection. Research has found that more frequent family dinners is associated with less teen smoking, drinking, aggressive behaviors, illegal drug use (e.g., CASA, 2010; Musick & Meier, 2012), healthier dietary habits (e.g., Gilman, et al., 2000), and enhanced child language acquisition and literacy development (e.g., Beals, 1997). Meanwhile, more fast food dinners are associated with a poor dietary quality, and an increased risk for obesity (e.g., Gillman, et al., 2000).

In the following, I want to talk about the role of workplace. Work demands likely play a role in the family dinner behavior, such as long work hours, a lack of flexibility (time and place), and unsupportive supervisors; time constraints can also make fast food dinners more attractive. The study showed that the overall time spent on meal preparation has decreased (Smith, et al., 2013), and both work hours and telecommuting have a relatively high correlation with dinner frequency and fast food, while supervisor support and WIF only had a relatively high correlation with dinner frequency.

And what about the children? Studies by Julian Barling showed that a mother's job satisfaction is associated with fewer teacher-rated conduct problems in nursery school children (Barling & Van Bart, 1984, JOOP). Child-related outcomes are seemingly forgotten by organizational scholars, even among W-F researchers.

Research on Work and Family Issues

Research on work and family issues has clearly shown that work impacts employees' lives outside of the workplace. Characteristics of jobs such as workload and role ambiguity have been examined as predictors of negative outcomes outside of the work domain. Occupational health psychology and stress researchers have examined the links between some of these job characteristics and important health outcomes, including high blood pressure and depression, for example, but less attention has been given to the links between job characteristics and actual health behaviors, such as exercise and eating habits. This is an important avenue for research, as these health behaviors are likely a critical link between objective characteristics of jobs, and important health outcomes such as cardiovascular disease and obesity. Further emphasizing their importance, health behaviors, such as engaging in physical activity, can be role-modeled to employee's children and impact their health as well.

The present study has two aims: the first is to examine characteristics of the work environment that relate to employee health behaviors – specifically the link between job characteristics and physical activity. Essentially, I'd like to know if a person's job relates to how much they exercise. The second objective is to investigate whether these behaviors relate to the employees' children's health behaviors and actual health through the role-modeling of physical activity. To answer these questions, I will test a model using a national multi-wave, multi-source dataset. The model extends the existing research by using a unique sample, and by examining outcomes beyond the employee or the organization.

While family researchers have a long history of studying children, child outcomes are not often included in organizational research. The model contains the mother's strain-based job demands, the mother's time-based job demands and their relationship with the mother's physical activity, and whether the mother's physical activity will influence the child's physical activity, and further influence the child's health. All relationships are significant, so mom's job characteristics can have an impact on their children's health. And both dad's and mom's work hours are significantly related to the parent-child interactive activities, and this can further influence the father social support, which is significantly related to adolescent CSE.

Now let's make a small summary thus far. Characteristics of the work environment relate to employee health behavior, and characteristics of the work environment indirectly and directly relate to child health outcomes, so we need to understand the role of the workplace in facilitating healthy families. And what can we do to help? This calls for the intervention research.

Mindfulness research may be helpful. It is linked to cognitive and emotional control, neural functioning, health, stress reduction, and well-being. Migration of concepts to the field of work psychology

derives from Glomb, et al. (2011). “Eastern” secular mindfulness (Hanh, 1976) refers to being attentive to and aware of what is taking place in the present, nonjudgmental observation, and often cultivated through meditation. Mindfulness can be used in work-family intervention, such as *“I like to think of it more as how present you can be in your work and home lives. When I say my husband’s work-life balance is out of whack, it’s because when he is not at work, he is still not fully present because of work demands. He is checking email, fielding calls, thinking about projects, or actively working on projects. I know he disconnects from our family life while in the office - I wish he could disconnect from work when he is home.”*

There are some initial studies, such as the research exploring the relationship among mindfulness, sleep quality vitality, work-family balance (Allen & Kiburz, 2012), and research on the work-family conflict (ability & training) (Kiburz, Allen, & French, under review). In our research of mindfulness-based intervention, the workshop is 1 hour long at the University of South Florida, along with behavioral self-monitoring for 13 days. The switching replications design is as follows. The results show that the mindfulness-based intervention is effective.

In the remaining time, I will share something about work-family conflict episodes. Let’s begin with its background. What we know about work-family conflict is based on self-reporting or the average “levels” approach (SD to SA scale), such as “My work keeps me from my family activities more than I would like.” and “My work causes strain that makes it difficult to fulfill family duties”. We recall and determine if conflict has occurred, its cause and effect confounded, and if it is based on a non-specified time period. In order to move forward, we need to examine discrete episodes of work-family conflict, understand the work-family decision-making from both micro and macro perspectives, and incorporate other sources of data. Work and family have an impact on cardiovascular indicators, WFC episodes also have an impact on decision-making. Research is beginning to gain insight into the inner conversations that individuals have when making work-family decisions. The directionality of each unique time-based WFC situation is only determined after a decision about competing demands is made. Results indicated that work/family role sender pressure, work/family instrumental support, work/family activity importance, work emotional support, and the direction of the previous WFC decision each predicted WFC decisions. Dominance analysis indicated that role sender pressure was the most important predictor. We measured 4 times a day the reported occurrence and time of WFC each day, found that WFC was not associated with PB, but was associated with HR.

There is a lot of motivation behind this research. Firstly, there have now been many years of work-family conflict research. Secondly, what we know about work-family conflict is primarily based on the “levels” approach – SD to SA scale. Thirdly, also primarily based on self-reported data collection – in retrospective, more recently within personal studies looking at a daily level. Fourth, current work is interested in decisions that individuals make when faced with a work-family conflict, and how it becomes WIF/FIW and investigate these episodes. Fifth, complement self-reporting with other measures that capture experience and multi-source pieces of data. Sixth, explore how this is negotiated between couples. And last, collect biometric data to better understand the experience of WFC. Current research involves episodic, mixed-methods, and an intra-couple approach to study the phenomenon of work-family decision-making. It poses difficulty to capture work-family dilemmas, capture conversation dynamics and physiological “in-the-moment” reactions, and examine gender and couple dynamics.

Psychophysiological data is collected continuously *during* interactions. Hardware and software are needed for recording, storing, cleaning, and analyzing data, as well as bio-metrical indicators registering the physiological correlates of stress (heart frequency, galvanic skin response, respiratory rhythm, body

temperature) and ECG data – blood pressure, heart rate with cuffs skin conductance (former galvanic skin response).

Future Research

There are heavy responsibilities for future research. We need to pay more attention on work-family boundary management. Future research can make full use of technology for data collection, as there are new opportunities for simultaneous and real-time assessment of behavioral, physiological, and psychological states. We hope we can better manage the relationship between work and family, and maximize its enrichment. That is all for my sharing today. Thank you for your listening!

About the Author

Dr. Tammy D. Allen is a professor of psychology at the University of South Florida, Tampa, Florida, USA. She served as the 2013-2014 president of the Society of Industrial and Organizational Psychology. She is also the former Associate Editor of the Journal of Applied Psychology and the Journal of Occupational Health Psychology, and has served on the editorial boards of a variety of journals.

Keynote Speech II

Stress at Work: A Multilevel Perspective

José M. Peiró

University of Valencia, Spain (Former President of IAAP)

I am glad to be invited to this conference. Today, my topic is about stress at work, and I will talk about it from a multi-level perspective. My speech will focus on the following six aspects: Firstly, I will talk about the stressed individual at work, then stress in an organizational context and in the organizational stress climate, next, we will discuss the climate strength as a collective property, and individual and collective coping with stress. And at last I will make a summary and give take-home messages for you.

The Stressed Individual at Work

Let's begin with the stressed individual at work from the stress-strain approach (Cooper & Hart, 2003). The stressors and strain approach is based on a relatively simplistic theory that views stress as occurring when work characteristics contribute to poor psychological or physical health (Beehr, 1995). *Stressors* refer to the work-related characteristics, events or situations that give rise to stress, and *strain* refers to an employee's physiological or psychological response to stress (Hurrell, Nelson, & Simmons, 1998). There is a presumed causal relationship between stressors and strain. Cox (1978) has likened this approach to an engineering model in which environmental demands may put people under pressure, and the strain created by this pressure may place people at risk of experiencing physiological and psychological harm. The stressors and strain approach has become the dominant theme in occupational stress literature, however, a growing body of empirical evidence has called this approach into question.

What is the contribution of the transactional (process) model of stress? It must be a more appropriate understanding of work stress experiences and their implications for workers' health and well-being. By paying attention to cognitions (primary and secondary appraisal), emotions and affect, coping behaviors and resources, context factors, we can unfold the stress-strain relations and causality.

Now, we will describe transactional model of stress thoroughly (Lazarus & Folkman, 1984). Appraisal means the cognitive process through which people monitor the conditions in their environment to determine if they are likely to have consequences for well-being (*primary appraisal*), and if so, what can be done about it (*secondary appraisal*). Environmental conditions can be appraised as harmful, beneficial, threatening, or challenging. In his monograph on emotion and adaptation, Lazarus (1991) developed a comprehensive emotion theory that also includes a stress theory (Lazarus, 1993). This theory distinguishes two basic forms of appraisal: primary and secondary appraisal (Lazarus, 1966). These forms rely on different sources of information. Primary appraisal is concerned whether something of relevance to the individual's well-being occurs, whereas secondary appraisal is concerned with coping options. Within primary appraisal, three components are distinguished: Goal relevance describes the extent to which an encounter refers to issues about which the person cares. Goal congruence defines the extent to which an episode proceeds in accordance with personal goals. Type of ego-involvement designates aspects of personal commitment such as self-esteem, moral values, ego-ideal, or ego-identity. Likewise, three secondary appraisal components are distinguished: blame or credit results from an individual's appraisal of who is responsible for a certain event. By coping potential, Lazarus means a person's evaluation of the prospects for generating certain behavioral or cognitive operations that will positively influence a

personally relevant encounter. Future expectations refer to the appraisal of the further course of an encounter with respect to goal congruence or incongruence. Specific patterns of primary and secondary appraisal lead to different kinds of stress. Three types are distinguished: harm, threat, and challenge (Lazarus & Folkman, 1984). Harm refers to the (psychological) damage or loss that has already happened. Threat is the anticipation of harm that may be imminent. Challenge results from demands that a person feels confident about mastering. These different kinds of psychological stress are embedded in specific types of emotional reactions, thus illustrating the close conjunction of the fields of stress and emotions.

However, there are some limitations of the individual approaches. Firstly, it concentrates on identifying job sources of stress and their relations to the individual pressure (e.g. job dissatisfaction), and moderators' and mediators' analyses are useful for the understanding and prevention of occupational stress, such as the study of perceived control at individual level, social support at the social level, and decision-latitude at the organizational level. Besides, there are individual differences and the agentic approach is de-contextualized and pays no attention to culture. As Cooper and Hart (2003) said, "despite the volume of research into the stressors and strain approach, our understanding of occupational stress has not progressed that far over the past decade. Moreover, the implications stemming from this volume of research have not been fully integrated into an appropriate theoretical framework that enables us to build a strong bridge between the occupational stress literature and other areas in the management science and work psychology literatures".

Stress in an Organizational Context

Then what about the stress in organizational contexts? However, they often share common demands, common exposure to demands and sources of pressure in organizations (e.g. relocations, downsizing; work system reorganization; new technology). They also share common resources, constraints, but they have complex outcomes, so the attention is paid to the relationships between employee well-being (individual outputs) and the ongoing viability and success of the work organizations ("healthy organizations").

Organizational context contains both socio-cognitive construction and objective reality. Firstly, it reflects different psychological climates, namely individual differences, and it also reflects different organizational (and/or work unit/team) climates, because employees' *shared* perceptions of the policies, procedures and practices rewarded, supported and those enacted in a given organizational environment are different. So the collective appraisal reflects the construction of the "organizational reality" by members. Focused climates refer to climates for service, safety, justice, ethics, such as the organizational processes produce various climates for the members. and the evidence on the validity of those "climates" for understanding and predicting important specific organizational outcomes such as accidents or customer satisfaction. In addition, it also refers to the organizational climate of stress and implications for the people and the organization's health (Schneider, 2012).

The Organizational Climate of Stress

In the following, I will talk about the organizational climate of stress. This means an emergent socio-cognitive context with collective properties that influences individual and collective emotions, coping, and outcomes. There are new and challenging questions in the research agenda on occupational stress and coping, such as how to understand the cross level and multilevel relations between variables, as well as the design of interventions abilities to change contexts, climates, and the individual and collective behaviors. However, there are some negative facets of the organizational stress climate, such as the demands or pressures climate, the job insecurity climate, namely the shared perceptions of being powerlessness to

maintain the continuity of threatened jobs in an organization, and then there is the (in)justice organizational climate, then the (dis)trust organizational climate and the non-supportive organizational climate, and finally, the burnout climate, like efficacy, depersonalization and cynicism (Maunoy& Kinnunen, 2002). When these collective properties are added, the results can be very different – this is climate strength. We randomly selected 526 teachers from 100 schools, and the results showed that most schools shared stress perceptions.

Why is the climate of stress so important? Because the effects of organizational job insecurity climate intensify over the job insecurity individual experience (Sora, et al., 2009). Former studies on stress focus on negative work experiences, and not very much on positive work experiences. But appraisal of stress may be positive (i.e., potentially beneficial to well-being) or negative (i.e., potentially harmful or threatening). So we suggested that both eustress and distress are relevant for people's overall levels of psychological well-being and for the organizations. We developed a scale, with 603 employee participants (209 males, 484 females; 10 participants did not specify their gender) from Public Social Services in the Valencian Community. In the second study, CFA was conducted, and participants were 431 Spanish Public Social Service employees (73 males, 276 females, 82 participants did not specify their gender), ranging in age from 21 to 65 ($M=38.49$, $SD=8.59$). The results of exploratory factor analysis showed that there were 4 factors – namely, relationships at work, home-work balance, personal accountability, and workload. The results of CFA showed that the fits of the two compared 1-factor and 4-factor models were significantly different both for distress and for eustress.

Agglomerative hierarchical cluster analysis was conducted (T1, $n=535$). Squared Euclidean distance was used to measure the distance between the shared appraisal of distress and eustress in work teams, and Ward's minimum variance method, which in general is very efficient (Burns & Burns, 2008) and tends to derive more equally sized groups, was used to form the clusters (Ward, 1963). The number of clusters was selected based on the rescaled distances evident in the hierarchical cluster analysis, the percentage change in agglomeration coefficients at each step of the cluster analysis, and conceptual considerations (Hair & Black, 2000).

In the second step of the cluster analysis, the cluster means (centroids) from the hierarchical 3-cluster solution were submitted to a nonhierarchical, k-means cluster analysis to refine the initial cluster solution, and to reduce the risk of cluster mis-assignment common with hierarchical cluster methods (Blashfield & Aldenderfer, 1988). Cluster 1 means distressed, shared distress appraisal levels about .46 SDs above the sample mean and shared eustress appraisal about 1.28 SDs below the sample mean. The level of shared distress appraisal was among the highest levels, whereas the shared eustress appraisal was the lowest levels for the sample. The distressed cluster comprised 27% of the sample (21 teams). Cluster 2 means balanced. This cluster reported shared distress appraisal levels about .78 SDs above the sample mean and shared eustress appraisal of about .91 SDs above the sample mean. The levels of shared distress and eustress appraisal were the highest for the sample. The Balanced cluster comprised 29% of the sample (23 teams). Cluster 3 means eustressed. This cluster reported shared distress appraisal levels about .74 SDs below the sample mean and shared eustress appraisal about .20 SDs above the sample mean. The level of shared distress appraisal was among the lowest for the sample, whereas the shared eustress appraisal was moderate. The Distressed cluster comprised 44% of the sample (35 teams).

The clusters were done on the sample from T1. The changes over time in the DV were done using T1 and T2. We did not check for stability of the patterns in T2. Balanced climate ↑ lacked personal accomplishment ($p < .01$), ↓ vigor ($p < .01$), ↓ dedication ($p < .05$), and ↓ absorption ($p < .05$), so balanced

climate (unexpectedly) is where the most vigor and dedication is. Eustressed climate \uparrow satisfaction ($p < .05$), \uparrow cynicism ($p < .05$), \uparrow lack of personal accomplishment ($p = .08$), and \downarrow vigor ($p = .08$), so distressed climate is where the most exhaustion and cynicism is.

There were some affective and emotional components of the stress climate. Emotions and affects are also shared by the members of a work unit or organization, such as a group affective tone (George, 1996), shared emotions (Barsade, et al, 2000), emotional climate (De Rivera, 1992), affect climate (González-Romá, et al., 2000; Gamero, et al, 2008), and shared burnout (emotional exhaustion) (González-Morales, et al., 2011). Gamero, et al., (2008) found that shared appraisal predicts emotional climate. It used a longitudinal sample composed of 156 branches of 3 savings banks and had 724 respondents at Time 1 and 686 at Time 2. Its average size was 5.88 (SD 1/4 1:77) at Time 1 and 5.83 (SD 1/4 1:89) at Time 2. Affective well-being scale (Segura & González-Romá, 2003) and Task and Relationships conflict (Shah&Jehn, 1993) were used to measure the emotional climate.

Stress Climate Strength

I want to share stress climate strength with , and I consider it as a collective level property. It means the degree of consensus among the members of a collective unit (González-Romá, et al., 2002). Its direct effects are over and above individual experiences of stress, such as job insecurity climate strength directly hampers work satisfaction, commitment, and trust in organizations (Sora, et al., 2012), and (In)justice climate strength has negative effects on individual satisfaction with supervision, organizational commitment and citizenship behavior (Walumba, et al., 2008). In addition, the interaction of the three dimensions of injustice climate strength increases shared experiences of burnout (Moliner, et al., 2005). Studies found some moderating effects of stress climate strength. For example, work insecurity climate strength increases the negative effects of work insecurity climate on satisfaction, commitment, work involvement and trust in the organization (Sora, et al., 2012), (in)justice climate strength of interaction and distribution increases the effects of each of these types of justice;s emotional exhaustion (Moliner, et al., 2005), and trust climate strength increases the positive effects of trust climate on performance (De Jongey Dirks, 2012).

Coping with Stress

Then how should we cope with stress? Coping is the cognitive or behavioral efforts that people bring into play to manage specific external and/or internal demands appraised as taxing (e.g. problem-focused coping) or to manage their emotions (e.g., emotion-focused coping) (Lazarus & Folkman, 1984). Coping processes refer to what people actually *do* when they attempt to cope or deal with a stressful experience. Coping resources refers to any characteristic of the person or the environment that can be *used* during the coping process. Firstly, individual coping can be used at work, It assumes that individuals function rather independently and they decide to invoke cognitive, behavioral or avoidance strategies to manage stressors in their lives. But at work, often stressors are systemic and beyond the control of the individual worker. Besides, individualistic and agentic approaches to problem-focused coping can be counterproductive and lead to frustration. But what about communal or collective coping? This refers to the shared appraisal of stress and the shared action orientation used to manage the stressor. In this idea, the stressor is conceived as “ours” instead of “mine” and it is “our” responsibility to take action (Torkelson, et al., 2007). It is not just obtaining social support, but aims at keeping the focus on the cooperative process.

Are these coping methods effective? In this part, we aim to analyze the effects of the individual and collective coping mechanisms on changes in teachers’ stress from the first (T1) to the third term (T2) of an

academic year. We consider the individual level as “Direct action” and “palliative” coping, and collective coping as # Actions undertaken to prevent or manage stress at the school level (reported by the principal). There were 526 teachers from 100 schools that were randomly selected as the participants. Sources of stress contains factors intrinsic to the job: role stress, relationship with other people, career and achievement, organization structure and climate, home/work interface, relations with staff and parents, relations with students, and societal demands on teaching/resources (Cooper, Sloan & Williams, 1988). Coping contains palliative coping, direct action, and collective coping (Cooper, Sloan & Williams, 1988).

Conclusion

At last, I want to give a summary and share some take home messages. Firstly, individual counterproductive palliative coping will increase stress. Secondly, individual direct action coping is not effective to reduce stress along the academic year (except with relations with students). Thirdly, collective coping decreases stress of their members and the climate of stress. So, the individual stress approach can be useful and productive but with limitations. Explicit consideration of organizations as a sociotechnical system should take demands, resources, constraints and so on into account as for the complexity and variety of the context, and also should consider the individual and organization for the complexity of the outcomes. In addition, there are some facets about stress climate that should be mentioned. Firstly, it often emerges in work units and organizations. Secondly, it may have important effects over and above individual experiences of stress. Thirdly, it needs to be considered both as eustress and distress in combination and in identifying the profiles. Lastly, it is an affective and emotional component of the stress climate that is relevant. The implications for future research are the need of a multi-level and cross-level study of stress and coping, the need to consider eustress and distress (in appraisal and emotions) and their profiles, the importance of a collective approach to stress and coping intervention, and the need to better understand the emergence of shared appraisals/emotions and the individual engagement in collective coping. There are also some implications for intervention: The need of a multi-level and cross-level diagnosis and intervention on stress in organizations (work units, and families, etc.), the need to consider eustress and distress (appraisal/ emotion) and their profiles in the intervention, the use of eustress as levers to control and manage distress, the influence the emergence of stress climates and shared emotions (“climate (re)design”, “engineering”), and the effective use of collective coping as a strategy to change the “system” or sub-systems” to prevent psychosocial risks in the organizations. That is all of my sharing today. Thanks for your attention!

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Keynote Speaking III

Occupational Health Psychology and Chinese Culture

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[Abstract] *In the past 100 years, the development speed of social change and economic growth in China has been remarkably fast, thus the problem of mental health in the workplace has become extremely prominent. As one of the branches of psychology, Occupational Health Psychology (OHP) aims to solve these problems. The scholars from western countries have done a lot of research in this field. Under such circumstance, we suggest to accumulate and explore the related thoughts of the Chinese traditional culture while absorbing the existing western achievements, and to perform the contemporary application. For example, the theory and the practice of the Chinese Treasury of Management, such as being people-oriented, virtue foremost, harmony prized, nature governance and the Zhong Yong, may contribute to the construction of Chinese Occupational Health Psychology, and may also bring new inspirations to the whole world.*

[Keywords] *Occupational Health Psychology (OHP); Chinese culture*

History and Reality

Occupational Health Psychology can be traced back to the early stages of the human industrial revolution. Let's begin with a city of United Kingdom – Manchester. The world's first industrial revolution developed from cities like Manchester, Birmingham, Leeds and so on, while some people also believe that Manchester was the world's first industrial city, and until now, it still plays an important role in the United Kingdom. Many manufacturing domains in Manchester have been well developed, and among the most famous, the textile industry started here, too. We mention the city of Manchester hereby to introduce a great figure – one of the founders of Marxism – Friedrich Engels. Engels came to this city in the 1840s, where he lived and worked for a long period, and he also married here. During his stay, he conducted a multitude of research on the industry, and in more detail, on the workers. In fact, he had studied so thoroughly the factory and the workshop, and made friends with the workers, and finally completed a promising book, *The Condition of the Working Class in England* (Engels, 1956). In this book, Engels described the tough situation of the British working class, including their problems of mental health. This resourceful information derived from his long-term study. In addition, Engels discussed a plethora of things about the British working class in this book, such as “the proletariat is not just a suffering class”; “the low economic status, not help to stop to push it forward, but to force it to win the final liberation itself”; “on one hand it's the inhuman cold and the iron-hearted egoism, on the other hand it is the unspeakable poverty”. He also castigated the bourgeoisie and the capitalists mercilessly, and revealed the exploitation and the ruthless repression of the working class under the capitalist system (Engels, 1956). At the time, similar descriptions also appeared in other English literature. For example, in the novels of famous writer Charles Dickens, we can also find many vivid descriptions of the city, the workers and the poor.

Obviously, Engels's research showed that at this time in the UK, the entire society and the entire city had exposed a kind of cold face to the workers and to the public. Even today, many people in developing countries suffer similar pains. During the time of Engels, the emergence of Jennie Spinner greatly improved the working efficiency, but this did not diminish the pressure on the workers, and meanwhile, it has even

caused some new problems. Although the industrialization in United States was slower than in United Kingdom, the parallel history of the industrialization provoked new similar problems. For example, there is a system called the “Taylor system” in management science, which showed up more than 100 years ago in the United States, and it is currently quite prevalent in China. The “Taylor system” can greatly improve production efficiency, but it also leads to the physical and mental stress of the workers. In this case, the American who used to uphold this system quickly began to realize its imperfection. Such introspection can be seen in the Charlie Chaplin movie, *Modern Times*. In this movie, Chaplin showed a wide range of comic and humorous scenes, but there were always skeletons in the closets – the film itself also reveals some bloody facts. In *Modern Times*, Chaplin plays a worker, who worked on the assembly line and was dominated by the “Taylor system”. Every day he does only one thing – tighten a screw, and he replicates this act everywhere. As time passes, it becomes a perpetual habit –he tightens the screw wherever he goes. Ironically, in a broader sense, he has become a machine, not even a simple machine, rather, a manipulator – a part of the bigger machine (Zhong, N., 2015). In this way, after the capitalist industrial revolution in the UK or the US, a plethora of new problems emerged, including health problems, which pertained to physical health and mental health, and definitely, the problems of the environment.

The history of the United Kingdom, including the ancient photographs of the country, have become a living record to the problems mentioned above. For example, in Manchester, workers often went on strike and paraded in order to fight for better rights, to improve their working conditions and to ameliorate their living standards. Afterwards, the police probably suppressed such movements, which resulted in bloodshed and many people getting injured – this was the case of the times. In the last hundred years, more precisely, after the Opium War of 1840, China began facing a great social change. The Chinese people has such kind of understanding for more than 100 years. Someone made a statement by figuring that China was facing “*unprecedented changes in 5000 years*”. This also corresponds to the situations’ status quo. That is to say, today, China is still in the process of these unprecedented changes, which will lead to many problems, including psychological problems, of which the most serious may even cause people to commit suicide. For example, Foxconn’s suicide jump was, to some extent, a psychological event, because the psychologists were involved at the end. Psychologists from Tsinghua University dealt with it, and it also caught the media and the public's attention. Some of these questions have been described in the handbook on Occupational Health Psychology. In addition, various issues are still happening in China’s current professional health domain. In other words, China is now facing many problems, which may have already been occurred in Europe and America a hundred year ago. Indeed, in recent decades, China has achieved an amazing economic growth, and this outstanding performance of national development receives global attention. So, it is now the perfect time to discuss Occupational Health Psychology.

People-Centered

What is the cause of the emergence of such a series of problems? From different perspectives, we could categorize micro, me so and macro reasons. From a macro point of view, today’s China is still under a sensitive time spot, as people often call it the “inflection point”. For example, when Chinese people’s GDP per capita reached 3000 USD, the inflection point for mental problems, health issues and well-being concerns increased. It is said that China has now entered into the modern era, so we have to admit that in a certain sense, China has achieved modernization or say that it has already become a modern country. So in contemporary China, there are many modern ideas, for example, a recent discussion – the “Internet +” is surely a quite novel concept, but it is also a very interesting phenomena. In Chinese psychology today, we also discuss how to respond to “Internet +” issues, and someone has proposed that maybe we could have a similar concept like “Psychology +”. Actually, human beings can add many things, but what we want to point out is, this “+” concept has been postulated a very long time ago, far before the Internet era. Let's go

back to Engels again; he had sharp thoughts – that is, when he spoke about the condition of the British workers, he also focused on a variety of other things. For instance, when Engels discussed the origin of human being, he believed that the origin of human being was “labor”, and labor turned us into a modern man from an ape, from the ancients to the “man” today. This was his basic idea, so he wrote another masterpiece, *The Part Played by Labor in the Transition from Ape to Man* (Engels, 1953). Engels not only studied the working class, but he also analyzed the role of labor in the transition from ape to man. In this book, and with some other research pertaining to human origins, we found key factors. It can be described that the process of human origin, to some extent, is the process of “Human +” – human beings use their own body and add other things like tools to make ourselves stronger (Zhong, N, 1991).

Admittedly, the academia accepts that human history is about 3 million years old or so; from the Paleolithic period of 3 million years ago to Neolithic period of 10 thousand years ago, mankind has experienced an extremely long evolution. We could find all kinds of descriptions of this process, for example, Mao Zedong wrote a poem, and at the beginning it mentioned, “From ape to man, only a few stones’ grinding”. What does this mean? It describes the major distinction between man and ape, that man is able to use stones, and make stones as our tools. In a broader sense, this is exactly the form of “human +”. In addition to stones, the human body can also add wood, bronze and iron, etc., and today you can even add many other things, including a variety of human manufactured machines. This is the process that people often talk about in “Man + Machine”, which may be an important way of evolution in millions of years. Especially in the past ten thousand years, we can see that humans have not changed much in their body, but human achievements have shaken heaven and earth. Moreover, human beings have gained a great success, and with the passage of time, we may forget that our success is based on the success of the “Man + Machine” system, meanwhile it is also the success of the machine-packed. All man-made objects, including machines, can be called a culture, and human beings are wrapped into culture to deal with nature, rather than to face it directly. As time goes by, human beings may be confused that whether they are facing nature or achievements of the cultures, and they may also neglect whether the culture really meets the nature.

The famous French thinker Julien Offray de La Mettrie wrote a book, *Man is Machine* (de La Mettrie, 1996). In this book, he expressed the idea that man is a machine, and in fact, he materialized man as a machine. This thought of mechanical materialism has historical significance, but if we only make such metaphor, we may forget the fact that a human being is a blood and flesh biological organism, and instead, we may believe that person is a kind of iron and steel parts of the machine. So, people will probably ignore that in front of nature, the human body is easily depleted and damaged because it is in fact very fragile.

In the above discussion, we have mentioned the “Taylor system” of management science, and the emphasis that the foundation of its philosophy was the western way of thinking such as “man is machine”. The problems encountered after its (Taylor system) emergence were also related to these ideas. Certainly, man is still “The wisest of all creatures” as we are able to create culture to deal with everything, thus culture seems quite powerful – it allows us to remove mountains and drain seas, even to transform heaven and earth; all of these movements exist truly, and this is a basic understanding to the strength of mankind itself. However, nowadays we should know the power of human being correctly, to recognize that human power is limited, and at the same time to be humble and to have a sense of awe of nature. We must understand that humans are still natural products, to a considerable extent, we have to listen to and to submit to the environment, rather than fight with it blindly. Because the way people deal with nature is still to wrap themselves up by using their own cultural achievements and artificial machines, and then to place themselves in nature.

Possible Ways

Although Occupational Health Psychology has only a short history of about ten years, scholars have done an enormous amount of research after its emergence. It has been well developed, especially in the western countries, thus the experts have already obtained many valuable achievements. In this field, a lot of research has been done according to the psychological perspective. For example, *Occupational Health Psychology* was published in China and introduced the work of psychologists in the areas of Work Stress Source, Shiftwork, Work-Family Balance, Requirements-Control Model, Emotional Labor, Job Security, Job Burnout Syndrome, Workplace Stress Intervention, Employee Assistance Program (EAP), Employment Ability and other aspects of health in the workplace (Song, & Wang, 2010). Meanwhile, a great work of this domain, *Handbook of Occupational Health Psychology* includes the following topics: Safety Climate, Conceptual and Measurement, Work-Family Balance, Shiftwork and Working Hours, Job Stress and Lack of Support, Control Over One's Own Situation: A necessary Condition for Coping with Stressors, Technology and Workplace Health, Job-Related Burnout, The Workplace and Cardiovascular Disease: Relevance and Potential Role for Occupational Health Psychology, Employee Assistance Programs (EAP), Worksite Health Interventions: Targets for Change and Strategies for Attaining Them, Job Stress Interventions and Organization of Work, Stress Management at Work (Quick, 2010). However, we should not ignore accumulating and exploring the related thoughts of the Chinese culture while absorbing the existing western achievements, as well as perform contemporary application in this field. For example, the theory and practice of the Chinese Treasury of Management, such as being people-oriented, virtue foremost, harmony prized, nature governance and the *Zhong Yong*, may contribute to the construction of the Chinese Occupational Health Psychology, and it may also bring new inspirations to the whole world.

Indeed, Chinese traditional culture includes many inspirations; we may have a very different way of thinking compared with the West. The research of Western Occupational Health Psychology is more or less prone to the individual, while the Chinese culture suggests that we may be able to jump out of this limitation and extend the concept to the perspective of the *group*. Chinese traditional culture talks about health cultivation, it also pays close attention to nourishing the mind, and perhaps it can also propose a greater concept, called "caring for the world". That is to say, we should not only focus on the individual, but also on the community, and even the society since an individual's different psychological performance is closely related to the group, as well as to the society. Today, a lot of problems are occurring at the individual level, but they also happen to the group level, and even the social level. This idea is not new, for example, the World Health Organization advocates a modern concept of "total health", which has already gone beyond the physiological point of view, and penetrates deeply into the social psychological dimensions. Inside psychology itself, some new branches have risen, such as Positive Psychology. Currently, this new subject still focuses on the individuals, but in fact, it could have a greater range of positive concerns. The famous American social psychologist D. Myers points out that Seligman's initial concept about positive psychology has three basic pillars: positive subjective well-being, positive personality, and positive groups, communities and cultures), and now we need to strengthen the third one, that is the construction of positive groups, communities and cultures (Snyder, & Lopez, 2013). We have done a lot of research on individuals, but performed less work on the positive organization, system, or society, and this is precisely our weak point. Therefore, from this insight, we would like to present some new ideas for the future research of Occupational Health Psychology.

The first idea is that we can take along period orientation to study the issue of Occupational Health Psychology. The famous cross-cultural managerial psychologist Hofstede and other scholars have postulated the cultural differences on management through a large amount of research, among which

involved a dimension of time orientation. From the perspective of time, Chinese people and Westerners have different time orientations (Smith, et al. 2009). For example, the Chinese may have a longer time-concern than Westerners; this helps the former to go beyond the short period and to reach the long period in order to explore more ideas than the latter. For instance, Chinese people don't just deal with the current problems, they often have some advanced ideas, which means to have an anchor windward before the problems show up. On the other hand, it describes the phenomena of treating "the non-disease", that is to say, not only to treat the actual disease, but also to prevent future diseases. This concept represents the idea of long time orientation of the Chinese people. We could use it in Occupational Health Psychology to not only care about the current problem, but also to think about people's mental health in the long-run.

The second idea is based on the integral characteristics of the Chinese culture, thus we can use the idea of *integration* and *connection* in the field of Occupational Health Psychology. This way of thinking may surpass the dichotomy doctrine. A lot of the research of Occupational Health Psychology is actually based on dichotomous assumptions, such as the work-family conflict, and indeed, this is an important pertinent issue that people have encountered since ancient times, and is also considered a dyadic contradiction. Other similar segmentation would include dividing things into internal-external, and public-private, such as public and private areas, or in and out of family, which means family-society. But in the integral and connected ideas, perhaps we can transcend such contradiction and make work and family go beyond the absolute opposition. We may think of family and work as an entirety, as we say in Chinese managerial psychology – when the family is well managed, people can perform much better in work; and when work is well done, people can also bring more happiness to the family.

The third idea is to promote concept of ecology, interdependence and interaction, which is an idea that the Chinese culture has always held. It means to put people into society and a broader environment. For example, there are many kinds of interactions, including man-machine interaction as we mentioned before ("Man + Machine"); physical and mental interactions; the interaction between the physiology and psychology; public and private interactions, or more precisely, social and family interactions; Chinese people also talk about the interaction between man and nature, which deals with the relationship between each individual and their surrounding environment. The concept of ecology, the concept of interdependence and the concept of interaction may also help us to develop an Occupational Health Psychology with some Chinese characteristics.

Finally, let's return to Engels whom we mentioned at the beginning. Engels and Marx established Marxism together. In fact, they not only proposed to change human beings, but also to transform the world. Such thinking also conforms to Chinese culture. In China, the Confucian thought of "Ethical philosophy" ("*Xiu Qi Zhi Ping*" – *cultivate persons, regulate families, order well the States, peace the world*) refers to that people not only need to adjust themselves, but also to adjust the groups, the countries and even the whole world. Chinese traditional psychological thought talked about "the self", or "the individual", but it also reminds us not to ignore the group, or the world; we should also change the world. Individuals and groups, mankind and society are all related to each other. So, when an organization, society and the world have been well-ordered, perhaps many of the problems with regard to individuals will also be well resolved.

Conclusion

In summary, the Chinese way of thinking is quite brilliant because the Chinese culture never excludes good things, but we don't mean to establish a Chinese characteristic Occupational Health Psychology by rejecting the Westerner's previous achievements. We don't have to improperly belittle ourselves or be overbearing, as every culture has its own limitations and advantages, complementing each other is the best way to develop psychology, and it is also a better choice for us. We don't intend to replace western psychology with Chinese psychology, we just believe that when the psychology of every ethnical traditional culture is

well developed, including the Chinese culture, the science of psychology can be finally considered as “psychology for people” (Zhong, N., 2008). In this case, the achievements of Western Occupation Health Psychology can be used for our reference, and the theory and practice in the Chinese Treasury of Management, such as people-oriented, virtue foremost, harmony prized, nature governance and the Zhong Yong may contribute to the construction of the Chinese Occupational Health Psychology, and it may also bring inspirations to the world. The ideas and patterns are likely to encompass anything and everything, combine with both Chinese and Western characteristics, individual-group interdependence and heaven-nature unity; these might be the four principles when the Chinese people construct and develop Occupation Health Psychology.

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Keynote Speaking IV

From Valuing Money to Valuing Health: Why China Needs OHP and Why It is the Time to Develop It

Tian Xie, and Shuang Shi

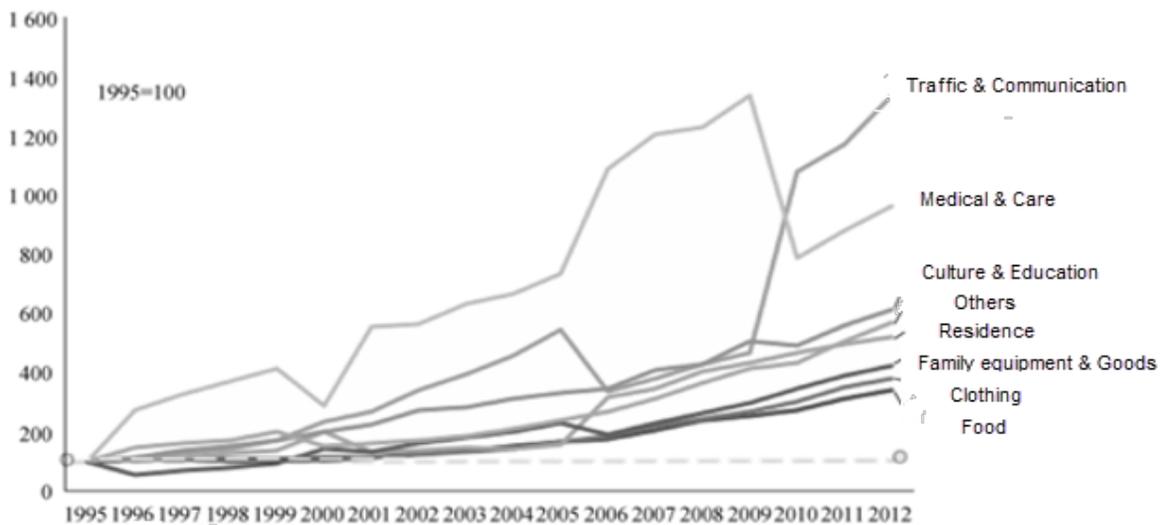
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[Abstract] Over the past twenty years, China's GDP has maintained a rapid growth. This rapid economic growth has improved the living standards of Chinese people, but has also brought a lot of social problems. A critical issue is that our values are undergoing dramatic changes, such as the rising and rampancy of materialistic values. People who value materialism, or Materialists, consider money and possessions as the center of their lives and use them as the standard to evaluate success and happiness. Numerous studies have shown that materialism has adverse effects on physical and mental health. However, many signs show that this value is already starting to change. On a national level, the Chinese government is now gradually transforming from pursuing purely economic development to being concerned with a greater variety of social consequences. On an organizational level, Chinese enterprises are also paying increasing attention to the physical and mental health of employees. On the individual level, Chinese people are ready to move from primarily valuing money to valuing health and the quality of life. In this period, China needs professional Occupational Health Psychology, and it is just the right time for OHP to be developed in China.

[Keywords] economic growth; materialism; health, occupational health psychology

We all know that China's GDP has maintained a rapid growth during the past twenty years. Since 1978, China has implemented the policy of reform and opening up. In 1983, China's GDP growth rate exceeded 10% for the first time. From 1983 to 2011, the average annual growth of China's GDP maintained at nearly 10%, and some areas even exceeded 20%. In 2014, China's GDP exceeded \$10 trillion for the first time, ranking 2nd in the world, twice more than Japan's GDP, which ranked third position, as well as five times that of India. In 2015, China's GDP accounted for almost 1/5 of the world's GDP (adapted from Peng, 2014)

High speed economic growth brought tangible benefits to the Chinese people, and the living conditions in all aspects of the daily lives of the Chinese people have been improved as never before. According to a study, all types of consumption of Chinese urban residents has shown a clear upward trend, and the total amount of consumption kept growing during the nearly 30 years from 1995 to 2012. In order to compare the growth rate of various types of consumption, the study drew the changes of the eight major categories of consumer spending based on 1995, as shown in Graph 1(Peng, 2014).



Graph 1 The growth rate of eight major categories of consumer spending during 1995-2012 (based on 1995)

However, although the rapid growth of the economy has improved the living standards of Chinese people, it has also brought a lot of social problems, such as environmental pollution, the gap between the rich and the poor, lack of faith, corruption, and so on. As for the psychological aspect, an important issue is the change of Chinese people's values (Xie, Bagozzi, & Yang, 2013). Recent surveys conducted by the Ipsos (2013) across the world suggest that China is the most materialistic country among the 20 surveyed countries. Seventy-one percent (71%) of Chinese agreed that they measured their success by the things they owned, while the global average is only about 34%. And 68% of them agreed that they felt under a lot of pressure to be successful and make money, compared with the 46% global average. It is no doubt that China's society values money very much today.

This "valuing money" is a colloquial expression of materialism, or materialistic value, which refers to the importance one attaches to worldly possessions (Belk, 1984). Materialists place possessions and their acquisitions at the center of their lives (acquisition centrality), viewing these as essential to their satisfaction and well-being in life (acquisition as the pursuit of happiness), and they also tend to judge their own and others' success by the number and quality of possessions accumulated (possession-defined success) (Richins & Dawson, 1992). Research showed that materialism can cause a series of negative consequences, such as reduced personal well-being, insecurity, fragile self-worth, and poor relationships among others (Kasser, 2002). In the work-related field, a recent study indicated that materialistic values were negatively related with a wide range of indicators of work-related personal well-being, including intrinsic and extrinsic reward satisfaction, job satisfaction, and career satisfaction (Deckop, Jurkiewicz, & Giacalone, 2010).

Having been aware of the seriousness of these problems, the Chinese government is also actively changing its responsibilities, gradually from simply focusing on economic development to paying equal attention to all kinds of social consequences. Such as environmental pollution (Lu, 2012), corruption (Li, 2012), the well-being of people (Li, 2013), and so on. Chinese enterprises are paying more and more attention to the physical and mental health of employees. In 2010, the "chain jumping event" in Foxconn made people realize that it was imminent to care for the psychological pressure of Chinese employees, especially the manufacturing workers. In 2015, Ping An Insurance (Group) Company of China(2015) released the "The Health Condition and Medical Benefits Report of Enterprise Employees in China (2015),

which lasted for half a year and involved 15 cities of China. The report shows that the vitality age of Chinese enterprise employees were 5.7 years older than their real age on average, and 60% of the respondents had chronic diseases; Chronic respiratory disease was the most common chronic disease among the respondents; Diabetes, peptic ulcers, rheumatoid arthritis and anemia also accounted for large proportions. Enterprise administrators gradually realized the effects of the physical and mental health of the employees on the development of enterprises. Chinese people also began to pay more attention to their physical and mental health problems. The people's demand for health has gradually shifted from passive treatment to active prevention, and then to the realization of certain purpose, the fitness consumption demand of Chinese people is increasing (Chen & Niu, 2014).

OHP came into being. OHP is an interdisciplinary area of psychology that aims to create a safe and healthy working environment and to promote the performance of employees (Houdmont, & Leka, 2010). It helps to solve the problem of occupational disease and job insecurity that has disturbed the government and the business community for a long time, and makes a positive contribution to the healthy growth of both workers and organizations.

Although it is less than two decades old, the theoretical research on OHP has had an important impact on the practice in USA and Europe, it helps employees to solve the problem of work pressure, job burnout, work-family conflict, and so on (Li, & Wu, 2008). OHP developed faster in Europe and USA. For example, there are two specialized journals that have been published, namely "Work & Stress" and "Journal of Occupational Health Psychology". As for the academic organization, in Europe, EAOHP was created in 1999, and in the United States, SOHP was founded in 2004 (Li, Y. X., & Li, Y. M., 2015). OHP has just started in China, there are no systematic empirical studies, any specialized journal, or any professional academic organization. But considering the reality of China's national conditions, the appeal of organizations and enterprises, as well as the needs of the Chinese people, we truly need the help of OHP. Therefore, we believe that China needs professional health psychology, and OHP comes at just the right time in China.

Acknowledgement

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Keynote Speech V

Occupational Health Psychology under the Complexity Paradigm

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[Abstract] In contemporary society, occupational mental health is becoming a more and more complex psychological and social-cultural phenomenon. Many major social problems require psychology to apply new methods for more comprehensive and thorough thinking. This study tries to make an exploration from the perspective of the complexity paradigm. Through literature research, this study combined the development, concepts and principles of the complexity paradigm, then it put forward some concrete opinions on how to think about occupational health psychology under the complexity paradigm. The current study provides a new perspective for the research on occupational health psychology.

[Keywords] complexity; simplicity; occupational health psychology; paradigm

Complexity Becomes a Basic Issue

In the 1980s, the main issues discussed by Popper, Kuhn, Lakatos, Feyerabend and other representatives of British and American philosophers of science were reasonable, scientific and so on, but not the complexity. But French philosopher Bachelard believed that complexity was a basic issue. He believed that there is no simple thing in nature, only things that are simplified. Scientific construction extracts its object from the complex environment in which it is located, and puts it into the environment of a non-complex experiment. Science is not the study of a simple universe; it is the simple operation to meet the needs of obtaining some nature or certain laws. As George Lukacs proposed, complex things should be seen as the original elements. So first of all, we should study complex things as complex things, then transform them from complex things to their most basic elements and processes (Morin, 1990). In contemporary society, occupational mental health is becoming a complex psychological and social-cultural phenomenon. Many major social problems require psychology to apply new methods for a more comprehensive and thorough thinking, such as the maintenance and recovery of occupational mental health, the finding and resolving of occupational psychological problems, and the prevention and treatment of occupational psychological diseases.

Paradigm and its Classification

Paradigm was proposed by Thomas Kuhn in 1962. Paradigm is the recognized “model” that a specific scientific community must follow when they are engaged in certain kind of scientific activities, and it includes all things that are concerned with scientific research, such as the common world view, basic theories, samples, methods, means, standards and so on.

Edgar Morin created a new understanding of paradigm from the perspective of complexity. He believed that a paradigm is formed by the leading concepts, key concepts, key principles and the certain types of extremely powerful logical relations among them. This relationship and these principles will dominate all the statements, and the latter will comply with their control unconsciously (Morin, 1990). He

also believed that paradigm dominates both logic and semantics. Different paradigms will attach different importance to certain kinds of logical relations. So a paradigm dominates the logic of theoretical thinking and practical activities. Paradigms are hidden principles that dominate our views on various things and the world, while we don't realize them (Morin, 1990).

Edgar Morin divided the basic paradigms into simplicity and complexity. Simplicity is the basic way of thinking in classical scientific research. Complexity is the basic mindset to understand the complexity in modern complex science and to solve the complex problems.

Simplicity insists on the following principles:

1. Universality, namely to rule out the locality or particularity as accidental factors.
2. To eliminate the irreversibility of time, more broadly, it is to eliminate all eventuality and historicity.
3. To reduce the understanding of the whole or the system to the understanding of the simple parts or elements that constitute them.
4. To reduce the understanding of organizations to the understanding of the orderliness inherent in these organizations (regularity, invariance, stability and so on). Orderliness is the highest principle of absolute interpretation, this reflects the domination of the universal and perfect determinism. Randomness is only a surface phenomenon resulted from our ignorance. Therefore, we can recognize the complex phenomenon or objects through the universal and inevitable laws of the basic units that dominate them.
5. The principle of linear causality that should be above and beyond the object.
6. To isolate or separate an object from its environment.
7. To separate the object absolutely from the subjects that have perceived or recognized it. Verification from different observer or experimenter not only shows the objectivity, but enough to eliminate the subject of cognition. So any problem of subject in scientific understanding is eliminated.
8. To eliminate the concrete existence and activities by quantization and formalization.
9. Autonomy is incomprehensible.
10. Formal logic serves as the absolutely reliable principle to test the inherent criterion of truth in the theory. Any contradiction is definite to indicate that there is a mistake. Thinking is to connect those clear and distinct concepts by monologique reasoning. Orthodox psychology usually use simplicity to understand science, to regulate and guide scientific research (Morin, 1982).

Complexity insists on the following principles:

1. Universality is effective but still not enough. The locality or particularity should also be taken into account.
2. As Prigogine argued, as for any problem exist in Biology (ontogenetic development, phylogenetic development, evolution) and organizations, people can only describe and understand a complex system according to their history and process, and get history and events involved in any explanation or interpretation.
3. To recognize the impossibility of isolating the simple basic units in the physical world, and the need to connect the understanding of elements or parts with the overall or systematic understanding of them. As Pascal argued that he did not think it was possible to understand the parts if did not understand the whole, and it was also impossible to understand the whole if the various parts were not particularly understood.

4. The problem in organizations is unavoidable. For some physical existence (celestial bodies), biological existence and human beings, the problem in auto-organization is inevitable.
5. The principle of complex causality.
6. To apply dialogues to think about various phenomenon, not only involve the perspective of organizations, but also involve random events to understand the reality.
7. To distinguish but not to separate an object from its environment. Understanding of any physical organization needs to recognize its interaction with the environment. Understanding of any biological tissue needs to recognize its interaction with the ecosystem.
8. To connect the observer or the knowing person with the observed or the known object. And it is necessary to introduce the human subjects that exist in the culture, society and history at certain time and space into any research area of anthropology or sociology.
9. To confirm the possibility and necessity of the scientific theory about subjects. From the perspective of self-producing and auto-organizing theory, to confirm the necessity of self-concept and the possibility of introducing the existence and activity of existence to the field of physics, biology and anthropology.
10. It points out the limitation of formal logic, and considers the contradictions or logical difficulties encounters in the observation or the experiment as a possible sign of a previously unknown or more profound field. And we should think deeply with dialogique and macro-concepts, and link up the possible opposite concept in a complementary way (Morin, 1982).

Simplicity tries to drive away disorder. Under the guidance of simplicity, research methods can only figure out one or more, but they fail to realize that one can also be more at the same time, and they never think about *unitas multiplex*; they either implement the abstract unification and eliminate diversity, or parallel diversity and ignore its unity on the contrary. This method isolates things that are separated, and obscures any things that are connected, mutual interfered and interacted. Under the influence of simplicity, orthodox psychology denies any occasionality, eventuality, randomness or individuality, everything is of determinism, without any subject, consciousness, or autonomy. Complexity is a mixture of different events, behavior, interaction, feedback and randomness, it constitutes our phenomenal world. Complexity allows those that once were regarded as non-scientific things become the common issues for scientific understanding, such as uncertainty, disorder, contradiction, diversity, complexity and so on.

Complexity believes “totality is not truth” which was proposed by Adorno. It is clear that completeness or theoretical omniscience is impossible. The world of life contains and tolerates far more disorder than the world of physics (Morin, 1990). If reduction still is the basic characteristic of scientific spirit, it is no longer the only and especially the final characteristic (Morin, 1990). Edgar Morin replaced the paradigm of separation or reduction or unilateralization with the paradigm of division and union. The latter makes it possible to distinguish but not to separate, and to combine but not to identify or to reduce. This paradigm will contain the principle of dialogique and super logic. It integrates classical logic while also takes the virtual limit (contradiction) and theoretical limit (the limit of formalism) into account at the same time. It carries the principle of Unit as *multiplex*, enables it to get rid of the high level and low level of abstract unity, namely holism and reductionism (Morin, 1990).

Thinking about OHP with Complexity

Human beings are physical, biological, social, cultural, psychological and spiritual beings. OHP is not only influenced by psychological and mental factors, but is also influenced by physical, biological, social and cultural factors. Therefore, the research on OHP should not bypass the complexity or put it up, it should get

into a mysterious black-box, and complexity provides a possibility to enter the black-box, because it helps us to think about the complexity of the organization and logic. The research should pay attention to the following three points.

Studying the Occupational Mental Health Under the Social-Cultural Background.

After all, occupation is the product of the development of culture, history and civilization. The connection between occupational psychology and organization, society and culture is particularly close. Just as Geertz proposed, human nature cannot be separated from culture and exist independently.

People must get involved in the culture, and only through culture can they become aware of their spiritual power. If we think that the world is composed of neutral information flow, and each individual deals with it according to their own ways, then we cannot see the social processes of the formation and the interaction of individuals. OHP certainly relies on the brain of employees and their genes, but also relies on the language, education, society and culture; OHP cannot be away from the social and cultural background. We must face up to the complexity of human society and culture, rather than eliminate it or cover it, and achieve the full creativity of individuals to solve problems like this or that, and respond to the challenges of the outside world in a more effective way. We should try to achieve the opposition and unity of individual and team, individual and organization, autonomy and organizational, order and disorder through competition and cooperation. Organizations that only have freedom will lack order, unless there is a profound spirit of solidarity among its members as a supplement, otherwise the organization will collapse. Sincere spirit of solidarity is the only thing that may keep complexity growing (Morin, 1990).

Studying the Occupational Mental Health as an Open System

Whether from the perspective of individual, organization or social culture, occupational mental health is an open system. Two main conclusions can be concluded from this open system: Firstly, the laws that biological organizations obey are not about the equilibrium state, but about the non-equilibrium state that is constantly being compensated for, and the steady state of motion. The second one may be more important, namely, the understanding of the system should not only be explored in the system itself, but also in its relationship with the environment. This relationship is not just a simple external dependence, but the composition of the system itself (Morin, 1990).

A closed system has little or no exchange with the outside, it almost doesn't have any individual character. An open system has exchange with the environment, both in substance or energy and organization or information; it is connected with the environment through a variety of dependent relationship, And thus the open system has its individuality – the more it is, the more it can't be isolated. Therefore, the environment plays a role of joint organization in its interior. It can't achieve self-fulfillment, self-closing, or self-satisfaction.

Solving Occupational Health Psychological Problems by Complexity

According to the orthodox opinion, it is a sign of error when there is a contradiction in the reasoning, so then we must go back and make another reasoning. But according to the viewpoint of complexity, when people meet some contradictions on the way from experience to reason, it does not mean that there is an error, but indicates that we have arrived at a profound level of reality, just because it is deep, so it cannot be expressed in our ordinary logic (Morin, 1990). Therefore, we need the rationality of self-criticism, and keeps communicating with the world of experience, because it is the only way to correct logical paranoia (Morin, 1990). Edgar Morin argued that a distinction must be made between rationalité and rationalization. What is rationalité? Real rationalité admits that there is non-rationalité and tries to communicate with those irrational things. What is rationalization? Its essence is trying to close the reality in a coordinated system.

It makes sure all things that refute this coordinated system in reality are excluded, forgotten and thrown aside, and are regarded as an illusion or a superficial phenomenon (Morin, 1990). In addition, according to the viewpoint of complexity, rationality is not determined, it is developmental. Just as Piaget argued that rationality is evolving, and it will keep evolving.

In the viewpoint of Cartesianism, the clarity of a concept and its difference with other concepts are the inherent characteristics of its truth. In the viewpoint of complexity, the concept of the most important thing is never determined from their boundaries but from their core, we should never attempt to determine the important things through seeking the boundary line. The boundary line is always vague, and is always in a state of mutual interference. So we should try to seek the core, and this often requires the help of macro-concepts (Morin, 1990). Take the concept of love and friendship as an example, people can clearly understand what is love and what is friendship from their cores, but there is also friendly love and loving friendship. Therefore, there are some intermediate states, some mixture between love and friendship, and don't exist a clear boundary line.

Edgar Morin proposed that there are three principles that may help us to think in complexity. Firstly, the principle of dialogue. Secondly, the principle of circulation in organizations. Thirdly, the principle of holography. The process of a cycle is such a process, in which the product and the result are both the causes and the producers of them. Such as holography in physics, even the smallest point that constitutes the image contains almost all information of the whole image. Not only does the part exist in the whole, but also the whole exists in the part. So the concept of holography has surpassed the reductionism that only sees parts, and has also surpassed the holism that only see the whole (Morin, 1990).

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Having More, Asking More, Giving More: Effects of Social Class on Prosocial Behavior in China

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[Abstract] Studies on the relationship between social class (subjective perception or a combination of income, education and occupational prestige) and prosocial behavior yield mixed evidence. Moreover, little is known about the situation in China. In the present research, we examined social class with large and representative samples. Data from China Family Panel Studies ($N = 33,600$) revealed that higher class individuals donated more money, volunteered more time, were more likely to ask for help, be asked for help, and offer help upon request across measured events. These findings challenge the expectations from mainstream psychological literature and the implications are discussed.

[Keywords] social class; socioeconomic status; prosocial behavior; helping

Introduction

How are the rich different from the poor in helping others? Exploring such a relationship is particularly crucial in China, considering its unique historical and sociocultural issues surrounding social class.

Social Class and Prosocial Behavior

Social class is a complex and multifaceted construct. It consists of objective features of material wealth and resources, as well as subjective perceptions of rank within a society (Piff, Kraus, Côté, Cheng, & Keltner, 2010). Viewed as a culture, social class has been reported to powerfully shape important life outcomes (Stephens, Markus, & Phillips, 2014).

In the mainstream, it has been argued that lower social class individuals are more likely to be prosocial theoretically. Living in stressful and threatening environments with diminished resources, they realize that relying on others is important for achieving their aims. Thus, they tend to be more prosocial and other-oriented (Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012). A few studies found that higher class individuals were less helpful, less charitable, less generous, and less trusting than their lower social class counterparts (Chen, Zhu, & Chen, 2013; Guinote, Cotzia, Sandhu, & Siwa, 2015; Piff, et al., 2010).

However, some research has pointed out other possibilities. On the one hand, a positive effect of social class on charitable donation (Gittell & Tebaldi, 2006; Hughes & Luksetich, 2008) and volunteering (Ramirez-Valles, 2006) has been observed. On the other hand, some results note a U-shaped relation on philanthropic giving (Schervish & Havens, 1995a, 1995b). The main theoretical considerations are that lower social class individuals have higher costs of prosociality, so therefore the likelihood of prosocial behavior should decrease as the costs of prosociality increase (Dovidio, Piliavin, Schroeder, & Penner, 2006).

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Questions of Previous Literature

One key problem is that studies proving a negative effect of social class on prosociality were based on rather small samples. Using several large and representative international samples, recent research found only positive or no effect of social class on prosocial behavior, varying across nations (Korndörfer, Egloff, & Schmukle, 2015). However, little is known about Chinese people of different social classes. During the Cultural Revolution, an egalitarian distribution of resources was idealized, whereas wealth and education were stigmatized (Walder, 1989). In addition to the influence of the past, it is also unknown how the predicted solipsistic value of higher social class may affect prosocial behavior in a predominantly interdependent culture (Kraus, et al., 2012).

Therefore, in the present study, we aim to examine the situation in China with large and representative samples from publicly available datasets. In line with recent studies using large samples (Korndörfer, et al., 2015), we hypothesize that social class is positively related or unrelated with prosocial behavior in China.

Method

Participants

The data for this study were obtained from the 2010 baseline survey of China Family Panel Studies (CFPS), covering 33,600 adults (16,286 men; mean age = 45.51 years; SD = 16.41) from 25 provinces.

Objective Social Class

Income. The individuals' annual incomes were collected. Because of the skewness of the data, we further applied a categorical scheme. This resulted in seven categories.

Education. Respondents indicated their highest educational level attained by choosing from one of eight educational categories.

Occupational prestige. Occupational prestige scores were calculated from Treiman's Standard International Occupational Prestige Scale (Treiman's SIOPS) (Ganzeboom & Treiman, 1996).

Computation of objective social class. In keeping with previous research (Korndörfer, et al., 2015), we computed a composite measure of the objective social class of the individual by averaging the standardized measures of income, education, and occupational prestige. We also calculated the objective social class for each household by averaging each family members' social class for analysis of household donation.

Prosocial Behaviors

Donation behavior. Respondents were asked how much money their family donated in the year 2009. We determined the ratio of donations to the annual household income.

Volunteering. Two items assessed how many hours participants spent on volunteer work every day on average in the last non-vacation month, for workdays and holidays respectively.

Help seeking and offering. Respondents were asked whether they had requested help in several important domains, by the question: "Up to present, have you asked for help because of the following things: (1) borrowing money, (2) school admission for children, (3) seeing a doctor, (4) seeking a job for yourself, (5) seeking a job for your child, (6) none." Responses were recoded into a dichotomous scale (1 = asked for help, 0 = never asked for help). Those who did not select "none" were further asked whether they received help or not. Responses were recorded into a dichotomous scale (1 = received help, 0 = not

received help). We averaged these responses as an indicator of mean proportions of receiving help. Another question assessed whether they had been asked for these kinds of help. Responses were also recoded into a dichotomous scale (1 = being asked for help, 0 = never been asked for help). Those who reported to be asked for help in these things were inquired further, as to whether they offered help or not. Responses were recorded into a dichotomous scale (1 = offered help, 0 = not offered help). Again, we averaged these responses as an indicator of mean percent of offering help.

Analytical Procedure

Data were analyzed in multilevel model with HLM (Raudenbush, 2004). Participants (Level 1) were nested within provinces (Level 2). In addition, gender and age were entered as Level 1 predictors, because they were shown to substantially influence prosocial behaviors. All the predictors were centered around the grand mean except gender (1 = male, 0 = female) and social class, which was centered around group mean. Because previous research has found evidence of a U-shaped relation, we also tested for curvilinear relations.

Result

We found a growing proportion of donating households with increasing deciles of social class (Figure 1A). The results of our logistic regression analysis (Table 1, Model 1) revealed the distinct rise. Next, we analyzed the monetary amounts of the donations relative to the annual household income per decile of social class. Figure 1B suggests a U-shaped relation. The applied nonlinear regression model confirmed the quadratic relation (Table 1, Model 2).

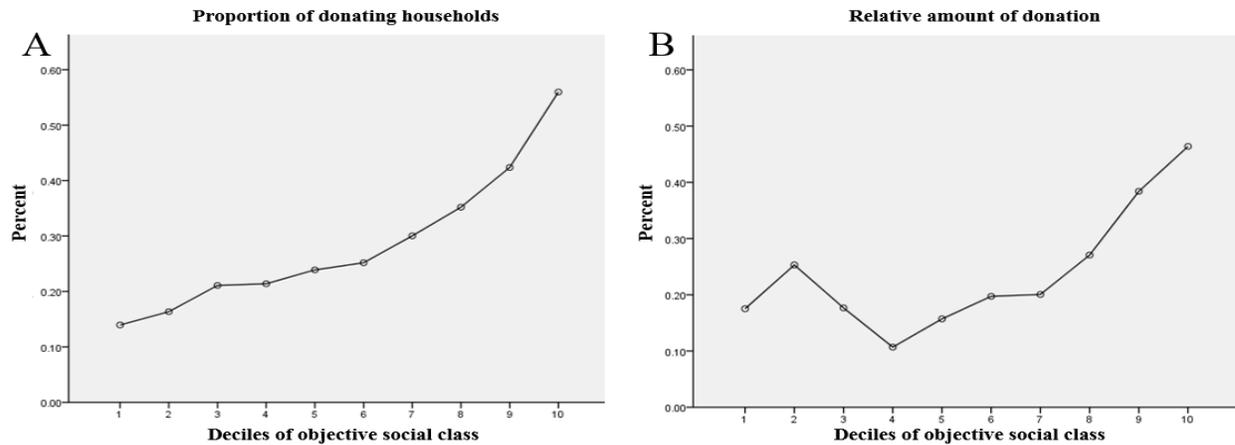


Figure 1. The Effect of Objective Social Class on the Relative Amount of Donation

Table 1. Intercepts from HLM Analyses: Donation and Volunteer

	Donations (yes/no)	Percentage of contributed household income	Average hours volunteer every day during workdays	Average hours volunteer every day during holidays
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Mean Differences	1.024(.116)***	.225(.019)***	.018(.003)***	.019(.003)***
Objective Social Class Slope	1.021(.064)***	.122(.020)***	.014(.003)***	.016(.003)***
Objective Social Class ² Slope	-.036(.037)	.049(.024)*	-.004(.002)*	-.001(.002)

Note: Values in parentheses refer to standardized errors. N=14,504; N=13,890 for Model 2; N=33,578 for Models 3 and 4. *p<.05; **p<.01; ***p<.001 (two-tailed).

We analyzed the volunteer time of workdays and holidays separately. Both results indicate that time spent on volunteering per decile of social class pointed toward a positive relation (Figure 2; Table 1, Model 3 and 4). Moreover, the regression confirmed the nonlinear effect for workdays.

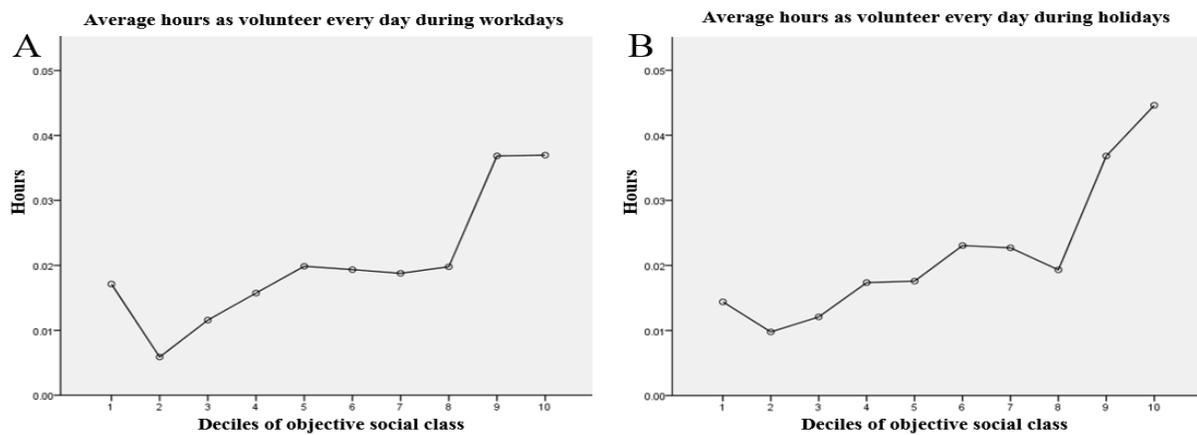


Figure 2. The Effect of Objective Social Class on Volunteering Time

In terms of the probability to ask for help, it seemed to increase with higher categories of objective social class (Figure 3A). The logistic regressions confirmed the expected positive effect (Table 2, Model 1). As for the probability of getting helped, most people got helped (Figure 3B) and no difference appeared (Table 2, Model 2).

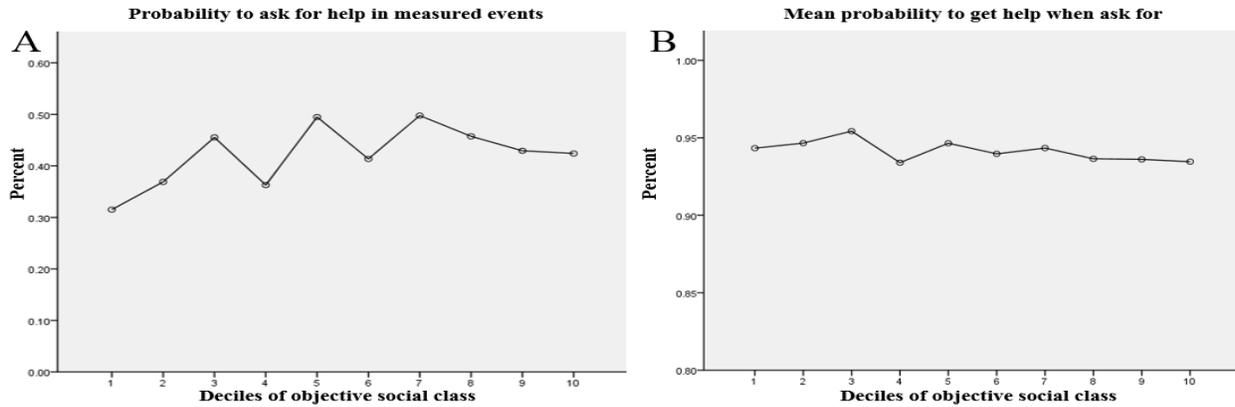


Figure 3. The Effect of Objective Social Class on Help Seeking

Table 2. Intercepts from HLM Analyses: Help

	Ask for help (yes/no)	Probability of getting help when ask for	Being asked for help (yes/no)	Probability of offering help when asked for
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Mean Differences	-.447(.076)***	.942(.006)***	-1.120(.080)***	.950(.006)***
Objective Social Class Slope	.202(.045)***	-.003(.004)	.467(.051)***	.008(.004) †
Objective Social Class ² Slope	-.106(.033)***	.002(.004)	-.022(.031)	-.004(.003)

Note: Values in parentheses refer to standardized error. N=33,578 for Model 1; N=14,185 for Model 2; N=33,566 for Model 3; N=9,737 for Model 4. † p≤.07; *p<.05; **p<.01; ***p<.001 (two tailed).

For the effect of objective social class on the probability of being asked for help, the solid line in Figure 4A points toward a clear positive effect. The corresponding logistic analyses confirmed this trend (Table 2, Model 3). Moreover, people from higher social class seemed to offer more help when asked (Figure 4B), which turned out to be marginally significant (Table 2, Model 4).

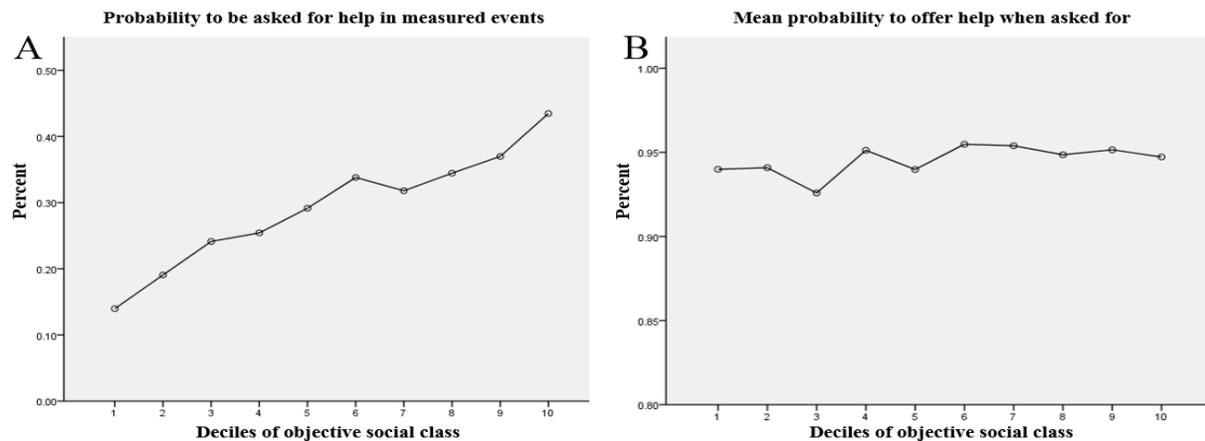


Figure 4. The Effect of Objective Social Class on Help Offering

Discussion and Conclusion

We aimed to thoroughly examine the relationship between social class and prosocial behavior in China, and we predominantly found a positive effect of social class on various forms of prosociality. Higher social class individuals donated higher ratio of money, volunteered more time, and offered more help on request. Moreover, they both asked for and were asked for more help, which, to our knowledge, is a new finding in this field.

These results contradict the predictions from the mainstream research (Kraus, et al., 2012), but are consistent with other studies using large samples (Gittell & Tebaldi, 2006; Hughes & Luksetich, 2008; Korndörfer, et al., 2015). The data reported here may provide a new perspective to consider, that is, the frequency of being asked for help, instead of focusing on spontaneous prosocial behavior. Because we found higher social class individuals were asked for more help by others, which gave them more chances to engage in prosocial behavior. Moreover, they also sought more assistance in the measured events. In exchange, they were more likely to reciprocate. In addition, the probability to offer help after being asked was also lower for lower class people in our measured items. One possible reason may be that most of the measured kinds of help called for material resources, which lower class people lacked and could not provide. Further studies should try to examine other kinds of prosocial behaviors and the motivations.

The current research contributes to the literature by exploring this relationship to a country with unique sociocultural and historical factors on the topic of social class. Nonetheless, further studies are needed before we label “good people” or “bad people” to different social class individuals.

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Effect of Leaders' Work Engagement on Followers' Subjective Career Success: A Multi-Level Model¹

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[Abstract] Using a sample of 68 work teams (68 work team leaders and their 380 followers) in 14 schools, this study investigated the relationships between work engagement (leaders' and followers') and subjective career success. Structural equation models and hierarchical linear models were applied to analyze the survey data. Results revealed that leaders' work engagement positively influenced their followers' subjective career success, and this relationship was mediated by the followers' work engagement. Leaders' work engagement acted as a moderator in the relationship between their followers' work engagement and subjective career success. Implications of these findings, limitations, and directions for future research were discussed in the final part of the paper.

[Keywords] subjective career success; work engagement; work team

Introduction

Career success is the goal every employee eagerly pursues. Research on career success has received increasing attention in the field of psychology and organizational science in recent years (De Vos, et al., 2011; Ramswami, et al., 2010; Spurk, & Abele, 2014; Stump, & Tymon, Jr., 2012). Based on a meta-analysis, Ng, et al. (2005) reviewed 4 categories of predictors of career success. As an important human capital variable, work engagement is also a predictor of success. Considerable evidence has proved the impact of work engagement on career success. Demerouti, et al. (2001b) found that work engagement was positively correlated to subjective career success. Ng's meta-analysis indicated that work engagement could predict objective career success and was positively correlated to subjective career success (Ng, et al., 2005).

However, most research considered objective career success and subjective career success together. In fact, the impact mechanism of the impact factors on subjective career success may be more complex. When study methodology was concerned, the existing research tended to investigate from a more individual perspective (individual level) than a team perspective (multilevel), in exploring the work team's impact on individuals' success.

Based on the literature review and research findings, this study intends to examine the influence of team leaders' work engagement on their followers' subjective career success by means of HLM.

Career Success

Career success is defined as the accumulated positive psychological and work outcomes resulting from individual work experiences (Seibert, et al., 1999). Researchers distinguish subjective career success from

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objective career success. Subjective career is only experienced directly by the person engaged in her or his career (Hogan, et al., 2013; Judge, et al., 2010; Ng, & Feldman, 2014).

From Work Engagement to Career Success

Work engagement is an active, positive work-related state that is characterized by vigor, dedication, and absorption (Bakker, 2011; Bakker, & Leiter, 2010; Schaufeli, & Bakker, 2010). The contest-mobility perspective of career success suggests that victory comes to those who demonstrate the greatest accomplishments. One can only get ahead on the basis of one's own abilities and contributions (De Vos, et al., 2011; Miller, et al., 2005; Ng, et al., 2005).

The impact of work engagement on career success was proved in empirical studies. For example, Demerouti, et al. (2001a) and Ng's meta-analysis (Ng, et al., 2005) found that work engagement was positively correlated to subjective career success. Bakker, et al. (2008) showed that work engagement is predictive of job performance and client satisfaction.

Based on the theories and studies above, we propose Hypothesis 1:

Hypothesis 1: Work engagement positively affects subjective career success.

From Leaders' Work Engagement to Followers' Work Engagement

A work team consists of team members who have the same commitment and responsibility to achieve one particular goal or accomplish one task (Hackman, 1987; Hart, & McLeod, 2003; Kozlowski & Bell, 2003). The leader's psychological and work state may influence followers' work attitude and behavior in a formal or informal way.

Work engagement is conceptualized to be a state with such important characteristics as openness to development and a contagion effect. In other words, work engagement in the leader-follower relationship and follower-follower relationship could easily impact each other within interpersonal interactions (Bakker, & Xanthoulou, 2009; Schaufeli, et al., 2009; Zhu, et al., 2009).

Leaders who are more engaged in work tend to be more hopeful, more motivated to success and would like to set up more challenging goals. Such characteristics and behavior of leaders will easily infect their followers and improve their work engagement (Fredrickson, 2003; Johnson, 2009; Avolio, et al., 2004). In addition, leaders are always regarded as role models of their followers regarding what attitude and behavior are appropriate. If leaders display high levels of work engagement, their teams will be willing to observe, and perceive positive work results of their leaders' work engagement. Therefore, it may help followers be more engaged in their work (Schaufeli, et al., 2009; Avolio, et al., 2004).

Therefore, in this study, we propose Hypothesis 2:

Hypothesis 2: Leaders' work engagement positively affects their followers' work engagement.

From Leaders' Work Engagement to Followers' Subjective Career Success: Mediation of Followers' Work Engagement

An engaged leader plays an important role in the team. Leaders who are more engaged in their work tend to perform better. For example, Xanthopoulou, et al. (2009) indicated that leaders' work engagement was positively correlated to the financial return. Moreover, engaged leaders were more loyal to their organizations and often experience better psychological and physical health (Halbesleben, & Wheeler, 2008; Schaufeli, et al., 2009; Bakker, et al., 2008; Demerouti, et al., 2001a). Last but not least, leaders who

are more engaged transfer their engagement to others, including their followers, and lead others also to become more engaged (Bakker, & Xanthopoulou, 2009).

Even with the important impact of leaders' work engagement, followers' work engagement is also necessary for followers' career success. It's not likely for a team member to achieve career success without his own engagement.

According to the evidence above, we propose Hypothesis 3:

Hypothesis 3: Followers' work engagement is a mediator between leaders' work engagement and their followers' subjective career success.

Leaders' Work Engagement Acts as a Cross-Level Moderator Between Followers' Work Engagement and their Subjective Career Success

Career success is affected by individual factors and organizational factors at the same time (Hogan, et al., 2013; Judge, et al., 2010; Seibert, et al., 1999). As an organizational factor, leaders' work engagement not only serves to directly improve their followers' work engagement and then promote their followers' career success, but also functions as a positive background factor in the work team, exerting an influence on the relationship between followers' work engagement and career success.

According to the person-situation interaction theory (Judge, & Zapata, 2015; Magnusson, & Magnusson, 2013; Troy, et al., 2013; Zettler, & Hilbig, 2010), when work teams have the same character as members, the effect of individual characters on outcomes will be strengthened.

We are curious if leaders' high work engagement will strengthen the relationship between followers' work engagement and their subjective career success or not.

Thus, we propose the following hypothesis:

Hypothesis 4: Leaders' work engagement positively moderate the effect of followers' work engagement on their subjective career success.

Method

Participants

Participants for this study were work teams from 14 schools in the Guang Dong Province. A total of 480 questionnaires were distributed and 448 valid questionnaires from both leaders and team members were collected, with 97.4% efficiency. We collected valid data from 68 work teams in total, with 7 team members each team, on average. In every work team, each employee has been working with his/ her direct supervisor for at least one year, with an average of 7.7years. Of all the participants, 17% were male and 83% female. The age of the participants ranged from 21 to more than 50 years old, with 35 years of age on average. The length of teaching of all the participants averaged 13.5 years.

Variables Measure

Subjective career success. We adopted a 5-item scale, the Career Satisfaction Scale (Greenhaus, et al., 1990) to measure the followers' subjective career success. Based on the results of confirmatory factor analysis, one item whose factor loading was lower than 0.4 was deleted and the other 4 items whose factor loading were all over 0.5 were maintained. After deletion, the Cronbach's alpha coefficient of the scale was 0.67.

Work engagement. We adopted the Utrecht Work Engagement Scale (UWES) from Schaufeli, et al. (2002) to measure participants' work engagement. The 17-item scale contained three dimensions – vigor,

dedication and absorption. After confirmatory factor analysis, one item whose factor loading was lower than 0.4 was deleted and the remaining 16 items were adopted in this study. The Cronbach's alpha coefficient of the three dimensions of leaders' work engagement were 0.85, 0.88 and 0.80; and that of the followers' work engagement were 0.88, 0.87 and 0.85.

Measurements and Data Analysis

This study sent independent self-reported questionnaires to both team leaders and followers respectively. The questionnaires for the leaders were subjective career success measurements while those for the followers contained both subjective career success scales and work engagement scales.

In terms of the questionnaires for the followers, we adopted Harman's one-factor measurement to examine common method variance (Malhotra, et al., 2006). The goodness of fit index of one-factor model and four-factor model were shown respectively as follows: $\chi^2=934.38$, $df=170$, RMSEA=0.12, NNFI=0.94, CFI=0.94, SRMR=0.068 (one-factor); $\chi^2=560.39$, $df=164$, RMSEA=0.08, NNFI=0.97, CFI=0.97, SRMR=0.055 (four-factor). The fact that the four-factor model fit was better than the one-factor model revealed that a homologous coefficient variance was possible in this study.

SPSS 22.0 was used in our study to perform descriptive statistics and reliability analysis. We used LISREL 8.70 to analyze confirmatory factor and HLM 6.02 to build a cross-level model, in order to test our research hypotheses. EM algorithm was adopted to compensate for the missing data.

Results

Cross-Group Measurement Invariance Test

Since work engagement measurement examined both team leaders and team members, it was necessary to ensure similarity in the structure of the measuring tool in these two groups. By means of multi-group confirmatory factor analysis methodology (Hau, et al., 2004), we could see that $\Delta\chi^2$ (Δdf) of the model was not significant and the goodness of fit index was of no obvious deterioration, although error variance, factor loading, factor variance, and factor covariance were controlled step-by-step. Therefore, such work engagement measurement in our study was applicable for leaders and followers.

Table 1. Cross-Group Measurement Invariance of Work Engagement

Model	χ^2	df	χ^2/df	$\Delta\chi^2(df)$	$\Delta\chi^2/df$	RMSEA	NNFI	CFI	SRMR
M _{0,L}	180.58	101	1.79			0.10	0.94	0.95	0.085
M _{0,F}	431.51	101	4.27			0.10	0.96	0.97	0.056
M ₁	612.09	202	3.03			0.10	0.96	0.97	0.056
M ₂	622.33	215	2.89	10.24(13)	0.79	0.09	0.96	0.97	0.058
M ₃	627.22	216	2.90	4.89(1)	4.89	0.09	0.96	0.97	0.066
M ₄	667.52	231	2.89	40.30(15)	2.69	0.09	0.96	0.97	0.058
M ₅	681.06	237	2.87	13.54(6)	2.26	0.09	0.96	0.96	0.070

Descriptive Statistics

Results of descriptive statistics for the study variables could be seen in Table 2.

Table 2. Descriptive Statistics for the Study Variables

Variables	M	SD	1	2	3	4	5	6	7	8	9
1. Leaders' work engagement	4.02	0.62	—								
2. Sex ^a	0.16	0.37	—	—							
3. Age	34.10	8.74	—	0.17**	—						
4. Educational background	3.45	0.62	—	0.01	-0.41**	—					
5. Teaching age	12.43	9.44	—	0.14**	0.94***	-0.38***	—				
6. Years in this school	6.98	7.33	—	0.10*	0.73**	-0.32**	0.72**	—			
7. Income	2.23	0.73	—	0.25**	0.51***	0.05	0.53**	0.40***	—		
8. Followers' work engagement	3.73	0.75	0.20***	-0.01	0.06	-0.15**	0.04	0.00	-0.08	—	
9. Subjective career success	3.13	0.80	0.15**	-0.06	0.05	-0.17**	0.05	0.07	0.01	0.56**	—

Note: ** $p < 0.01$, * $p < 0.05$; ^a 0=female, 1=male, (mean value of sex represented data of male followers). The leaders' work engagement reflected group-level (work team) data.

Leaders' Work Engagement's Influence on Follower Subjective Career Success: Multilevel Mediation Effect of Followers' Work Engagement

The model was cross-level mediation-lower mediator, i.e. Model 2-1-1. We centralized the Level 1 variable based on the mean value of the group to separate the between-group mediation effect from the intra-class one, resulting in a more accurate estimation of the mediation effect (Fang, et al., 2010). To begin with, a null model, M1, was built and the percentage of the between-group variance in the dependent variables variance, i.e. ICC(1) (intra-class correlation coefficient) was computed. In our research, $ICC(1) = 0.13 / (0.13 + 0.52) = 0.20 > 0.06$, and the between-group variance was significant ($\tau_{00} = 0.133$, $\chi^2 = 159.721$, $p < 0.001$). Thus, the between-group effect could not be neglected and multilevel analysis by means of HLM was necessary (Wen, 2009; Zhang, et al., 2003).

We followed a three-step procedure to test the cross-level mediation effect. In Step 1, we built M2 to examine the direct effect (c) of team leaders' work engagement on follower subjective career success. HLM results revealed that leaders' work engagement had a positive influence on follower subjective career success ($\gamma_{01c} = 0.13$, $t = 2.59$, $p = 0.014$).

In Step 2, we built the multilevel regression equation based on M3, in order to test the direct effect (a) of leaders' work engagement on followers' work engagement. HLM results showed that leaders' work engagement has a positive effect on followers' work engagement ($\gamma_{01a} = 0.19$, $t = 2.34$, $p = 0.022$). H2 was verified.

In Step 3, M4 was built to test the effect (c' and b) of leaders' work engagement and followers' work engagement. Results revealed that followers' work engagement has a positive effect on follower subjective career success ($\gamma_{10b} = 0.53$, $t = 8.09$, $p < 0.001$). After controlling followers' work engagement, the influence from leaders' work engagement on follower subjective career success was not significant ($\gamma_{01c} = 0.01$, $t = 0.06$, $p > 0.05$). In summary, followers' work engagement functioned as a complete mediation variable in the relationship between leaders' work engagement and follower subjective career success, proving H3 of the study.

Table 3. Model Equations

Model	L1	L2
M ₁ : Null model	$SCS_{ij} = \beta_{0j} + r_{ij}$	$\beta_{0j} = \gamma_{00} + \mu_{0j}$
M ₂ : Lworen → SCS	$SCS_{ij} = \beta_{0j} + r_{ij}$	$\beta_{0j} = \gamma_{00} + \gamma_{01}^c (Lworen) + \mu_{0j}$
M ₃ : Lworen → Fworen	$Fworen_{ij} = \beta_{0j} + r_{ij}$	$\beta_{0j} = \gamma_{00} + \gamma_{01}^a (Lworen) + \mu_{0j}$
M ₄ : Lworen, Fworen → SCS	$SCS_{ij} = \beta_{0j} + \beta_{1j} (Fworen) + r_{ij}$	$\beta_{0j} = \gamma_{00} + \gamma_{01}^c (Lworen) + \gamma_{02} (Mworen) + \mu_{0j}$ $\beta_{1j} = \gamma_{10}^b$
M ₅ : Moderation Effect	$SCS_{ij} = \beta_{0j} + \beta_{1j} (Fworen) + r_{ij}$	$\beta_{0j} = \gamma_{00} + \gamma_{01} (Lworen) + \mu_{0j}$ $\beta_{1j} = \gamma_{10} + \gamma_{11} (Lworen) + \mu_{1j}$

Note: SCS = Subjective Career Success, Lworen=Leaders' work engagement, Fworen=Followers' work engagement, Mworen=Mean work engagement (based on followers' work engagement on group level).

Followers' Work Engagement's Influence on Follower Subjective Career Success: Multilevel Moderation Effect of Leaders' Work Engagement

According to the M5 shown in Table 3, we tested the multilevel moderation effect of leaders' work engagement between followers' work engagement and subjective career success. Result showed that the moderation effect of leaders' work engagement was significant ($\gamma_{11} = -0.23$, $t = -2.75$, $p = 0.008$). That is, the effect of followers' work engagement on subjective career success became smaller as leaders' work engagement increased.

Discussion

Influence Mechanism of Leaders' Work Engagement on Followers' Subjective Career Success

The present study found that leaders' work engagement could exert a positive influence on followers' subjective career success and such influence was mediated by followers' work engagement. In line with our Hypothesis 2, the result suggested that leaders' work engagement influenced followers' work engagement. We proposed that the reason why leaders' work engagement could exert a positive influence on followers' work engagement was determined by emotion contagion, social learning, organizational support and sincere interaction. This effect of leaders' work engagement on followers' work engagement could promote followers' subjective career success, and followers' work engagement functioned as a cross-level mediator. Our Hypothesis 3 has been verified.

Inconsistent with Hypothesis 4, leaders' work engagement acted as a negative moderator, but not a positive one. That is, the more the leader was engaged in his work, the smaller the effect the followers' work engagement on their subjective career success was. In the perspective of social comparison, people want to estimate their ability properly but they often lack objective standards (Festinger, 1954). Although it may make us upset, we tend to compare ourselves with those who are more outstanding than us (Gibert, & Giesler, 1995), such as leaders. In the process of comparing with the engaged and outstanding leader, followers might experience dissatisfaction with their own careers. Leaders' high levels of work engagement decreased the effect of their work engagement on subjective career success.

Implications

The current study has great theoretical and practical implications.

1. We adopted HLM to explore relationships between cross-level variables among teachers, which accelerated the ecological validity and explanatory power of the existing researches.

2. Considering the positive influence of work engagement exerted upon their subjective career success, we should focus on the improvement of work engagement, especially with leaders.

Study Limitations and Suggestions for Future Research

Due to major differences in different organizations, we should be cautious in generalizing the results of this study to other organizations. In addition, this study was conducted with participants in a Chinese cultural context. Thus, the results should be cautiously promoted in a cross-culture context. More research is needed to be conducted in a cross-cultural context, seeking to explore the interaction between leaders' and followers' work engagement in different cultures. In addition, we should expand our sample size with samples from different organizations in different industries.

Conclusion

In summary, our results revealed that leaders' work engagement was positively related to followers' subjective career success, with this relationship mediated by follower work engagement in a multilevel model. Moreover, leaders' work engagement functioned as a moderator in the relationship between followers' work engagement and their subjective career success.

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Dynamic Process Model of Need Satisfaction in Social Network

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[Abstract] *How are our needs satisfied on social networks sites (SNS)? Former studies have found that SNS have greatly changed our interpersonal communication strategies today. Using the data of 286 Chinese students' questionnaires, this research found that communication strategies mediated the process from an unsatisfied relatedness need to the satisfaction of a relatedness need. Further analysis showed that the satisfaction of a competent need mediated the relationship between an unsatisfied relatedness need and communication strategies. The current study made some theoretical contribution to the studies focusing on the dynamic process of need satisfaction on SNS.*

[Keywords] *social network sites; relatedness need; competent need; autonomy need; communication strategies*

Introduction

The rising and popularity of social network sites (SNS) has caused a great impact in China, and many local social networks have quickly started up, such as Renren, QQ space, Kaixin and so on. It was estimated that until 2010, Renren, known as the Chinese version of Facebook, had more than 160 million registered users (AppLeap & Great Wall Club, 2010). Many studies have indicated that SNS have become a common interpersonal communication strategy. To some extent, they have become deeply integrated into our daily lives and greatly changed our interpersonal communication strategies today. (Burke, Marlow, & Lento, 2010; Ellison, Steinfield, & Lampe, 2007; Valkenburg & Peter, 2007, 2009).

In terms of social connections, Granovetter (1973) emphasized the important role of weak ties in society, but the corresponsive strong ties are less discussed. Putnam (2000) distinguished between bridging social capital and bonding social capital. The study further added maintaining social capital to the communication objects in Facebook, namely distinguishing that by getting to know new friends through SNS, it could help individuals maintain links between friends who were geographical separated (Ellison, Steinfield, & Lampe, 2007). Therefore, the purpose of this study is to test the dynamic process model of need satisfaction in social networks by focusing on the satisfaction of relatedness need.

This study further simplified the scale of communication objects and communication strategies, and divided the communication objects into two categories: closest friends (CF) and other friends (OF), and then also divided the communication methods into only two categories: active communication (AC) and passive communication (PC). Meanwhile, according to the process model of need satisfaction, we believe that when individuals' needs are not satisfied, they will take certain actions, but these actions do not necessarily satisfy their needs effectively; in addition, actions that can effectively satisfy their needs are not necessarily the usual ones taken by individuals. Zhou (2014) suggested that communication with CF, especially AC, was an effective behavior to satisfy the relatedness need. Similar to the idea of Sheldon, Abad and Hirsch (2011), this study investigated the effect of unsatisfied relatedness need (URN) on communication objects and communication strategies. Also, this study investigated the effect of

communication objects and communication strategies on relatedness need satisfaction. These two aspects together constitute the process of satisfying the unsatisfied relatedness need. Finally, according to the theoretical model proposed in this study, whether other needs are satisfied can effectively moderate an individual's need satisfaction. This research focuses on the process of the relatedness need being satisfied, then the autonomy and competent needs should be discussed. When the autonomy need is satisfied, the individual will experience his communication behaviors on Renren are out of his own will, and then they will experience more pleasure in the process of using Renren, therefore, their relatedness need can be better satisfied. When the competent need is satisfied, the individual will experience that he can make better use of Renren to satisfy his needs, and therefore, their relatedness need can also be better satisfied. So, we expected that:

H₁: URN will influence the choice of communication objects.

H₂: URN will influence the choice of communication strategies.

H₃: Communication with CF/OF will mediate the relationship between URN and SRN.

H₄: AC/PC will mediate the relationship between URN and SRN.

H₅: The satisfaction state of autonomy will moderate the relationship between URN and the choice of communication objects /communication strategies.

H₆: The satisfaction state of competent will moderate the relationship between URN and the choice of communication objects /communication strategies.

Method

Participants and Procedure

Participants were students from Wuhan University, China. We gave out 300 questionnaires and 295 were returned. We eliminated the obvious invalid questionnaires. We also abandoned questionnaires that had above 5 values that were missing, so the total amount of questionnaires was 286. The valid return rate was 95.3%, among which boys and girls was 141 and 122, respectively, and there were 23 students that did not fill in the gender. The average time for the registration of SNS was 2.6 years.

Measurement

Measurement of communication strategies. This study simplified the measurement of communication strategies. Only three items were used. Firstly, participants were asked how much time they spent on CF, and then the proportion of time they spent on CF in the way of AC and PC, respectively, and finally, the proportion of time they spent on OF in the way of AC and PC, respectively. In this way, we could calculate the proportion of time that participants spent on different objects and different communication ways, specifically.

Measurement of URN and SRN. Both measurements were adapted from Sheldon, Abad and Hinsch (2011); each had three items – 6-item in total.

Measurement of mediators. We used items for PC with OF as a way to deal with the lack of relatedness need, and we used items for AC with OF as a way to satisfy relatedness need. In order to compare them using the study of Sheldon, Abad and Hinsch (2011), we also measured Renren as a way to deal with the lack of relatedness need and a way to satisfy relatedness need.

Measurement of need satisfaction state on SNS. The satisfaction state of three basic psychological needs was measured by three basic needs, namely, competency, autonomy, and relatedness. A 9-item scale was used.

Result

In order to ensure the reliability of the results, first, we used the Harmon single factor test to examine the common method bias (Podsakoff & Organ, 1986). It suggested that the results of this study could not be explained by a single factor, so there was no common method bias.

Related Variables of URN and SRN

Pearson product-moment correlation analysis was conducted to test their relationship with related variables. In order to facilitate the comparison, general use of Renren (ordinary use frequency of Renren, recent use frequency of Renren, and use intensity of Renren) was also added.

Table 1. Correlation between Related Variables and URN, SRN

		URN	SRN
Friend Types	CF	-0.03	0.09
	OF	0.03	-0.09
Communication Ways	AC	-0.17**	0.19**
	PC	0.17**	-0.19**
CF	AC	-0.17**	0.14*
	PC	0.12*	-0.01
OF	AC	-0.01	0.13*
	PC	0.04	-0.14*
Ordinary Use Frequency of Renren		-0.03	0.09
Recent Use Frequency of Renren		0.01	0.06
Use Intensity of Renren		<-0.01	0.12*

Note: * indicates that the coefficient is significant at $p < 0.05$ level. ** indicates that the coefficient is significant at $p < 0.01$ level, and the same below.

As shown in Table 1, neither URN or SRN has a significant correlation with friend types, so H_1 is not confirmed. Because URN is not significantly related to friend types, H_3 lost the premise to be verified, so H_3 is not confirmed, either.

But both URN and SRN has a significant correlation with communication ways, so H_2 is confirmed. As for the four conditions resulting from the interaction of communication ways and friend types, only AC with CF is significantly related to both URN and SRN, and PC with CF only has a significant relationship with URN; both PC and AC with OF only have a significant relationship with SRN. Besides, only the use intensity is significantly related to URN, the other two variables of general use of Renren are not significantly related to neither SRN or URN.

Mediating Effect on URN to be Satisfied

Causal steps strategy was adopted to test the mediating effect (Baron & Kenny, 1986). Firstly, multiple regression analysis was used to test whether the independent variable (X) significantly accounted for variability in the mediating variable (Equation 1). Secondly, we tested whether the mediating variable (M) significantly accounted for variability in the dependent variable (Y) (Equation2). Thirdly, we tested the effect of X on Y in the first layer of the equation, and then entered M in the second layer (Equation3).

First, this study tested whether communication ways played a mediating role between URN and SRN. Considering that communication methods was divided into AC and PC, and they are completely correlated, it's enough to test any one of them. The following takes AC as an example to carry on the mediating effect analysis (Table 2).

Table 2. AC as a Mediator: A Stepwise Regression Analysis of URN to be Satisfied

Y X	Equation 1	Equation 2	Equation 3(SRN)	
	AC	SRN	First Step	Second Step
X				
URN	-0.05**		-0.27**	-0.24**
M				
A		0.67**		0.55**
C				
F	7.97**	10.68**	16.95**	12.27**
R ²	0.03	0.04	0.06	0.08
F change				7.21**
ΔR ²				0.02

As shown in Table 2, the mediating role of AC is confirmed. Meanwhile, in Equation 3, after the introduction of M, the partial regression coefficients (absolute values) of X decreases from -0.27 to -0.24, but is still significant, which indicates that AC is a partial mediator. Then the Sobel test was conducted to further examine the mediating effect above (Preacher & Hayes, 2008), The results show that Sobel $Z=2.12$, $p=0.03<0.01$, so H_4 is confirmed.

Psychological Mechanism of URN Affecting Communication Strategies

According to the dynamic process model, whether the individual can take effective measures to satisfy a certain need is determined by the satisfaction state of other needs. Therefore, this study tested whether the satisfaction of competency and autonomy would moderate the relationship between URN and PC, but neither of them were verified, so H_5 and H_6 were not confirmed.

Then this study made another assumption, namely, the satisfaction of competency need experienced on Renren (referred to as sense of competence) mediates the relationship between URN and communication types. The following still takes AC as an example to carry on the mediating effect analysis (Baron & Kenny, 1986).

Table 3. Sense of Competence as a Mediator: A Stepwise Regression Analysis of URN and Communication Types

Y X	Equation 1	Equation 2	Equation 3 (AC)	
	Sense of Competence	AC	First Step	Second Step
X				
URN	-0.10*	0.09**	-0.053**	-0.045*
M				
sense of competent				0.08**
F	6.01*	10.51	7.97**	8.09**
R ²	0.02	0.04	0.03	0.06
F change				8.02
ΔR ²				0.03

As shown in Table 3, the mediating role of sense of competence is confirmed. Meanwhile, in Equation 3, after the introduction of M, the partial regression coefficients (absolute values) of X decreases

from -0.053 to -0.045, but is still significant, which indicates that the sense of competence is a partial mediator.

Then the Sobel test was conducted to further examine the mediating effect above (Preacher & Hayes, 2008). The results show that Sobel $Z=1.96$, $p<0.05$, so the assumption is confirmed again.

Discussion

Through the improvement of this research, the behavior on SNS can be effectively measured by the questionnaire, but in future research, this questionnaire still needs to be further verified by more behavior data. In addition, another purpose of this study is to test the dynamic process model of need satisfaction in SNS by focusing on the satisfaction of relatedness need.

There are two important findings in this study: Firstly, communication methods play a mediating role between unsatisfied relatedness need and satisfied relatedness need, namely, when individuals feel their relatedness needs are not satisfied, they will choose passive communication on Renren, but only when they take active communication can their relatedness need be satisfied. Secondly, this study investigated the psychological mechanism of unsatisfied relatedness need affecting communication strategies, and found that the sense of competence mediates the relationship between unsatisfied relatedness need and communication types. Namely, when the individual feels their relatedness need is not satisfied, they will experience a lower level sense of competence, and tend to take passive communication to interact with their friends on Renren. Unfortunately, the moderating role of sense of competence between unsatisfied relatedness need and communication types is not confirmed; this may be caused by the measurement indicators we chose. According to the dynamic process model of need satisfaction proposed in this study, the satisfaction state of other needs should be trait need-satisfaction, but it is more like the state need-satisfaction in this study. Therefore, future research should separate the measurement of trait need-satisfaction and state need-satisfaction, and reveal the mediating and moderating mechanism among them.

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A Comparative Research on Boundary Flexibility and Relevant Variables of Work-family Interface between the Employee in One-Earner Family and Two-Earner Family

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[Abstract] *The aim of this study is to compare the differences among boundary flexibility and relevant variables of the work-family interface between the employees in one-earner and two-earner families. We investigated 320 samples by the scale of boundary flexibility, work-family conflict, work-family enrichment and work-family balance. The results manifested that: (1) Work→family conflict of employees in a two-earner family is significantly lower than that of employees in the one-earner family, and their work→family enrichment and work flexibility willingness are significantly higher than that of employees in one-earner families. (2) Whether the subject's spouse has work should be noticed and controlled in future work-family interface study, to ensure the accuracy of the study results.*

[Keywords] *employees in one-earner family; employees in two-earner family; boundary flexibility; work-family interface*

Introduction

With the social improvement, the traditional Chinese family model where men manage the external affairs while women handle the internal affairs has come to the end. *Chosun Ilbo*, a famous newspaper agency in South Korea, provided statistics in 2011, in which 11.62 million families participated in the investigation, and they found that 5.07 million were two-earner families, more than one-earner families (4.91 million). This was the first time that the number of two-earner families exceeded the number of one-earner families. (A two-earner family means both the husband and wife have their own job, and the one-earner family means *either* the husband or the wife has his/her own job). Such a trend didn't happen in South Korea alone, and it is quite common in other Asian countries as well, including China. Researchers investigated families in Henan province and noticed that the new family model – “managing external affairs together” or “managing internal affairs together” began to prevail, especially among the post-80s generation (Lin, 2012). Undoubtedly, the change of the family model poses a series of new challenges to a couple's work and family life. Previously, husbands only needed to work hard outside, and wives only needed to do the housework. Currently, however, everything has changed. Both husbands and wives devote themselves to their work, and they also have to take care of their family life as well. The core issue of this study is to find what kind of change this diversified devotion in time and energy will bring to individual boundary management and work-family interface.

Some researchers have considered that the conflicts brought by diversified role transformation are mainly presented in three aspects, as follows: first, the conflict between the traditional single role and the modern multiple role; second, the conflict between the family role and society role; third, the conflict between the recessive role and the dominant role (Li, 2012). In brief, the conflict experiences brought by the family and work roles of employees in two-earner families are called “work family conflicts”, which

refers to the existing conflicts between role stress during work and non-work times. If individual time and energy can't meet the requirements of the work and family roles, then enters the work-family conflict (Thomas & Ganster, 1995). According to this definition, the concept can be classified into two directions, the work→family conflict and the family→work conflict. The work→family conflict denotes that the individual conflict is caused by the role requirement of work. In reverse, it is called the family→work conflict. Thus, we propose:

Hypothesis 1: The work→family conflict and the family→work conflict of employees in two-earner families are significantly higher than that of the employees in one-earner families. (In this study, the employees in one-earner families refer to the employee who has the job).

In the case of employees in two-earner families, multiple roles will bring not only role conflict, but also individual satisfaction and self-enrichment (Sieber, 1974). The behavior that individuals might be benefitting from in the roles they are playing so as to enrich their performance in other roles is called work-family enrichment. Work-family enrichment refers to the resources (like knowledge, skills, positive emotions, and increased self-esteem and income, etc.) that the employees obtain from one role (either work or family) that will increase their performance in the other field (Greenhaus & Powell, 2006). Just like the work-family conflict, work-family enrichment has its directionality, as well; it can be divided into two directions: work→family enrichment and family→work enrichment. In essence, a work-family balance represents work-family promotion or work-family enrichment (Carlson, Kacmar & Wayne, 2006). Thus, we propose:

Hypothesis 2: Work→family enrichment, family→work enrichment, and work-family balance of the employees in two-earner families are significantly higher than that of the employees in one-earner families.

The main change from the one-earner family to the two-earner family is that the individual's management and boundary of work and family have changed. On the basis of boundary theory, individuals will create different boundaries in areas of work and family and transform their roles across the boundaries every day (Ashforth & Fugate, 2000). Due to their unique values, (work experience and lifestyle) when an employee faces role requirements in various fields, the level of their willingness to transform to the matched role is discrepant. The level of individual transformation from one role to the other is called boundary flexibility willingness (Matthews, Barnes-Farrell, & Bulger, 2010), and includes work flexibility willingness (the level of an individual's willing transformation from a work role to the family role if the family demands it) and family flexibility willingness (the level of an individual's willing transformation from the family role to a work role if work demands it). Moreover, each employee has different resources and lives in different environments, so his/her ability to accomplish the transformation is different when facing specific role requirements. The ability of leaving the field that an individual is currently in to cater to the requirements of another field is called boundary flexibility ability (Matthews, et al., 2010); it includes work flexibility ability (leaving the work field to cater to the demands of the family field) and family flexibility ability (leaving the family field to cater to the demands of the work field). Regarding one-earner families, the person who has no job may undertake the most portion of the housework and family responsibility. Relatively, two-earner families have a much tougher responsibility and have to handle family affairs themselves, so they might prefer to transform from their work role to a

family role rather than from a family role to a work role, while their ability of family→work role transformation is weaker. Thus, we propose:

Hypothesis 3: Work flexibility willingness of the employees in two-earner families are significantly higher than that of the employees in one-earner families. Family flexibility willingness and family flexibility ability of the employees in two-earner families are significantly lower than that of the employees in a one-earner family.

Method

Participants

The married employees of many enterprises and public institutions in Hubei, Henan, Shanghai, Fujian, Jiangxi and other provinces were invited to answer the self-assessment questionnaires. We delivered a total of 178 questionnaires to employees in one-earner families, 160 of which were valid (response rate 89.89%); and we delivered 459 questionnaires to employees in two-earner families. There were 380 valid responses (response rate = 82.78%). To compare the data with employees in one-earner families, we selected 160 questionnaires among employees in two-earner family randomly, so the total sample was 320 employees.

The sample consisted of 236 males and 84 females. The age of the employees was between 22 to 59 years old, and the average age is 36.41 years old (Standard Deviation, SD=7.85). Basic demographic information of the employees in one-earner and two-earner families are listed in Table 1.

Table 1. Basic Information of Employees in One-Earner Family and Two-Earner Family (n=320)

	Gender (M/F)	Occupation (SM/MM/JM/CE)	Education Background (≤SH/C/B/≥M)	Taking care of kids under 18 (person)	Parents help with housework (person)	Hiring hourly housekeeper (person)	Average age	Seniority (year)	Average working hour per week
One-earner family (n=160)	149/11	26/31/41/62	37/37/48/38	112	70	10	37.18	14.13	46.69
Two-earner family (n=160)	87/73	8/43/39/70	45/28/82/5	118	89	13	35.64	12.70	45.97

Notes: Occupation SM=Senior Manager, MM=Middle-level Manager, JM=Junior Manager, CE=Common Employee; Education Background SH=Senior High Graduates and lower, C=College Graduates, B=Bachelors, M=Masters and higher.

Measures

Work-family boundary flexibility. We used the scale of work-family boundary flexibility compiled by Ma, Shen, Yang, Tang & Xie (2014), whose reliability was high in China. All in all, the scale included 19 items, 4 of which related to work flexibility ability (“When there is demand at home, I can leave my work temporarily”), 5 of which related to family flexibility ability (“If it’s necessary, I can work overtime for all day and will not be influenced by family responsibility”), 6 of which related to work flexibility willingness (“To perform family responsibility, I am willing to rearrange my work ”), 4 of which related to family flexibility willingness (“To perform work responsibility, I am willing to rearrange my family life ”). Each level was measured using five-point Likert scale whose ranges from 1 (Completely not accord) to 5 (Completely accord). The higher the score was, the stronger individual flexibility ability or willingness employees had. The coefficient of internal consistency of four dimensions in the study was 0.863 (work flexibility ability), 0.859 (family flexibility ability), 0.792 (work flexibility willingness) and 0.75 (family flexibility willingness). The questionnaire’s coefficient of internal consistency was 0.854.

Work-family conflict. We used the work-family conflict questionnaire compiled by Netemeyer, Boles & Mcmurrian (1996). The scale includes two dimensions, work→family conflict and family→work conflict, and 5 items for each, such as “I have much work to do, so I am too busy to handle family affairs”. This part of variables was assessed using five-point Likert scale (1= completely not accord, 5=completely accord). The final score and the individual conflict level shared the same trend. The validity of the questionnaire had been proved in China as well (Ma, et al., 2014). The coefficient of internal consistency of two dimensions in our study was 0.852 (work→family conflict) and 0.875 (family→work conflict). The questionnaire’s coefficient of internal consistency was 0.89.

Work-family enrichment. We used the work-family enrichment scale compiled by Wayne, Musisca & Fleeson (2004). The scale includes two dimensions – work→family enrichment and family→work enrichment, as well as 4 items for each, such as “My work helps me to handle my personal and factual issue in my family life”. This part of the variables was assessed using a five-point Likert scale (1= completely disagree, 5=completely agree). The final score and the individual enrichment shared the same trend. The validity of the scale had been proven in China as well (Ma, et al., 2014). The coefficient of the internal consistency of the two dimensions in our study was 0.717 (work→family enrichment) and 0.783 (family→work enrichment). The scale’s coefficient of internal consistency was 0.78.

Work-family balance. We used the scale of work-family balance compiled by Grzywacz & Carlson (2007), which is a single-dimensional scale including 6 items, such as “People around me think I can balance my work and family life well”. This section of the variables was assessed using a five-point Likert scale (1= completely disagree, 5=completely agree). The final score and the level of work-family balance shared the same trend. The coefficient of the internal consistency of the scale in the study was 0.883.

Research Procedures and Data Analysis

We trained investigators before we started our investigation. Those investigators who were familiar with the questionnaires and the standard implementation procedures collected the responses from the appointed subjects, either online or on the spot. Using SPSS 21.0, we analyzed the data for descriptive statistics, correlation analysis, and independent samples t test.

Research Results

Descriptive Statistics and Correlation Analysis

The descriptive statistics and correlation analysis of employees in one-earner families and two-earner families are presented in Tables 2 and 3. Table 2 reveals that the work flexibility ability of employees in one-earner families has significant positive correlation with their family→work conflict; their family flexibility ability has significant positive correlation with their family→work enrichment and work-family balance; their work→family conflict has significant positive correlation with their family→work conflict. (We only list major correlations similarly hereinafter).

Table 2. Means, Standard Deviations and Correlations (Employees in One-Earner Families) (n =160)

	M	SD	1	2	3	4	5	6	7	8
1 Work Flexibility Ability	3.24	.96	1							
2 Family Flexibility Ability	3.91	.78	.403 ^{***}	1						
3 Work Flexibility Willingness	2.82	.79	.579 ^{***}	.217 ^{**}	1					
4 Family Flexibility Willingness	3.6	.77	.1	.525 ^{***}	-.104	1				
5 Work→Family Conflict	2.73	.97	-.124	.12	.047	.243 ^{**}	1			
6 Family→Work Conflict	1.94	.74	.164 [*]	-.092	.295 ^{***}	.027	.475 ^{***}	1		
7 Work→Family Enrichment	3.13	.81	.159 [*]	.142	.145	.031	-.018	.131	1	
8 Family→Work Enrichment	4.03	.63	.165 [*]	.483 ^{***}	.104	.322 ^{***}	.117	-.111	.315 ^{***}	1
9 Work-family Balance	3.74	.68	.214 ^{**}	.312 ^{***}	.036	.241 ^{**}	-.09	-.237 ^{**}	.388 ^{***}	.573 ^{**}

Note: ^{*} represents $p < 0.05$; ^{**} represents $p < 0.01$; ^{***} represents $p < 0.001$ (similarly hereinafter).

Table 3 reveals that work flexibility ability of employees in two-earner families has significant negative correlation with their work→family conflict; their family flexibility ability had significant correlation with their family→work conflict; their work→family conflict had significant negative correlation with their work-family balance.

Table 3. Means, Standard Deviations and Correlations (Employees in Two-Earner Families) (n =160)

	M	SD	1	2	3	4	5	6	7	8
1 Work Flexibility Ability	3.32	.94	1							
2 Family Flexibility Ability	3.88	.71	.489 ^{***}	1						
3 Work Flexibility Willing	3.00	.83	.405 ^{***}	.055	1					
4 Family Flexibility Willing	3.57	.68	.301 ^{***}	.458 ^{***}	.131	1				
5 Work→Family Conflict	2.55	.89	-.241 ^{**}	-.309 ^{***}	.114	-.13	1			
6 Family→Work Conflict	2.08	.89	-.25 ^{**}	-.5 ^{***}	.207 ^{**}	-.213 ^{**}	.677 ^{***}	1		
7 Work→Family Enrichment	3.29	.79	.132	.101	.218 ^{**}	.208 ^{**}	-.063	-.083	1	
8 Family→Work Enrichment	4.02	.73	.162 [*]	.344 ^{***}	.076	.255 ^{**}	-.169 [*]	-.298 ^{***}	.48 ^{***}	1
9 Work-family Balance	3.79	.69	.196 [*]	.291 ^{***}	.174 [*]	.311 ^{***}	-.177 [*]	-.292 ^{***}	.493 ^{***}	.627 ^{***}

Independent Samples t Tests

Regarding employees in one-earner families and two-earn families as between-subject factors, we adopted the independent samples t tests to analyze the scores of each dimension of boundary flexibility and the relevant variables of work-family interface. We compared the results with the data above, and concluded the differences. The detailed results are presented in Table 4.

Table 4. Variance Analysis on Each Dimension of Work Flexibility and Relevant Variables of Work-Family Interface (n=320)

	<i>t</i>	<i>p</i>		<i>t</i>	<i>p</i>
Work→family conflict	-2.296*	.022	Work flexibility ability	.737	.462
Family→work conflict	1.499	.135	Family flexibility ability	-.403	.687
Work→family enrichment	2.446*	.015	Work flexibility willingness	2.202*	.028
Family→work enrichment	-.164	.870	Family flexibility willingness	-.403	.687
Work→family balance	.599	.550			

Table 4 reveals that employees in one-earner families and two-earner families have remarkable differences on 3 dimensions: work→family conflict, work→family enrichment and work flexibility willingness. Specifically, the work→family conflict of the employees in the two-earner families was significantly lower than that of the employees in one-earner families, and their work→family enrichment and work flexibility willingness were significantly higher than that of the employees in one-earner families.

Discussions

Hypothesis Verification

Parts of the study results supported Hypotheses 2 and 3, but contrasted with Hypothesis 1. It was the complete opposite to Hypothesis 1 that the work→family conflict of the employees in two-earner families was significantly lower than that of the employees in one-earner families. The results indicated that although we proposed that demanding a more family role would cause fiercer work family conflict, compared to employees in the one-earner family. This situation could be relieved by mutual understanding between couples. In two-earner families, the husbands and wives face the same demand of the work role, so they can understand each other, which means even one of the family was too busy to handle family affairs, the other could take over it immediately. Therefore, couples could experience a less ambivalent, but more harmonious family life. On the contrary, in a one-earner family, the person who has no work lacks the work role demanding experience, thus it might be difficult for them to understand and accept the work demands of their spouses. Once an employee in a one-earner family confronts the conflict between the work role and family role, it seemed more complicated to resolve, and the conflict will probably further deteriorates.

Parts of Hypothesis 2 were proved in that that the work→family enrichment of the employees in two-earner families was significantly higher than that of the employees in one-earner families. The employees in two-earner families had to take their work and family roles into consideration at the same time, which definitely produced inter-role crossover and mutual influence, and by that time, the resources of the employees in two-earner families would optimize their performance in the field of the family. However, the roles of the employees in one-earner families were relatively simple and single, which meant that they were only charged with work. Then, their spouses had to cope with most of the family affairs, or play the family roles, thus the work→family enrichment of employees in one-earner families was lower than that of employees in two-earner families.

Parts of Hypothesis 3 were proved in that work→family willingness of the employees in two-earner families was significantly higher than that of the employees in one-earner families. Because of work, employees in two-earner families had to handle family affairs in their spare time with more family demands, which resulted in a stronger willingness to transfer from their work role to their family role.

Nevertheless, spouses of the employees in one-earner families could help them with the housework; the working ones could focus on their work attentively with lower family demands and presented lower work flexibility willingness.

Other Study Findings

We concluded that the work flexibility ability of the employees in two-earner families had significant negative correlation with the work→family conflict, which means the stronger work flexibility ability was, the weaker the work→family conflict was, but the relevant result of the employees in one-earner families didn't show the same features. The family flexibility ability of the employees in two-earner families had significant negative correlation with the family→work conflict, which means the higher the work→family conflict is, the lower the work-family balance is, but the relevant result of employees in one-earner families didn't show the same features.

The results above reminded us that the differences in the subjects caused obvious differences of the study results. Some similar results seldom reflect in the group of employees in one-earner families. Hence, whether the subject's spouse has to work should be noticed and controlled in future work family interface study to ensure the accuracy of the study results.

Practical Implications

Under the acceleration period of the reforming and developing in China, the two-earner family model had gradually replaced the one-earner family model, however, the model received some queries. Researchers reckoned that the serious surplus labor force population in China caused unemployment, and job positions were far beyond requirement. Thus, it is more reasonable to implement a one-earner employment policy (Che & Zhou, 1998). After listening from all walks of life, questions have arisen: how do individuals make their choices? Regardless of economic factors, which one is better to enhance individual life quality, the one-earner family model or the two-earner family model? This study provided a certain enlightenment for this problem.

Based on the results, the work→family conflict of the employees in two-earner families was less than that of employees in one-earner families. The work→family enrichment of the employees in two-earner families was higher than that of employees in one-earner families. The work→family conflict can predict life satisfaction to a large extent (Tong & Zhou, 2009), and work family enrichment can predict individual psychological health condition as well (Grzywacz, 2000). Thus, under the same conditions, it is more preferable for individuals to choose the two-earner family model than the one-earner family model, because the two-earner family model offers a higher quality of life.

Conclusion

1. The work→family conflict of the employees in two-earner families is significantly lower than that of the employees in one-earner families, and their work→family enrichment and work flexibility willingness are significantly higher than that of the employees in one-earner families.
2. It should also be noticed and controlled whether the subject's spouse has to work in future work family interface study to ensure the accuracy of the study results.

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The Trait of ‘Smart-Selfishness’ about Middle-Class Occupational Young People and its Relation with Social Mentality: A Social Psychological Perspective of Creativity and Prosocial Tendency

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[Abstract] *Social mentality has an important effect on occupational mental health, and it might be impacted by individuals’ specific personal traits. The present research mainly focuses on social mentality and the relative impact factors of Chinese middle-class young people from universities, government departments and enterprises. We used holistic and an analytic thinking style, and value judgment on materialism as two important social cognitive basements of social mentality. Then, we classified four types of personal traits based on the variables of creativity and altruism. One of the four was called ‘smart-selfishness’ which refers to people with a high level of creativity and a low level of altruism. We also examine the relationship between the trait of ‘smart-selfishness’ and the basement of social mentality. The results show that young people with the trait of ‘smart-selfishness’: (a) generally demonstrated much more of a trend of analytic thinking style than other types, and (b) generally demonstrated much more materialistic value than other types.*

[Keywords] *occupation; cognitive basement of social mentality; ‘smart-selfishness’; creativity; prosocial tendencies; altruism*

Introduction

In recent decades, the theoretical and empirical studies of occupational psychology have gradually become a significant research field of applied psychology (e.g., Super & Bohn, 1971; Banks, Clegg, Jackson, Kemp, Stafford, & Wall, 1980; Hacker, 1994; Varga, et al., 2012). Occupational psychologists mainly aim to solve three research questions: the impact factors of individuals’ mental health or well-being in the workplace, the strategies of career development for new employees, and how to coordinate the psychological connection between employers and employees during organizational management. The present research will explore a relatively new point of view to further supplement the studies of occupational psychology. Such exploration refers to particular social mentalities based on the process of social cognition. As a dispersed social mood, social mentality reflects an integration of social affection accordatura, social consensus and social value (Yang, 2006; Wang, 2011). Wang and Yang (2014) have proposed an indigenized understanding of social mentality in a particular period, which is defined as a group of universal or consistent psychological characteristics and behavioral patterns held by the majority of social members.

Social mentality has plenty of heterogeneous implications because it is related to both the cognitive and affective processes of social interactions, and it also has important impacts on the outcomes of those processes, i.e., a stable attitudinal system in workplace, perceptions of career relevant interests, occupational efficiency and behavioral patterns (Lent, Brown, & Hackett, 1994). For example, individuals’ positive mentalities and coping strategies during one’s long term career development will improve the

conditions of occupational mental health (Needle, Griffin, & Svendsen, 1981). Another research investigated the relationship between occupational stress, social support, job control and psychological well-being (Daniels & Guppy, 1994). Social mentality seems to be a coverall concept that includes cognition, affection, behavioral intention and even the outcome variables, such as well-being and mental health. Therefore, it is such a complex psychological construction that researchers have had a hard time making a clear understanding about all of its social and psychological implications.

Given this, we specifically limited our research issue to a narrow field. Such a field refers to the social mentality's cognitive basement which is constructed by two aspects of mental processes in the perspective of social cognitive psychology. One aspect refers to the holistic versus analytic thinking styles which play a role of a cognitive mechanism during basic social or cultural interactions (Nisbett, Peng, Choi, & Norenzayan, 2001) and occupational practices such as how to ascertain a behavioral responsibility during an event of gross negligence in the context of enterprise organization (Kwan & Chiu, 2014). Specifically, holistic thinking refers to the particular cognitive style with which the individuals try to understand a phenomenon in a macroscopic context and the related problems are solved in a holistic way. In contrast, analytic thinking style refers to an independent consideration of social or personal issues with less concerns about the situational information. According to Choi's theory (2007), a four dimensional structure of scale can be used to test the extent to which individuals think about and solve routine problems either with a holistic or an analytic style. The first dimension is *focus of attention*, i.e., the focus on the relationship between the whole field and the objects (holistic style) versus the focus primarily on the objects themselves (analytic style). The second dimension is *explanation of causal relationship*, i.e., the causality belief of interactionism which is related with a complex causalities based on the interactions between 'an actor and his or her surrounding situations' (holistic style) versus the belief of dispositionism which just includes the causal consideration of personal disposition (analytic style). The third dimension is *perception of change*, i.e., the belief of a cyclic system which refers to a state of constant change (holistic style) versus the belief of a linear system which refers to a similar patterns of change (analytic style). The fourth dimension is the *contradiction* of two contradictory opposites, i.e., naive dialecticism based on a compromised assumption that each one of the opposites can be eventually transformed into the reverse side (holistic style) versus formal logic as a problem-solving approach with an all-or-none principle to resolve contradictions by arbitrarily eliminating one of the two opposites (analytic style) (Choi, Koo, & An Choi, 2007). The other cognitive basement of social mentality is a specific kind of value judgment related with the material level of social reality. Materialistic value is related with both general value (Kilbourne & LaForge, 2010) and other specific values in relevant fields such as consumption (Sevgili & Cesur, 2014), workplace behaviors and organizational management (Deckop, Giacalone, & Jurkiewicz, 2015). According to the definition proposed by previous researchers (Kasser & Ryan, 1996; Inglehart, 2008), materialism has been understood as a set of value or goals for a person to satisfy his or her need of physical and economic security through the pursuit of material wealth. Hofmesister and Neulinger (2013) proposed a three dimensional structure of materialism in the questionnaire, which includes possessiveness (e.g., reversed scored 'I don't get particularly upset when I lose things'), non-generosity (e.g., reversed scored 'I enjoy sharing what I have') and envy (e.g., I am bothered when I see people who buy anything they want). While in a much more cognitive view, Richins (2004) developed another three dimension, i.e., *success* (e.g., 'I admire people who own expensive homes, cars, and clothes'), *centrality* (e.g., 'I enjoy spending money on things that aren't practical') and *happiness* (e.g., 'My life would be better if I owned certain things I don't have') so as to test the value of materialism.

Under occupational environment, the holistic or analytic think style reflects the basic approach with which individuals to understand the key point of their position statement (attention), impact factors of how to increase job performance (causality), transformation pattern of industrial prosperity degree (perception of change), and the philosophies of how to coordinate the interpersonal conflicts among enterprise between different employees or personally internal conflict between career and family (attitude toward contradiction). Therefore, such a dichotomous form of thinking style can imply the cognitive basement of social mentality for those employers and employees. In addition, the value judgment of materialism reflects the basic standards with which individuals explore the meanings of business consideration or job salary during the ordinary employees' life span, as well as the relationship between organizational behaviors and the pursuit of wealth. In other words, the strength of materialism in a person's belief system can be seen as a reference to judge what is his or her most valued thing is during the process of long term goal pursuit. It is reasonable to take the holistic & analytic thinking styles and materialistic value as the social cognitive basement of social mentality in occupational background.

Then the next question arises. Is such a social cognitive basement influenced by some relative steady psychological factors? It is probably that there are some deep-level dispositions that affect the extent to which an ordinary employee understands the key point of his or her job position with a method of either a holistic or analytic thinking style, and the extent to which an ordinary employee connect their ultimate goal of career development with the pursuit of wealth. The first aspect of such dispositional factor is related with the capacity of creativity, which is perceived as an important indicator to judge the efficiency of thinking and resolving problems about an ordinary person. There are two critical feathers of the creativity ability: that is, novelty and usefulness (Sawyer, 2006; Sternberg & O'Hara, 1999). People with high level of creativity tend to be nonconforming, flexible, independent, open to new experience and willing to take risks (Simonton, 2003). Some researchers have empirically found that the internal factors such as personality, affect, cognition, motivation, intelligence, tolerance of ambiguity, self-confidence, and cognitive flexibility can facilitate or impair creativity (see Leung, et al., 2008), as well as the contextual factors such as the setting arrangements in the work place (Knight & Baer, 2014) or the social status pattern in the context of cultural mixing (Zhang, 2016) can also influence the performance of a creative task. Even so, other researchers still viewed creativity as a stable trait that can influence some specific cognitive processes, such as the negative priming effect of divergent thinking on the attentional mechanism of cognitive inhibition (Stavridou & Fuenham, 1996), and the positive effect of creativity on children school performance (Hansenne & Legrand, 2012). So we propose that the more stable personality of an individual, the higher level of creative cognition might play a dispositional role during the forming process of his or her social mentality in the workplace. The second aspect of the dispositional factor that influences the social cognitive basement of employees' social mentality is the tendency of prosocial behavior during their occupational practices. Prosocial behavior refers to the altruistic actions that accompany the outcomes of benefiting others and connecting with others. Such outcomes have been proven to be the most prototypical features of prosocial behavior (O'Reilly & Chatman, 1986). According to the Prosocial Tendencies Measure (PTM) proposed by Carlo and Randall (2002), people mainly conduct prosocial behavior with six types of tendencies: altruistic, compliant, emotional, dire, public, and anonymous. Among these dimensions, the altruistic tendency has been considered as the purest element of prosocial behavior because it reflects the striving to relieve victims' pains without any consideration for the behavioral cost or the future feedback of the victims. Kanungo and Conger (1993) argued that altruism has a place in the business world and it can bring good economic sense because the macroscopic trend of today's globalization needs more

interdependence, cooperation and loyalty rather than independence, competition and individualism. Still, altruism as an irrational tendency seems to be incompatible in the occupational situations with frequent interpersonal communications and material exchanges. People with a high level of altruism might suffer losses in microscopic competitive context. Hence, we propose that as a pure element of prosocial personality, altruism plays a impairing role during the adaptable process of any microscopic competitions.

In summary, the inquisitive question of the present research is the relationship between the combined of creativity (high and low) and altruism (high and low), as well as their four sub-types and the cognitive basement of social mentality, i.e., thinking style and materialistic value. Particularly, we are exploring the personal trait of a high level of creativity and low level of altruism, as well as the relationship between such traits and the cognitive basement of social mentality. We assume that compared with those three sub-types, such a smart and selfish type will demonstrate a more concrete and lower level of thinking style, but a higher level of materialistic value.

Method

Participants

574 young people were sampled from the province of Guangdong, Xinjiang, Heilongjiang, Shanxi and Beijing in mainland China; the proportion of females is 46.5%. All of the participants were younger than 40 years old. The mean age of the participants was 32 years old ($SD = 4.23$). There were three types of occupations among these participants: 162 teachers from universities, 184 civil servants from government departments, and 228 white-collar employees from enterprises.

Measurements

Cognitive basement of social mentality. Firstly, according to the existing research (Choi, et al., 2007), four dimensions of thinking style, i.e., attention ($\alpha = 0.82$), causality ($\alpha = 0.67$), perception of change ($\alpha = 0.60$), and contradiction ($\alpha = 0.63$) were used to examine the extent to which the participants understood and practiced the holistic thinking style rather than the analytic style in their workplace. Participants were asked to rate on a Likert scale from 1 (extremely disagree) to 5 (extremely agree). The higher estimation on the scale means the participants are more likely to be holistic, whereas the lower estimation means they are more likely to be analytic. Secondly, according to the study of Richins (2004), a short form material value scale of 9-items with three dimensions (success, centrality, and happiness) was used to measure materialism of young people. Participants were asked to rate the similarity between the descriptions and themselves on a Likert scale from 1 (extremely dissimilar to me) to 5 (extremely similar). A rough description of materialism was emphasized in the present research. So we averaged all of the nine items as an integrated measure of global materialism (global $\alpha = 0.73$).

Dispositional factors. The first factor was creativity. It was the Chinese edition of *Creative Tendency Scale (CTS)*, which had been revised by Lin and Wang (1997) according to Williams' theory. A 50-item measure was designed to assess four types of abilities on a 3-point Likert rating scale ranging from 1 (*extremely disagree*) to 3 (*extremely agree*). The four types included *Curiosity* ($\alpha = 0.70$), *Adventure* ($\alpha = 0.60$), *Challenge* ($\alpha = 0.69$) and *Imagination* ($\alpha = 0.82$). They were then averaged and integrated into one global measure of creativity. The second factor was prosocial tendency of altruism, which was selected from the six-dimensional structure of Prosocial Tendencies Measure (PTM, Carlo & Randall, 2002). According with Carlo's theory, people mainly conduct prosocial behavior with 6 types of tendencies: altruistic, compliant, emotional, dire, public, and anonymous. A revised edition of PTM also supports the

6-dimension of prosocial tendency with a sound psychometrical criterion among Chinese adolescents (Kou, et al., 2007). The validated Chinese version suggests that it is also reasonable for Chinese people to conduct prosocial behavior which is driven by the motivations related to the above six tendencies. The tendency of altruism ($\alpha = 0.71$) refers to relieving victims' pains without the consideration of any feedback or cost. Participants were asked to rate the similarity between the descriptions and the truths of themselves on a Likert scale from 1 (extremely dissimilar to me) to 5 (extremely similar to me).

Results and Discussion

Categories Analysis

An analysis of mid-split was used to categorize different kinds of individuals based on the dispositional factor of creativity and altruism. The result demonstrated that there was a nearly proportional distribution of the 2 (high level of creativity versus low level of creativity) \times 2 (high level of altruism versus low level of altruism) structure. Respectively, the proportion was 19.6% (high creativity and low altruism), 21.0% (high creativity and high altruism), 35.4% (low creativity and low altruism), and 24.0% (low creativity and high altruism). Much of the attention in the present research was placed on the high level of creativity and low altruism, which was named as '*smart-selfishness*'. Such a compound trait can represent a typical group of young people in current China's middle class. They have plenty of strategies to adapt to the social change and gain benefits for themselves regardless of the welfare and benefits of other people. What we want to know is how they adapt to the complex model of social change with no loss of personal interests. It is possible that such a question can only be limitedly interpreted by the high level of creativity and low level of altruism. The trait of '*smart-selfishness*' may be related with some more deep-seated social cognitive factors. Therefore, a further analysis should be conducted to examine the relationship between personal traits based on the ability of creativity and the moral characteristic of altruism.

Table 1. Relationships Between Social Thinking, Material Values and Personal Traits. 'C': Creativity; 'A': Altruism

	Holistic & Analytic Thinking Style				M. value
	<i>Causality</i>	<i>Contradiction</i>	<i>Change</i>	<i>Attention</i>	
High C. & low A. (<i>'smart-selfishness'</i>)	4.03(0.79)	3.56(0.59)	3.08(1.04)	3.51(0.56)	3.21(0.69)
High C. & high A.	4.52(0.56)	4.02(0.62)	3.31(0.82)	3.99(0.66)	3.33(0.76)
Low C. & low A.	3.81(0.81)	3.46(0.78)	2.98(0.57)	3.46(0.60)	2.96(0.50)
Low C. & high A.	4.49(0.56)	3.90(0.58)	3.05(0.72)	3.81(0.62)	2.92(0.91)
<i>F</i> test	29.11**	17.09**	3.66*	17.26**	8.15**

The Relationship Between Personal Traits and the Cognitive Basement of Social Mentality

As shown in Table 1 and the multiple comparisons after the analysis of one-way ANOVA: (1) participants with the trait of '*smart-selfishness*' significantly demonstrated a lower tendency of holistic causality belief than those with high C & high A, and low C & high A; (2) participants with the trait of '*smart-selfishness*' significantly demonstrated a lower tendency of holistic contradiction belief than those with high C & high A, and low C & high A; (3) participants with the trait of '*smart-selfishness*' significantly demonstrated a lower tendency of holistic change belief than those with high C & high A; (4) participants with the trait of '*smart-selfishness*' significantly demonstrated a lower tendency of holistic attention belief than those with high C & high A, and low C & high A. As for the value judgment of materialism, the result showed that

the participants with the trait of ‘smart-selfishness’ significantly demonstrated a higher tendency of material value than those with low C & low A, and low C & high A.

Generally speaking, such results suggest that the trait of ‘smart-selfishness’ with a high level of creativity and a low level of altruism is related to the tendency of analysis rather than a holistic thinking style and is related with a higher level of materialistic value. Possibly, the present research can help us to understand the mechanism of why such individuals in China can develop a good adaptation during the stupendous changes in the recent 30 years. Moreover, the present research also provides an adaptive model under the current Chinese culture. Such an adaptive model implies that as an external resource, the conventional thinking style in western culture, i.e., the analytic style, may help some Chinese people to efficiently achieve their own goals. However, the thinking mode of holistic style is insufficient because it is only a method of goal pursuit. The value of materialism may provide guidance to solve individuals’ confusion of weltanschauung to benefit themselves without any scruples.

Conclusion

In conclusion, the present research made a primary exploration about a specific type of youth group called ‘smart-selfishness’ with the internal dispositions of high creativity and low altruism. We found a relative close relationship between the trait of ‘smart-selfishness’ and the analytic thinking style, as well as the value of materialism, which is considered the cognitive basement of social mentality. Such a trait will demonstrate an adaptive model of goal pursuit during the process of social change. Moreover, the social phenomenon based on this trait may reflect the mixture between the modern public spirit and the traditional patriarchal spirit. Further research should continue to explore the internal structure of ‘smart-selfishness’ to examine its underlining mechanism.

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Primary and Secondary School Teachers' Mental Health Diathesis from the Perspective of Virtues and Strengths

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[Abstract] *From the perspective of virtues and strengths, this paper discusses the model of happiness education within the Chinese cultural context, along with teachers' professional features, and puts forth the core concept of teachers' mental health diathesis. It also examines how clinical work and the career field promotes teachers' mental health and professional happiness. 568 teachers from Jilin Province in China were asked to complete the Teachers' Mental Health Diathesis Questionnaire. It concludes that teachers' positive mental resources, especially the "open-minded" general mental health diathesis and "psychological communication" of professional mental health diathesis, are conducive to promoting good mental health and professional happiness.*

[Keywords] *primary and secondary school teachers; mental health diathesis; virtues and strengths; happiness education*

Introduction

In recent years, the World Health Organization and the International Labour Organization, the latter of which is dedicated to promoting the mental health of employees, have indicated that the public health issue of mental health in the workplace has received an increasing amount of attention (Gabriel & Liimatainen, 2000; Lavikainen, Lahtinen, & Lehtinen, 2000; World Health Organization, 2002). In a survey conducted by the European Agency for Safety and Health at Work (2000), 28% of the employees reported experiencing mental health problems in relation to their work. A series of interventions regarding employees' stress, anxiety, and depression have been put into practice in the United States, Europe, and Japan (Dunnagan, Peterson, & Haynes, 2001; Health Education Authority, 1999; Jones, Tanigawa, & Weiss, 2003). These interventions are targeted at addressing in-depth the potential risk factors that affect employees' mental health in different work environments. Teachers and other education workers are considered to be at high risk for developing psychological problems because of the high pressure they experience at work (Johnson, Cooper, Cartwright, Donald, Taylor, & Millet, 2005). Teachers face various forms of pressure in daily work situations, including teaching, class management, human relationships, title assessments, and various examination evaluations, which lead to mental and physical symptoms, such as exhaustion, somatic symptoms (e.g. depression, anxiety, panic disorders), job burnout, and even uncivilized workplace behaviors (Zhou, Yan, Chen, & Meier, 2014), such as bullying co-workers or being rude to students.

It is human instinct to want to find out how to face a disease or problem, however, the higher-level goal of psychology is not only to cure mental disorders, but also to make life more meaningful by identifying and developing virtues and strengths. A teacher with positive emotions, personality traits, and social systems not only experiences a happier, more fulfilling life, but they also bring positive power to his/her students, which promotes a happy education. A primary objective of positive psychology is causing people to feel full of life and to be able to identify and cultivate their inner potential (Meng,

2008). Thus, the positive psychology theory system can be combined with the promotion of teachers' mental health diathesis.

Cultural context must be considered. Cultural, social, and political factors have an important influence on people's happiness. Specifically, compared with European-Americans, African-American and Japanese people experience a relatively smaller positive effect of everyday experience on happiness, whereas achievement at work has a relatively greater impact on happiness among the latter groups (Carr, 2013). Cultural factors partly determine how personality traits and quality of mental health are related to happiness; the mechanism may be that cultural values determine goal setting, with achievements of these goals then leading to happiness (Triandis, 2000). Therefore, there is a need for further research to examine how best to integrate the concepts of virtues and mode of happiness with factors of the Chinese culture and professional characteristics.

From this background, we put forward the local concept of teachers' mental health diathesis, which is consistent with the positive psychology quality of individuals' strength orientation. Before this, Shen and Ma (2004) put forward the concept of mental health diathesis of heredity and environment, based on a related study of clinical psychology, defining it as an intrinsic and stable psychological quality that influences or determines individuals' psychological, physiological, and social function, thus affecting their mental health and adaptation level. Thus, from the perspective of virtues, combined with cultural background, this study defines teachers' mental health diathesis as cognitive, emotional, and behavioral strengths that are developed and adapted in the self and society, and manifest as an external pattern of continued, positive psychological function. The goal in this study is to apply a practical and effective professional evaluation model and intervention training mechanism to clinical work and career fields, in order to promote employees' mental health and happiness.

Method

Participants and Procedures

Of 600 primary and secondary school teachers who were invited to participate in this study, 568 provided valid responses, including 260 (45.8%) teachers in primary schools, 271 (47.7%) in junior high schools, and 37 (6.5%) in senior high schools. Of these, 120 (21.1%) were males and 448 (78.9%) were females. In terms of levels of education, 63 (11.1%) held a junior college degree, 497 a bachelor's degree (87.5%), five (0.9%) a master's degree, and three (0.5%) held a doctoral degree. There were 12 (2.1%) third-grade teachers, 172 (30.3%) second-grade teachers, 306 (53.9%) first-grade teachers, 75 (13.2%) senior teachers, and three (0.5%) high-grade senior teachers. There were 65 (11.4%) individuals with less than 6 years of teaching experience, 199 (35%) between 6 and 15 years, 223 (39.3%) between 16 and 25 years, and 81 (14.3%) with 26 or more years.

Measure

Participants completed the Teachers' Mental Health Diathesis Questionnaire (TMHDQ) (Li & Liu, 2015), which is composed of general mental health diathesis and professional mental health diathesis subscales. The former subscale includes eight dimensions (55 items): open-mindedness, respect and appreciation, emotional stability, kindness, tolerance and understanding, love for family and devotion to their job, positivity and optimism, and culturally literate; whereas the latter subscale includes five dimensions (33 items): use of psychological communication, teaches by learning, coping strategies, positive guidance, and understanding students. The respondents were asked to rate the extent to which each item described

them, on a 5-point Likert-type scale ranging from 1 (very much unlike me) to 5 (very much like me). The total score was calculated by adding all the items, with a high score reflecting a higher degree of the mental health diathesis within an individual. The current internal reliability coefficients of the general mental health diathesis ($\alpha = 0.972$) and professional mental health diathesis ($\alpha = 0.945$) subscales were excellent.

Data Analysis

Data analyses were conducted using SPSS version 21.0. Descriptive statistics were used to assess the teachers' mental health diathesis, including eight dimensions of general mental health diathesis and five dimensions of professional mental health diathesis. Analyses of variance were carried out to test differences in demographic variables, such as gender, educational background, professional titles, number of years of teaching experience, and teaching school level.

Result

Overall Level of Primary and Secondary School Teachers' Mental Health Diathesis

Analysis of participants' mean scores and standard deviations showed that the open-mindedness dimension of the general mental health diathesis subscale had the highest scores, along with the psychological communication dimension of the professional mental health diathesis subscale. The results of the t test ($t = 144.69$, $p < 0.001$) showed that scores for general mental health diathesis were significantly higher than those for professional mental health diathesis. According to the psychometric requirements, using two standard deviations to evaluate the results of the survey, participants in each dimension of the two subscales showed a low score on emotion stability (4.75%) and positivity and optimism (4.05%) dimensions of the general mental health diathesis subscale, and the understanding students (5.81%) dimension of the professional mental health diathesis subscale. Overall, the percentage of very low-level mental health (3.52%) indicates that primary and secondary school teachers' mental health diathesis is high.

Participants' Demographic Variables

Analyses of variances were used to describe the characteristics of teachers' mental health diathesis on gender, educational background, professional titles, number of years of teaching experience, and teaching school level. The results showed that there was no significant difference in terms of gender, however, the open-mindedness ($F = 3.58$, $p < 0.05$), respect and appreciation ($F = 3.00$, $p < 0.05$), emotional stability ($F = 3.15$, $p < 0.05$), and kindness ($F = 5.03$, $p < 0.01$) dimensions of general mental health diathesis, and the use of psychological communication ($F = 3.70$, $p < 0.05$) and use of positive guidance ($F = 3.65$, $p < 0.05$) dimensions of professional mental health diathesis showed significant differences in terms of the participants' levels of education. There were significant differences in professional titles in terms of the emotional stability ($F = 2.66$, $p < 0.05$) dimension of general mental health diathesis, and the teaches by learning ($F = 2.63$, $p < 0.05$) dimension of professional mental health diathesis. There were significant differences in the number of years of teaching experience in terms of the open-mindedness ($F = 4.04$, $p < 0.01$), emotional stability ($F = 3.85$, $p < 0.05$), tolerance and understanding ($F = 2.87$, $p < 0.05$) dimensions of general mental health diathesis, and the use of positive guidance ($F = 2.88$, $p < 0.05$) dimension of professional mental health diathesis. There were significant differences in teaching school levels in terms of the respect and appreciation ($F = 7.51$, $p < 0.01$), kindness ($F = 4.42$, $p < 0.05$),

tolerance and understanding ($F = 4.60, p < 0.05$), loves family and job devotion ($F = 8.82, p < 0.001$), and positivity and optimism ($F = 3.07, p < 0.05$) dimensions of general mental health diathesis, and the use of psychological communication ($F = 2.87, p < 0.05$), teaches by learning ($F = 2.87, p < 0.05$), uses coping strategies ($F = 2.87, p < 0.05$), and uses positive guidance ($F = 2.87, p < 0.05$) dimensions of professional mental health diathesis.

Discussion

Overview of Primary and Secondary School Teachers' Mental Health Diathesis

Teachers' mental health diathesis includes not only a psychological quality, but also the teacher's own cognition, emotions, behavior, and personality qualities (Li & Liu, 2015). Professional mental health diathesis directly promotes the development of students' mental health, whereas general mental health diathesis indirectly affects students' positive personality. Assessment tools were used in this study to discuss the development and adaptation of teachers from both macroscopic and microscopic perspectives in terms of the cognition, emotion, behavior, personality, adaptation to comprehensive analysis of teachers' mental health, and psychological potential problems of teaching and management.

"Open-mindedness" is a desirable personality characteristic in teachers (Cline & Necochea, 2006; Hare, 2002). Stanovich (1999) considered open-minded people to have relatively stable psychological mechanisms and strategies that tend to generate characteristic behavioral tendencies and tactics. Teachers with more open-minded thinking styles reported a higher likelihood of adapting instructions, and the degree of open-mindedness was found to be a predictor of their attitudes (Elik, Wiener, & Corkum, 2010). This study indicated that teachers' high self-evaluation in relation to the open-mindedness personality dimension of general mental health diathesis, which relates to responses to workplace conditions, such as interpersonal relationships and title evaluations, reflects growth in teachers' psychological and professional skills, along with increased government investment into education resources. From the perspective of development and adaptation, self and society correspond to development, whereas life and work correspond to adaptation (Yu, Jin, & Zheng, 2010), so "psychological communication" which relates to the teacher effectively using psychological counselling methods to communicate with students, belongs to the adaptability dimension. This form of communication also relates to teachers' abilities to coordinate themselves within the learning environment, and reflects a stronger interest in education and ability to use professional skills to analyze teaching and problem situations, and maintain a positive classroom atmosphere, which are vitally important to the quality of teaching (Levy, Brekelmans, & Morganfield, 1997).

Characteristics of Teachers' Mental Health Diathesis in Relation to Level of Education

The relationship between education level and general mental health diathesis has been explained from the perspectives of cognitive thinking, education resources, and economic status, where those with higher levels of education also have higher individual cognitive thinking, well-being, and socioeconomic status (Michalos, 2010). Professional mental health quality is mainly embodied in teaching and management; generally speaking, teachers with a junior college degree and more years of teaching experience have mainly reached teaching and management achievements through practical experience, and studies have found that they are more effective than novice or early-career teachers (Clotfelter, Ladd, & Vigdor, 2007; Rockoff, Jacob, Kane, & Staiger, 2011). The study also found that teachers with a master's degree had the lowest scores, which could be due to high expectations, research difficulty, and low pay inducing a

psychological imbalance (He, Tan, Zhao, & Wu, 2010). Teachers with a doctoral degree have reached a certain stage of professional learning, have divergent thinking, are more independent, have better judgement, and have more mature and stable psychological characteristics; thus, existing knowledge experience constantly enhances cognitive ability.

Characteristics of Teachers' Mental Health Diathesis in Relation to Professional Titles

In the process of education, further study is an important approach to improving teachers' professional level and skills. The lifelong education and democratization trends in teachers' roles promote a shift from the imparting of knowledge to student individuality development facilitator, which requires teachers to reflect on their own views on education, children, and practice, inspect related theory within education practice to improve their own practices, and achieve professional development (Liu, 2013). Title evaluation relates to the school undertaking teacher education achievement and recognition, and affects, to a certain extent, the teachers' social status, including their economic income and welfare (Wang & Yuan, 2013). High-grade senior teachers have not only professional skills, but also high ethics, while second-grade teachers may be in a difficult climbing period, in that they are not satisfied with their teaching tasks and payment.

Characteristics of Teachers' Mental Health Diathesis in Relation to Number of Years of Teaching Experience

With accumulation of experience, individuals can react to the subjective and objective conditions of stress by adopting mature coping, including adjusting their mood, being cognizant of the problems, and understanding others' situations; essentially, experiences are individual-environment transactions, an outcome of the cognitive appraisal of personal resources and stressors (Duan, He, Siu, Li, & Zhang, 2015). Teachers with 26 or more years of experience have, in the long term, learned to effectively regulate their emotions, understand students' cognitive models, and use a variety of methods to guide students. After five years of work as a novice teacher, those who have worked as teachers for between 6 to 15 years have entered the second stage, wherein they find that their lives are more stressful, with higher family expectations, more urgent demands for a higher level of professional title, and a heavy teaching and scientific research workload. Teachers in this stage can engage in self-adjustment or attend interventions, like "national training programs" (i.e. the Primary and Secondary School Teachers National Training Program, which aims to improve primary and secondary school teachers' abilities, including providing professional and psychological quality training). Davies (2005) has indicated that people with more open-minded traits are more likely to profit from such interventions.

Characteristics of Teachers' Mental Health Diathesis in Relation to Teaching School Level

Teachers play a crucial role in early detection of students' mental health problems and subsequent referrals to intervention support services (Graham, Phelps, Maddison, & Fitzgerald, 2011). They are frequently the first to observe maladaptive behaviors that affect students' learning and overall functioning, and student performance, in turn, also affects teachers' mental health status. Adolescents' mental conflicts develop with age so that, in the initial stage, at the elementary school teaching level, the level of conflict is low, which means that the individual can address this with their existing knowledge experience and strategy. In the medium term, at the junior middle school teaching level, psychological conflict increases, and the individuals' existing knowledge experience and strategy are not sufficient to address these conflicts, and new knowledge and strategies have not yet fully formed. Finally, at the high

school teaching level, psychological conflicts are still high, but individuals have obtained new knowledge and strategies to effectively solve these. Some studies have found that junior high school students are prone to developing behavioral problems, such as anxiety, moral problems, physical and mental disorders (Shen, Shen, & Lu, 2011), which means that junior high school teachers spend large amounts of energy and, therefore, there is a more pressing need to identify and use their positive psychological resources.

Limitation

This study has several limitations. First, although we are the first to explore primary and secondary school teachers' mental health diathesis, few health-related variables were included in our research framework. Future studies should adopt different measures to further clarify the mechanisms by which mental health diathesis functions. Second, longitudinal studies need to be conducted to examine the different functions of mental health diathesis in different stages. Third, a self-reporting questionnaire may not allow for in-depth measurement of teachers' performances and responses. In order to gain further insight into teachers' mental health diathesis, investigators should also use interviewing and classroom observation techniques.

Conclusion

The theoretical perspective and measurement tool we adopted allowed us to focus on potential positive psychological resources, so that our research had a different viewpoint from that used in similar past research conducted on teachers' mental health. The results of this study make an important contribution to current understanding of the concept of primary and secondary school teachers' mental health education. Our use of an innovative evaluation tool to assess teachers' mental health diathesis education allowed us to examine the needs of all primary and secondary school teachers, not just those with psychological maladjustment. The focus of teachers' mental health diathesis education is to not only solve teachers' psychological problems, but also to identify and cultivate teachers' potential advantages and inner strengths (Li & Liu, 2014). Teachers' psychological health education work should be conducted from the perspective of the virtues and strengths of teachers. Future research should be based on the effective measurement of teachers' mental health diathesis in order to design an intervention training strategy, from the perspective of the development of potential advantages to identify and cultivate teachers' virtues and strengths. In this way, we can enhance teachers' psychological well-being, professional happiness and, ultimately, achieve the goal of happiness education.

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The View of Human Nature from Oriental Psychological Counseling – An Analytic View Based on Chinese Language

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[Abstract] The mission and pursuit of the oriental psychological counseling model should be to explain the psychological phenomenon in the Orient, and to improve the psychological functioning of oriental individuals. This study discusses the cultural dilemma and proposes that cultural roots must be identified and innovative theories applied to build an oriental psychological counseling model. Chinese idioms, folk adages, proverbs, and philosophical stories are analyzed by content analysis method, and finally, the view of human nature is divided into three dimensions, which are self-nature, collective nature, and spirit nature. This study explores the human nature in terms of Chinese people's psychological wisdom, making clear the core concepts of Oriental psychological counseling.

[Keywords] Chinese culture; oriental psychological counseling; The view of human nature; Chinese language

Introduction

Since the 1970s, the applicability of culture, which is frequently studied in psychology, has become an international focus of psychologists and a key aspect in the development of psychology. This developmental feature has highlighted that cultural traditions of different countries and groups of people should not be ignored in the research on psychological counseling. Cultural traditions refer to a system of cultural values and stable aspects of culture that have emerged over a long period and are ingrained in the population (Feng, He, Guy, & Yan, 2001). Human beings reflect the existence of culture, and psychology also has its own cultural features. China, with a history of over 5,000 years of civilization, is affected by the oriental culture in almost every aspect, such as ways of thinking, emotional experiences, and modes of action. Although China is rich in ideas and experiential practices of psychological counseling, it first developed as a science in the West. Therefore, its development has been involved in the same cultural conflicts as the importation of goods. To interpret Chinese individual's psychological phenomena, we need to take culture into account; thus, the redevelopment of the Chinese psychological counseling theory is necessary (Hong & Chen, 2005; Yang, 2002).

The Chinese View of Human Nature Contained in the Chinese Language

“Know yourself”– this topic is the ultimate goal for psychological research. What on earth is a human being? No one; not any ideologists, philosophers, or educators could avoid such an ancient, yet renewed, question. The solution to the mystery of human nature remains at the center of both oriental and occidental philosophy. And whether consciously or not, neither can a psychologist avoid building a psychological theory system based on the thoughts of human nature. The presumption of human nature is meant to be one of value, no matter whether if the psychologists propose it and acknowledge it or not. The understanding of human nature is more of the nuclear problem than psychological counseling concerns. To state it honestly, the view of human nature is the logical starting point to build the counseling theory. Therefore, how to view human nature constitutes the basic theoretical question for psychological counseling, and the

counseling theory based on the view of human nature would move future to take the discipline mission of “help people to know themselves” on the topic of “know yourself”.

A language is the carrier of its culture, and it reflects the characteristic of a nation. It contains not only the history and cultural background of its nation and its people’s outlook on life, value and their style of living and thinking (Ma, 2011). Thus, language is key to understanding culture, and a method of decoding Chinese psychological wisdom. Psychological wisdom refers to the ability for comprehensive psychological regulation in dealing with the activities of society, nature, and life process, and is the core presentation of Chinese traditional culture and Chinese philosophy. French philosopher Francois (2004) compared western philosophy with characteristics of Chinese traditional culture, and noted that Chinese cultural traditions such as Confucianism, Taoism, and Buddhism should be considered ‘wisdom’, rather than ‘philosophy’ in the western sense. All of these make language also a key to understand a culture, and a password to decode the Chinese view of human nature. To explore the Chinese view of human nature, and to provide proof for building an oriental psychological counseling model, we adopted the method of analyzing content with the Chinese language as a carrier, and found the Chinese view of human nature is contained within the idioms, folk adages, philosophers’ proverbs and philosophical stories by analyzing them.

Method

Participants and Procedures

Twenty master’s graduate students, of which 10 were majoring in psychology and 10 in the Chinese language served as members of the project team. First, they thoroughly read Chinese idioms (Xu, 2012), folk adages (Wen, 2012), philosophers’ proverbs (Gai, 1991) and philosophical stories (Hao, 2004), and selected the words or stories that describe human’s psychological activities; they included 444 idioms, 1002 folk adages, 270 philosophers proverbs and 270 philosophical stories. Next, they encoded each word or story, and then encoded the words or stories again within a certain category, and checked them repeatedly to ensure uniqueness of form, but uniformity of content. Lastly, they analyzed each category of content on the view of human nature with description and statistics.

For the 444 idioms, 1002 vulgarisms, 270 maxims, and 270 philosophical stories, we determined the sources and explanations, and described the interpretation of the words into comprehensible questionnaire items. We further analyzed the 1986 questionnaire items, merged the duplicate items, and rejected the items for which explanations were not strong, finally selecting the representative 420 items. Then, we used the Delphi technique to identify Chinese people’s human nature, to develop a scale based on this information, and to inform the construction of an oriental psychological counseling model on the view of human nature.

We selected ambiguous items and asked seven experts (two majoring in Chinese philosophy, two majoring in traditional culture, and three majoring in psychological counseling) to categorize them again and then identify agreement. They were also required to grade their agreement from 1 to 10. After the third round of categorization, with basic agreement of the experts, we selected 87 items that represented the Chinese people’s views of human nature

Data Sources

From the *Xinhua Idiom Dictionary* (Xu, 2012), we selected 444 phrases describing people’s psychological activities from 8382 idioms; from the *Chinese Folk Adage Dictionary* (Wen, 2012), we selected 1002 phrases from 8845 folk adages; from the *Seven Leading Pre-Qin Philosophers Proverb Dictionary* (Gai,

1991), we selected 270 phrases from 919 proverbs; and from *The Ancient Chinese Philosophical Story* (Hao, 2004), we selected 270 phrases of 264 stories.

Data Analysis

Content analysis was used to analyze Chinese psychological wisdom in idioms, folk adages, proverbs, and philosophical stories. Data analyses were conducted using SPSS version 21.0. We used clustering analysis to select items, chiefly decided by the uniformity of expert opinions and the average level of agreement (scores above 7). We adopted stratified sampling by distributing 500 questionnaires to civil servants, business unit personnel, enterprise employees, self-employed people, college students, and retirees, etc., and used exploratory factor analysis with 87 human nature items.

Results

First, we chose typical items from the 420 items that reflected Chinese psychological wisdom to group into the self, collective, and spiritual realms, and, at the same time, rating each item for agreement from 1-10. In the first round, seven experts selected numbers of items ranging from 145 to 188, resulting in the retention of 132 items. In the second round, inconsistent items were reclassified and judged. After the third round, 87 items were selected. The standard to select final items was chiefly decided by the uniformity of the experts' opinions, and the average level of agreement (scores above 7). The specific results are presented in Table 1.

Table 1. *The Results of Clustering Analysis for Human Nature*

Expert	Round 1 (132)	Round 2(117)			Round 3(87)		
		<i>Self-Nature</i> (57)	<i>Collective Nature</i> (20)	<i>Spirit Nature</i> (40)	<i>Self-Nature</i> (41)	<i>Collective Nature</i> (12)	<i>Spirit Nature</i> (34)
1	145	58	26	48	62	20	45
2	188	56	37	39	49	33	35
3	157	55	33	44	50	28	39
4	156	70	21	51	65	19	43
5	149	50	30	52	43	27	47
6	164	64	22	46	56	18	43
7	153	62	28	42	59	23	35

Note: The values in brackets represent the item number selected at the end of judgment according to two standards of qualitatively consistent and were greater than or equal to 7.

Based on the clustering results, items for the questionnaire for the Chinese view of human nature were listed. A total of 500 questionnaires were distributed, and 447 valid questionnaires were collected (response rate: 89.4%). Exploratory factor analysis was conducted with the 87 items. First, we analyzed the discriminant validity of items; values were divided into high and low groups (based on the proportion of 27%), to investigate whether differences across categories were significant for each item. The results showed that the mean difference was not significant for five items, therefore, they were removed. The remaining 82 items had good discriminant validity. The factor analysis results were significant, $KMO = 0.951$, $p < 0.001$. The exploratory factor analysis showed that three items loaded on all factors, and another four items had factor loadings of less than 0.3; therefore, these seven items were eliminated. Distribution of the remaining 75 items was consistent with previous theoretical assumptions and classification of the clustering method. 'Self-Nature' contained 36 items, 'Spiritual Nature' had 31 items, and 'Collective Nature' had 8 items. These three dimensions of the human nature scale explained 50.56% of the total

variation (the individual factors explained 25.61%, 14.67%, and 10.28%). The overall scale alpha was 0.97, and the reliability of all subscales was higher than 0.7 (0.95, 0.95, and 0.70, respectively). The specific factor loadings are presented in Table 2.

Table 2. *Exploratory Factor Analysis of Human Nature*

Item	Factor Loadings			Variable	Factor Loadings		
	<i>Self-Nature</i>	<i>Spirit Nature</i>	<i>Collective Nature</i>		<i>Self-Nature</i>	<i>Spirit Nature</i>	<i>Collective Nature</i>
1	0.44			39		0.51	
2	0.38			40		0.48	
3	0.47			41		0.48	
4	0.39			42		0.50	
5	0.38			43		0.38	
6	0.40			44		0.67	
7	0.34			45		0.43	
8	0.50			46		0.39	
9	0.40			47		0.37	
10	0.39			48		0.52	
11	0.54			49		0.50	
12	0.45			50		0.41	
13	0.36			51		0.43	
14	0.45			52		0.52	
15	0.51			53		0.56	
16	0.47			54		0.46	
17	0.47			55		0.62	
18	0.55			56		0.39	
19	0.71			57		0.45	
20	0.58			58		0.57	
21	0.51			59		0.41	
22	0.60			60		0.47	
23	0.62			61		0.53	
24	0.63			62		0.50	
25	0.60			63		0.49	
26	0.51			64		0.37	
27	0.56			65		0.56	
28	0.59			66		0.32	
29	0.58			67		0.46	
30	0.53			68			0.41
31	0.42			69			0.39
32	0.35			70			0.44
33	0.39			71			0.33
34	0.41			72			0.31
35	0.38			73			0.48
36	0.45			74			0.45
37		0.48		75			0.39
38		0.44					

Discussion

The Connotation Explanation of Chinese Human Nature View

The traditional Chinese's view on humans is not to take the human being as a person in one dimension. A human is not only a "natural person" of individual meaning, or a "social person" of group meaning. Human nature is of transcendence, which will lead people to pursue the significance and value of their lives, to help them get rid of various desires and social conventions, and help them gain freedom and harmony of heart. On this basis, the human nature view of the Chinese people is divided into three dimensions: self-nature, collective nature, and spirit nature. However, how do we grasp their connotations respectively? How do we understand the essence of culture deeply? Let's try to make a simple definition.

Self-Nature

Connotation. Self-nature consists of the 'self' and 'nature'. From the literal meanings in Chinese, 'self' means oneself and 'nature' means people's inherent characteristics, or the most fundamental psychological traits of a person. This is like the understanding of 'I' in Western philosophy, in which 'I' is 'myself', and 'an individual person'.

Cultural Interpretation. Confucianism accepts self-nature as humans' naturalness. The Chinese philosopher Mencius considers human nature to be the 'nature' of the mouth, eyes, ears, nose, and limbs, and humans' inborn and natural attributes, which emphasize the animalistic nature of humans. Taoists' view of human nature also emphasizes naturalness, however, such naturalness is not just biological, it is natural instinct. The Tao TeChing of Laozi stresses how to seek life through retreat and FengYoulan proposes that the starting point of Taoists' philosophy is to save life and avoid hurting life. Self-nature was originally a Buddhist term; in the opinion of Huineng, self-nature is the temperament and in-being of oneself, and its existence is prior to all experiences. Therefore, for human nature, on an individual level, Confucianism, Buddhism, and Taoism all emphasize naturalness.

Collective Nature

Connotation. From the literal Chinese meaning, 'collective' refers to people who get together, while 'nature' refers to people's inherent characteristics, and collective nature represents a psychological trait displayed in the gathering of several people. Like the understanding of 'human' in Chinese philosophy, which involves thinking of a 'human' not as an individual or isolated person, but as a group in which being together with others and having social relations (mainly political and moral relations) and also a corresponding relation with 'nature' (there is no nature without 'human' and vice versa), the essence of human is the sum of the 'human-human' and 'human-nature' relationships. The Chinese culture stresses the determination of human essence through 'relations' and considers humans as a 'collective', reduced to 'us', and emphasizing individuals' dependence and responsibility to the group. Therefore, there is relative neglect of oneself to pursue interpersonal harmony. Human sociality is stressed and human is considered a category of relationships.

Cultural Interpretation. The core value of Chinese culture is Confucianism, of which the core value is collective culture (Mao, 2009). *The Analects of Confucius* also mentions the words 'Dao' and 'De': 'Dao', which mean the way groups should follow and 'De' means personal cultivation. Cultivating morality means following the right path and causing individuals to pursue the objectives of groups.

Spiritual Nature

Connotation. From the literal Chinese meaning, ‘spirit’ refers to the soul and mind, ‘nature’ refers to people’s inherent characteristics, and spiritual nature represents a type of mental strength that is beyond the level of the individuals and society. Spiritual nature is the internal motivation to stimulate the significance and transcendence of life, which can promote individuals to feel the significance and value of life. It is the internal requirement and power when a person feels confused by body and mind or sense. Spiritual nature can integrate levels of physiology, spirit, and society, to determine individuals’ state of adaption and health.

Cultural Interpretation. In Chinese ancient ideology, Confucianism, Buddhism, and Taoism all have their own assiduous ideal personalities and realms of life. The life realm of Confucianism is a moral realm of self-improvement and care for society. It involves self-cultivation, family harmony, country management, and world peace. Self-cultivation is the starting point of logic and is the system, while family harmony, country management, and world peace are utilizations. The life realm of Taoism opposes letting one’s heart be a slave to one’s body and pursues spiritual freedom of the life realm: ‘Alone with the spirit of heaven and earth’. Finally, with respect to the life realm of Buddhism, the Chinese local culture lacks religious spirit. Religious emotion is a particular emotion of human beings, and a dialogue about a limited life and an infinite world. The life realm of Taoism involves helping other people, as well as oneself, cultivating blessings and wisdom, and trying to reach a realm of ‘consciousness’ and ‘liberation’ to relieve pain and annoyances of life. Chinese ancient ideologists pursue the unity of knowledge and action, and pay attention to self-cultivation to perfect the personality image and promote the life realm. Confucianism and Taoism both stress self-realization in real life.

The View of Human Nature and the Construction of Oriental Psychological Counseling Theory

Through reading the Chinese views of human nature, we recognized the Chinese people’s ideas of the question, “Why people are called people?” inside their view of human nature, by which their view of human nature based on psychology counseling can be constructed. Using this view of human nature as a starting point during the construction of oriental psychology modes can also reflect the Chinese culture characteristics in psychology counseling.

The Construction of Oriental Psychology Counseling Theory

The construction of oriental psychology counseling theory should demonstrate the “people-oriented” ideology in Chinese culture, as well as insist on its principle A central attribute of the Chinese culture as a whole is “people-oriented”. It was pointed out in *The Book of History* that heaven and earth are the mothers of the universe, while people are the spirit (1st *Mobilization on the Mount Taishan, The Book of History*), which stressed people’s prominent status among the universe and is an unreserved demonstration of people’s value. Xunzi, a Pre-Chin ideologist, once divided the universe into four categories, “water and fire are breathing but do not live, grass and trees live, yet have no knowledge, animals can sense but know nothing about rules and feelings, while human-beings not only breathe to live, but also possess intelligence and the ability of sensing courtesy and righteousness, and that’s what makes human the supreme in the universe” (*Xunzi Kinship*). That is to say, compared to water and fire, grass and trees, as well as animals, human-beings make the most significant impact to the universe because of their competence to live, know and sense. The traditional Chinese culture is exactly “people-oriented”, rather than “God-oriented” or “Object-oriented”. Therefore, psychological counseling based on the Chinese culture should be established on the basis of attention to human existence, respect of human subjectivity, human agency and human

development so as to analyze the consistency and rationality of psychological counseling from the perspective of the human-being itself.

Oriental Psychology Counseling Theory Should Embody the Content of “Being Introspective, Self-Cultivation of Body and Spirit”, without Neglecting the Elevation of Mental Realm

The construction of oriental psychology counseling theory should embody the content of “being introspective, self-cultivation of body and spirit”, without neglecting the elevation of mental realm. In the ideology of “integration of nature and man”, nature refers to not only “the genuine nature” that rules nature and human-beings, but also “the nature of morals”, which connects nature and human moral rules directly. On one aspect, Confucius makes “the nature of morals” equal to “the genuine nature” and admits its existence, plus great reverence and awe. He also delves into the origin of morals in nature, in which he suggests “integration of nature and man”. He assumes humans share a common root with genuine nature, as with morals. However, “the natural law” exists by being inside of humans. It is reflected or presented by humans, corresponding to “the human law”; “the natural law” would be meaningless otherwise. That also means that Confucius’ awe of the “the nature of morals” does not weaken the human’s position in the universe. He holds the idea that “humans are able to promote nature, but nature can’t do the same to humans”, which means humans have the capability of upholding and developing nature, while nature lacks that ability to enrich humans. By saying that, he not only clarifies human’s core position, but also ensures people that humans can accomplish self-development. The establishment of “the nature of morals” by the Confucian school has made moral culture the core characteristic of the Chinese culture. For one thing, we cannot talk about humans without “the genuine nature” included. Humans should show respect to morals because “the genuine nature” rules everything in the human’s world, for which humans stand; in addition, the nature of morals exist for the well-being of humans. After we understand ourselves, we are able to know the universe, so as to absorb knowledge and nutrition from the nature, which in turn, will achieve harmony between nature and human.

Therefore, value dimension should be adopted into the construction of psychological counseling theory, which can present human values by elevating their moral traits to attain the highest realm of life which is “unified with both the nature and the earth”; this wonderfully demonstrates human value in its integration with society. In fact, apart from the Confucian school, the Taoist school, as well as the Buddhist school, in the traditional Chinese culture value also advocates introspectiveness and self-development. The Confucian school stresses, “Heaven has nothing to rely on but the morality”, which means one can only get assistance from outside by elevating his morality; the Buddhist school contributes all the worries and agony in human life to the human itself. It directs humans to eradicate greed, hatred and ignorance, and to become pure humans. Being introspective is also self-examination and this is also promoted; the Taoist school maintains that humans should follow the nature of all things in the universe by not reforming capriciously out of personal desire, but respecting nature and others by letting them develop in their own ways. Only by doing so can we attain a state that is fully developed and perfect. Ideologists of this school also draw attention to not interfering with other things or exploiting the best of things. Through self-examination and self-development, one can cultivate spirit with all his heart to elevate his moral spirit and reflect upon self-value significantly out of the values as a whole.

Conclusion

This article discussed the construction of the oriental counseling model from the perspective of human nature and primarily focused on three aspects. First, we explored Chinese cultural difficulties in the

development of psychological counseling, the cultural conflict and antagonism that are present when drawing upon lessons from western counseling, and the need to include cultural roots and theoretical innovation in the construction of the oriental psychological counselling model. Second, using a content analysis method, we analyzed Chinese idioms, folk adages, proverbs, and philosophical stories, and explored the psychological wisdom of the Chinese people, to clarify the core concept of oriental psychological counseling. Third, we explored the nature, and psychological wisdom of the Chinese, and concluded that the Chinese view of human nature includes self-nature, collective nature, and spiritual nature. Finally, we identified Chinese people's wisdom, and clarified the core concept of oriental psychological counselling.

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A Meta-Analysis Study on System Justification

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[Abstract] System Justification Theory (SJT) describes the phenomenon where disadvantaged group members have a motivation to defend and justify the status quo, even though the system may be the cause of their disadvantage. Over the past two decades, a great deal of empirical support has accumulated both for and against system justification. We addressed two related questions: To what extent the system justification phenomenon exists, and what are its boundary conditions? A meta-analysis study was conducted. However, no evidence was found to support the phenomenon of system justification for either the overall effect or in different boundary conditions. Theoretical concern and further direction was also discussed.

[Keywords] system justification; system justification theory; meta-analysis boundary conditions

Introduction

Overview of System Justification: Theory and Evidence

In-group favoritism is a robust effect that has formed the basis of many social psychology theories (Baron & Banaji, 2009). However, as early as Clark and Clark's (1947) doll preference study, out-group favoritism surfaced as African-American children showed their preference for White dolls. The notion that members of subordinate groups internalize stereotypes, and legitimize the unjust social system led to the development of the System Justification Theory (SJT), which outlines the psychological process by which low-status groups are paradoxically more likely to justify the existing status quo than their higher-status counterparts, even when the system is objectively unfair (Jost & Banaji, 1994).

SJT asserts that individuals are motivated to view themselves, the group they are in, and the society they belong to as fair and good (Jost & Banaji, 1994). Higher-status groups benefit from the system; all their motives are consistent, so it's rational for them to demonstrate in-group favoritism, and perceive the system as legitimate (Jost & Banaji, 1994). However, the lower-status groups have conflicting motivations for themselves, their group interests and their system interests. It was found that lower-status groups both demonstrate in-group derogation (Rudman, Feinberg, & Fairchild, 2002) and demonstrate system justifying behaviors (Jost, Banaji, & Nosek, 2004). This conflict leads to psychological discomfort, and according to cognitive dissonance theory, people of disadvantaged groups will alleviate this dissonance through rationalization processes (Festinger, 1957). Jost, Blount, Pfeffer, and Hunyady (2003) suggest that low-status people rationalize their disadvantaged state by thinking that although the system classifies them and their group as subordinate, the stability of the system is maintained via their acceptance of their current status. Moreover, Brandt (2013) proposes that psychological conflicts also arise when low status groups experience inequality but do not respond to their disadvantage. To ease the dissonance, they are likely to perceive the existing social system as more legitimate than it actually is. This explains why low-status groups are resistant to social change, and why they view the social system as equal to or more legitimate than their high status counterparts (Brandt, 2013). The combination of SJT and Cognitive Dissonance Theory was named by Brandt (2013) as the Status-Legitimacy Hypothesis.

During more than a decade of research, SJT has been supported by numerous (published) empirical studies. For example, a study by Henry and Saul (2006) found that impoverished low-status indigenous Bolivian children felt less alienated from the government and rated their current government as more effective than high-status Mestizo and Hispanic Bolivian children. Major, et al. (2002) found that people in a low-status group with the belief in upward mobility are less likely to attribute rejections from high-status groups as discrimination. Zhu, Kay, and Eibach (2013) found that participants who were primed with meritocratic beliefs viewed merit-based funding policy as relatively more fair compared to an equality-based funding policy (Zhu, et al., 2013).

Research Questions

The current study proposed two relevant questions, concerning on the effect of system justification and its boundary conditions.

Research Question 1: To what extent does the system justification phenomenon exist? Some recent studies have found limited or no support for SJT. Recently, research by Brandt (2013) revealed that the system justification phenomenon is not a robust finding. Though system justification phenomenon has accumulated a decade of evidence, which cannot be falsified by a single study, the Brandt (2013) study did bring us the worthwhile Research Question 1.

Research Question 2: Which moderator variables serve as the boundary conditions? Brandt (2013) proposed three boundary conditions of the status-legitimacy hypothesis: civil liberties, societal inequality, and meritocratic culture. Combining all three boundary conditions, status-legitimacy effects, if robust, should be easily detected in US samples as America is a meritocratic country with great civil freedom and high inequality (Brandt, 2013). However, with national representative data from the US, Brandt (2013) only found one effect out of 14 in support of the status-legitimacy hypothesis, and six effects out of 14 provided contradictory evidence. Apart from civil liberties, societal inequality and meritocratic culture, other researchers also suggested possible boundary conditions of SJT (van der Toorn, Tyler, & Jost, 2011). In order to better understand SJT, these previous studies inspired us to ask our second question, Research Question 2.

Method

Data Collection

PsychINFO, APA Journals, Google Scholar, and Social Science Citation Index search engines were used to select articles published before December 30, 2014. At first, 219 papers were found. Then, we selected papers by adopting the following 5 objective criteria:

1. The keywords “system justification”, or “system justifying”, or “status-legitimacy” should appear in the article’s abstract. This means that the selected study should specific its relevance to system justification or SJT, though the main purpose of the study may or may not be related to system justification.
2. Naturally generated low-high status (e.g. gender, income) or experimentally manipulated low-high status data should be included, and the SJ measure or SJ, in specific domain measure, should be included, too.
3. One sample was used only for one time, and only the specific measure of SJ was selected. For example, if one study defined the high-low status by gender and income, and it measured SJ and

gender-specific SJ, then only gender was included as the definition of high-low status, and only the gender-specific SJ was chosen as the SJ measure.

4. Only the first-hand data were selected to avoid the influence of an overwhelming second hand database. So, for example, the data from a large-scope of existing surveys by Brandt (2013) were not included in the meta-analysis.

5. Finally, all of the selected studies should come from published journals to guarantee their quality.

At last, there were 30 studies from 14 papers that were recruited into the final analysis procedure.

Data Analysis Procedure

The effect size, sample size, the definition of high-low status, the measure of SJ, and the necessary indicators, including *Mean*, *SD*, *t*, *r*, sample size and effect direction were entered into Comprehensive Meta-Analysis software.

Results

Heterogeneity Test

The variation in study outcomes between studies were measured by Cochran's Q. It showed that the studies were significantly varied, with $Q=205.458$, $df=28$, $p<0.001$. Therefore, the random effect model was chosen in the following analysis.

Overall Effect of System Justification

The random effect model showed that high-status individuals were more likely to support the current situation, which did not support the hypothesis of System Justification Theory ($N=14543$, 95% CI= [0.322~0.549], $Z = 7.508$, $p< 0.01$).

Possible Moderators of System Justification

Although several potential moderators, such as civil liberties, societal inequality and meritocratic culture were proposed to buffer the effect of SJ (Brandt, et al., 2013), studies that included these variables are so rare. So we explored other possible moderators such as the following.

Different operational definition of the high-low status group. Since the original SJT classified the high-low status groups by gender, race, income, and education (Jost, et al., 2003), we created the moderator variable by separating the studies using these four criteria as Type 1, and other criteria as Type 2. Fully random effects analysis was used to combine the studies within each subgroup. The study-to-study variance (tau-squared) was assumed to be the same for all subgroups – this value was computed within subgroups and then pooled across subgroups.

For neither Type 1 (classical definition of SJ), nor Type 2 (other definitions of SJ) studies, the SJT was not supported, with high-status group members advocating more than low-status group members (Type 1: $Z = 6.139$, $p< 0.001$; Type 2: $Z = 4.132$, $p< 0.001$).

Different data format. The high-low status groups can be seen as either a discrete or continuous variable. The data format was also included as one potential moderator. For neither Type 1 (high-low status as discrete variable) nor Type 2 (high-low status as continuous variable) studies, the SJT was not supported, with high-status group members advocating more than low-status group members (Type 1: $Z=10.392$, $p< 0.001$; Type 2: $Z=0.590$, $p=0.555$). However, for continuous data format of high-low status, the advocates of the current system showed no difference for either the high-status or the low-status group members.

Discussion

The aim of the current study is to examine to what extent system justification phenomenon exists, and its boundary conditions. System justification theory (SJT) posits that low-status group members are more likely to advocate the social systems are more legitimate than other high-status counterparts (Jost, Pelham, Sheldon, & Sullivan, 2003). The current study did not provide any evidence supporting this system justification phenomenon. Further, no boundary conditions were found to make the system justification phenomenon possible, either.

Though the system justification phenomenon was not supported, the result of the current study corresponded well with the recent study by Brandt (2013). By operating the system justification phenomenon as the “status-legitimacy hypothesis”, Brandt (2013) examined the system justification phenomenon by three representative sets of data from the United States (American National Election Studies and General Social Surveys) and through the world (World Values Survey). He found that “the status–legitimacy effect is not robust” (p. 765). The current study provided another evidence supporting the findings of Brandt (2013).

Though the criteria of selecting the empirical studies into meta-analysis procedure was very conservative, the system justification phenomenon was not supported. For example, in Douglas, et al. (2014), both gender-specific system justification (e.g. “In general, relations between men and women are fair”, from Jost & Kay, 2005) and general system justification were measured (by using SDO scale, from Pratto, et al., 1994, “Some groups are simply inferior to other groups”). According to our Criteria 3, only the gender-specific system justification measure was selected into the meta-analysis. However, even using this conservative criterion, SJ was not supported.

It is interesting to find that researchers use the term system justification and have even developed more specific types of system justification under different contexts, but they have not realized that the results have already contradicted the basic idea of System-Justification Theory itself. For example, Chapleau and Oswald (2014) examined how people legitimized gender inequality in sexual violence from a system justification view. The rape myth acceptance (the stereotype of blaming the victim for the assault, exonerating the perpetrator, and dismissing the violence of rape) was used as the specific system justification for women in sexual violence. The SJT would predict that women as low-status group members should score higher in the rape myth acceptance. However, the results were just reversed by showing men were more likely of accepting the rape myth (Chapleau, & Oswald, 2014, Table 1, p. 210).

Though the system justification phenomenon did not get support in the current meta-analysis, we still admit it as a charming concept. System justification maybe catches our eye partially because of its counter-intuitive nature. The development of the theory has now developed into a more nuanced mechanism, with more related theories, and applications into social issues. The current study reminded the researchers in this area to go back to the phenomenon itself, and think about under what specific conditions, this counter-intuitive can pop up.

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Abusive Supervision and Subordinate Promotive Voice Behavior: The Moderation Effect of Employee Forgiveness Behavior

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[Abstract] *Using the data of 668 employees' questionnaires, this thesis examines the influence mechanism of abusive supervision on subordinate promotive voice behavior, especially the mediation effect of organizational justice, and the moderation effect of employee forgiveness behavior. The empirical study suggested: (1) Abusive supervision negatively affects subordinate promotive voice behavior; (2) Organizational justice mediates the relation between abusive supervision and subordinate promotive voice behavior; (3) Employee forgiveness behavior can moderate the relation between abusive supervision and subordinate promotive voice behavior. The less subordinate receives abusive supervision, the more he has promotive voice, when forgiveness behavior is higher; (4) Employee forgiveness behavior can moderate the relation between abusive supervision and organizational justice. The less subordinate receives abusive supervision, the more he perceives organizational justice, when forgiveness behavior is higher; (5) The interaction between abusive supervision and forgiveness behavior affects subordinate promotive voice behavior through the mediation effect of organizational justice.*

[Keywords] *abusive supervision; promotive voice behavior; organizational justice; employee forgiveness behavior*

Introduction

Voice behavior includes two types, which are promotive voice behavior and prohibitive voice behavior. Research has indicated that promotive voice behavior makes more sense for an enterprise. Promotive voice behavior means “employees’ expression of new ideas or suggestions for improving the overall functioning of their work unit or organization” (Liang & Farh, 2012). Promotive voice is positively related to organizational learning (Edmondson, 2003), work performance (Detert & Burris, 2007; Mackenzie, Podsakoff & Podsakoff, 2011), and creativity (Zhou & George, 2001). How to motivate employees’ promotive voice behavior is always important to enterprises. However, so many leaders in enterprises not treat subordinate well, and abusive supervision always happens. This can decrease subordinate voice behavior (Wu, et al., 2012), as well as promotive voice behavior. Many scholars have pointed out this negative effect path, but the mechanism is still under discussion. Research has indicated that abusive supervision can affect organizational citizenship behavior mediated by organizational justice (Zellars, et al., 2002). We reason that promotive voice behavior is a kind of organizational citizenship behavior, and abusive supervision can affect it mediated by organizational justice. Meanwhile, if subordinates can forgive their supervisors, they will have more strength to contribute to promotive voice.

In the following sections, we develop a conceptual framework to understand the effect mechanism of abusive supervision on promotive voice behavior mediated by organizational justice, and moderated by forgiveness behavior. We then present a test of this model among a sample of 668 members of enterprises in China.

Theory and Hypotheses

Abusive Supervision and Promotive Voice Behavior

Promotive voice behavior is “employees’ expression of new ideas or suggestions for improving the overall functioning of their work unit or organization” (Liang & Farh, 2012). Just as voice behavior, promotive voice behavior is one kind of organizational citizenship behavior (OCB). Some researches have pointed out that leadership behavior can affect OCB. For example, Podsakoff, et al. (1990) and Podsakoff, MacKenzie, & Bommer (1996) found subordinates’ OCBs were positively related to transformational leadership behaviors. On the contrary, some negative leadership behaviors, like abusive supervision, can restrain OCB (Zellars, et al., 2002). Promotive voice behavior, as one kind of OCB, also can be affected by abusive supervision. Many researchers have already indicated that abusive supervision negatively affects voice behavior (Burriss, et al., 2008; Wu, et al., 2012). We assume that abusive supervision negatively affects promotive voice behavior.

Hypothesis 1: Abusive supervision negatively affects promotive voice behavior.

Mediating Effect of Organizational Justice

Abusive supervision affects OCB mediated by organizational justice (Zellars, et al., 2002). Promotive voice behavior, as one kind of OCB, is affected by abusive supervision and can be mediated by organizational justice. Abusive supervision can negatively affect the subordinate’s organizational justice perception (Aryee et al., 2007). Tepper (2000) indicated abusive supervision negatively relates to subordinates’ perceptions of interactional and procedural justice. The perception of organizational justice of a subordinate mainly comes from the actions of their supervisor. When subordinates are abused by their supervisors, they may feel their organization did not treat them justly. And the fact that organizational justice can affect OCB has been confirmed by many researches (Zellars, et al., 2002; Aryee, et al., 2007). We assume that abusive supervision negatively affects promotive voice behavior mediated by organizational justice.

Hypothesis 2: Organizational justice mediates the relation of abusive supervision and promotive voice behavior.

Moderating Effect of Forgiveness Behavior

Forgiveness is an interpersonal reaction, which is the action of the victim abandoning the authority of resentment, denouncement, or revenge on an injustice violator, but can sympathize, or even love, the violator (Goodstein & Aquino, 2010). In forgiveness behavior, the motive of the victim changes, the motive for revenge against the violator decreases, but the motive of reconciliation and friendliness is enhanced, and the victim does not care about the injurious behavior from the violator (McCullough, Worthington, & Rachal, 1997). Organizational researchers regard forgiveness behavior as a coping strategy for workplace violations (Aquino, Tripp, & Bies, 2006). Many researches have focused on forgiving the organization and the organizational forgiveness climate (Fehr & Gelfand, 2012). Researchers found that forgiveness behavior can reduce negative emotion (Fitzgibbons, 1986; Hebl & Enright, 1993), repair controlling forces from the violator (Bies & Tripp, 1995) and interpersonal relations. Fehr & Gelfand (2012) found the organizational

forgiveness climate can affect relationship commitments of the employee, and interpersonal citizenship behavior. Hence, we forecast that if the subordinate can forgive the injustice treatment from their supervisor, the reduction of organizational justice perception may improve, and so does the promotive voice behavior. So, we form the following hypotheses:

Hypothesis 3: Forgiveness behavior can moderate the effect of abusive supervision on subordinate promotive voice behavior.

Hypothesis 4: Forgiveness behavior can moderate the effect of abusive supervision on organizational justice.

Hypothesis 5: The interaction of abusive supervision and forgiveness behavior affect subordinate promotive voice behavior mediated by organizational justice.

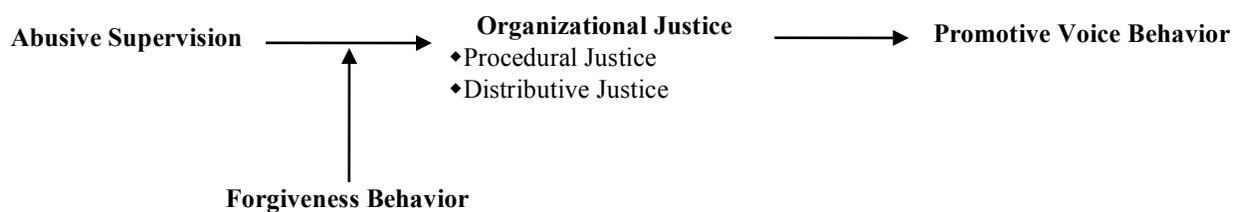


Figure 1. Conceptual Model

Method

Participants and Procedure

Data were collected from 668 employees from enterprises in Dalian, Tianjin, Xiamen, and Shenzhen in China, including some leading global enterprises, some big state-owned enterprises, and other types enterprises. The response rate to this survey was 83.6% (n=1254), and only 688 pieces were effective. In all of the participants, 49% were male, and 51% were female.

Measures

All variables were rated on a 1-5 scale, with responses ranging from 1 (strongly disagree [or never for the stress scale]) and 5 (strongly agree [or very often for the stress scale]).

Abusive supervision. Employees completed a 15-item measure of abusive supervision developed by Tepper (2000). An example item is “My supervisor tells me my thoughts or feelings are stupid.” Cronbach’s α was 0.984.

Organizational justice. Employees completed a 12-item measure of organizational justice developed by Liu, Long, & Li (2003), which also included procedural justice and distributive justice. An example item, “Have you not had enough time for yourself because of your job?” Cronbach’s α was 0.965.

Forgiveness behavior. Employees completed a 5-item measure of Forgiveness behavior developed by Bradfield & Aquino (1999). An example item, “I accepted their humanness, flaws, and failures.” Cronbach’s α was 0.966.

Promotive voice. Employees completed a 5-item measure of promotive voice developed by Liang, Farh, & Farh (2012). An example item, “Proactively develop and make suggestions for issues that may influence the unit.” Cronbach’s α was 0.966.

Data Analysis

Firstly, we used AMOS to do confirmatory factor analysis to test the discriminant validity of the scales, and tested the common method variance using Harman single factor testing. Then, descriptive statistical analysis and correlation analysis was done using SPSS. Finally, we analyzed the relationships of abusive supervision, organizational justice, employee forgiveness behavior, and promotive voice behavior with regression analysis using SPSS, and tested the impact of interaction between abusive supervision and forgiveness behavior on promotive voice behavior through organizational justice.

Results

Confirmatory Factor Analysis and Common Method Biases

To assess the factor structure of the measures in the study, we tested a series of confirmatory factor analysis models (see Table 1). The results suggested that five-factor model was a relatively good fit to the data, $\chi^2=3224.64$; $p<0.001$; CFI=0.92; NFI=0.91; IFI=0.92; RMSEA=0.08. In summary, the hypothesized five-factor model (Model 5) was the best fit to the data, which means the five factors are different concepts.

We also tested the common method variance using Harman single factor testing. Explore factor analysis separated out 5 factors before rotation, which explained 39.015% of variance. This data is below 50%, which means the influence of common method biases was not serious (Harrison, McLaughlin, & Coalter, 1996).

Table 1. Model Comparisons of the Measurement and Structural Models

Model	χ^2	df	CFI	NFI	IFI	TLI	RMSEA
1 factor model	19835.68	594	0.43	0.42	0.43	0.39	0.22
2 factor model	15753.24	593	0.55	0.54	0.55	0.52	0.20
3 factor model	12142.23	591	0.66	0.64	0.66	0.63	0.17
4 factor model	8024.30	588	0.78	0.77	0.78	0.76	0.14
5 factor model	3224.64	584	0.92	0.91	0.92	0.92	0.08

Note: n=668

1 factor model: abusive supervision + procedural justice + distribution justice + forgiveness behavior +promotive voice behavior

2 factor model: abusive supervision + procedural justice + distribution justice + forgiveness behavior, promotive voice behavior

3 factor model: abusive supervision + procedural justice + distribution justice, forgiveness behavior, promotive voice behavior

4 factor model: abusive supervision + procedural justice, distribution justice, forgiveness behavior, promotive voice behavior

5 factor model: abusive supervision, procedural justice, distribution justice, forgiveness behavior, promotive voice behavior

Descriptive Statistical Analysis and Correlation Analysis

Descriptive statistics and intercorrelations among the study variables are provided in Table 2. All variables are strongly correlated. The negative correlation between abusive supervision and promotive voice behavior is strong ($r=-0.088$, $p<0.05$). Abusive supervision is negatively correlated with procedural justice and distribution justice ($r=-0.211$, $p<0.01$; $r=-0.246$, $p<0.01$). Forgiveness behavior is positively correlated with procedural justice, distribution justice and promotive voice behavior ($r=0.286$, $p<0.01$; $r=0.231$, $p<0.01$; $r=0.363$, $p<0.01$). Promotive voice behavior is positively correlated with procedural justice and distribution justice ($r=0.346$, $p<0.01$; $r=0.293$, $p<0.01$).

Table 2. Means, Standard Deviations, and Correlations

Variable	M	SD	1	2	3	4	5
1. Abusive supervision	1.75	0.889	1				
2. Forgiveness behavior	3.23	1.246	-0.072	1			
3. Procedural justice	2.59	0.956	-0.211**	0.286**	1		
4. Distribution justice	2.52	0.887	-0.246**	0.231**	0.740**	1	
5. Promotive voice behavior	2.94	0.998	-0.088*	0.363**	0.346**	0.293**	1

Note: ** $p < 0.01$, * $p < 0.05$

Regression Analysis

According to the research of Muller, Judd, & Yzerbyt (2005), we tested the mediate effect and moderate effect of H1, H2, H3, and H4. According to the research of Wen, Zhang, & Hou (2006), we tested the moderated mediation models of H5. We setup 16 models to test the 5 hypotheses through hierarchical regression method. Procedural justice is the dependent variable from model 1(M₁) to model 4(M₄). Distribution justice is the dependent variable from model 5(M₅) to model 8(M₈). Promotive voice behavior is the dependent variable from model 9(M₉) to model 16(M₁₆).

Hypothesis 1 was supported. The result of model 10(M₁₀) suggested that abusive supervision negatively affects subordinate's promotive voice behavior ($\beta = -0.11$, $p < 0.01$).

Hypothesis 2 suggested that organizational justice mediates the influence effect of abusive supervision on subordinate's promotive voice behavior. According to Muller, Judd, & Yzerbyt (2005), we employed a four-step mediated regression analysis. At Step 1 the control variables were entered (M₉). At Step 2, the main effect of abusive supervision on the subordinate's promotive voice behavior were examined (M₁₀), and abusive supervision negatively affected subordinate's promotive voice behavior ($\beta = -0.11$, $p < 0.01$). At Step 3, the main effects of abusive supervision on organizational justice were examined (M₂, M₆), and abusive supervision negatively affected procedural justice ($\beta = -0.28$, $p < 0.01$) and distribution justice ($\beta = -0.30$, $p < 0.01$). At Step 4, the effects of abusive supervision and organizational justice on the subordinate's promotive voice behavior were examined (M₁₁, M₁₂). The effect of abusive supervision on the subordinate's promotive voice behavior was not significant when procedural justice was entered, as well as distribution justice. The effects of procedural justice and distribution justice on subordinate's promotive voice behavior were significant ($\beta = 0.28$, $p < 0.01$; $\beta = 0.23$, $p < 0.01$). This means the mediation effect of organizational justice exists, and organizational justice can mediate the effect of abusive supervision on subordinate's promotive voice behavior. Hypothesis 2 was supported.

Hypothesis 3 suggested that forgiveness behavior can moderate the effect of abusive supervision on the subordinate's promotive voice behavior. According to Muller, Judd, & Yzerbyt (2005), we employed a three-step mediated regression analysis. At Step 1, the control variables were entered (M₉). At Step 2, the effects of abusive supervision and forgiveness behavior on subordinate's promotive voice behavior were examined (M₁₃) (Adjusted $R^2 = 0.34$). At Step 3, the effects of abusive supervision, forgiveness behavior, and the interaction between abusive supervision and forgiveness behavior on subordinate's promotive voice behavior were examined (M₁₄) (Adjusted $R^2 = 0.35$). The ΔR^2 between M₁₄ and M₁₃ is significant ($\Delta R^2 = 0.01$; $p < 0.05$), and the effect of the interaction between abusive supervision and forgiveness behavior on subordinate's promotive voice behavior is significant ($\beta = 0.09$, $p < 0.01$). Hypothesis 3 was supported.

Hypothesis 4 was also supported. We separately tested the moderation effects of forgiveness behavior between abusive supervision on procedural justice, and distribution justice. Firstly, according to Muller, Judd, & Yzerbyt (2005), we employed a three-step mediated regression analysis to test the moderation effects of forgiveness behavior between abusive supervision on procedural justice. At Step 1, the control

variables were entered (M_1). At Step 2m the effects of abusive supervision and forgiveness behavior on procedural justice were examined (M_3) (Adjusted $R^2=0.17$). At Step 3, the effects of abusive supervision, forgiveness behavior, and the interaction between abusive supervision and forgiveness behavior on procedural justice were examined (M_4) (Adjusted $R^2=0.18$). The ΔR^2 between M_4 and M_3 is significant ($\Delta R^2=0.02$; $p<0.01$), and the effect of the interaction between abusive supervision and forgiveness behavior on procedural justice is significant ($\beta=-0.12$, $p < 0.01$). Forgiveness behavior can moderate the effect of abusive supervision on procedural justice. Then, we employed a three-step mediated regression analysis to test the moderation effects of forgiveness behavior between abusive supervision on distribution justice. At Step 1, the control variables were entered (M_5). At Step 2, the effects of abusive supervision and forgiveness behavior on distribution justice were examined (M_7) (Adjusted $R^2=0.15$). At Step 3, the effects of abusive supervision, forgiveness behavior, and the interaction between abusive supervision and forgiveness behavior on distribution justice were examined (M_8) (Adjusted $R^2=0.19$). The ΔR^2 between M_8 and M_7 is significant ($\Delta R^2=0.04$; $p<0.01$), and the effect of the interaction between abusive supervision and forgiveness behavior on distribution justice is significant ($\beta=-0.17$, $p < 0.01$). Forgiveness behavior can moderate the effect of abusive supervision on distribution justice. Therefore, forgiveness behavior can moderate the effect of abusive supervision on organizational justice.

Hypothesis 5 was supported. According to Wen & Ye (2014), we employed a six-step model to test the interaction of abusive supervision and forgiveness behavior affects subordinate promotive voice behavior mediated by organizational justice. At Step 1, the control variables were entered (M_1). At Step 2, the effects of abusive supervision, forgiveness behavior, and the interaction between abusive supervision and forgiveness behavior on abusive supervision were examined (M_{14}). The interaction between abusive supervision and forgiveness behavior on abusive supervision was significant ($\beta= 0.09$, $p < 0.01$). At Step 3, the effects of abusive supervision, forgiveness behavior, and the interaction between abusive supervision and forgiveness behavior on procedural justice were examined (M_4). The interaction between abusive supervision and forgiveness behavior on procedural justice is significant ($\beta= -0.12$, $p < 0.01$). At Step 4, the effects of abusive supervision, forgiveness behavior, and the interaction between abusive supervision and forgiveness behavior on distribution justice were examined (M_8). The interaction between abusive supervision and forgiveness behavior on distribution justice is significant ($\beta= -0.17$, $p < 0.01$). At Step 5, the effects of abusive supervision, forgiveness behavior, procedural justice and the interaction between abusive supervision and forgiveness behavior on abusive supervision were examined (M_{15}). The impact of procedural justice on abusive supervision is significant ($\beta= 0.22$, $p < 0.01$). At Step 6, the effects of abusive supervision, forgiveness behavior, distribution justice and the interaction between abusive supervision and forgiveness behavior on abusive supervision were examined (M_{15}). The impact of distribution justice on abusive supervision is significant ($\beta= 0.19$, $p < 0.01$). Consequently, Hypothesis 5 was supported –the interaction of abusive supervision and forgiveness behavior affects subordinate promotive voice behavior mediated by organizational justice.

Table 3. Regression Analysis Results

Variable	Procedural Justice				Distribution Justice				Promotive Voice Behavior							
	M ₁	M ₂	M ₃	M ₄	M ₅	M ₆	M ₇	M ₈	M ₉	M ₁₀	M ₁₁	M ₁₂	M ₁₃	M ₁₄	M ₁₅	M ₁₆
Control Variable																
Gender	0.16*	0.13	0.08	0.09	0.12	0.10	0.06	0.08	0.06	0.05	0.02	0.03	-0.02	-0.03	-0.05	-0.05
Age	-0.05	-0.05	-0.08	-0.07	-0.03	-0.03	-0.05	-0.05	0.04	0.04	0.05	0.04	0.00	0.00	0.02	0.01
Education	-0.09**	-0.11**	-0.10**	-0.11**	-0.08**	-0.10**	-0.09**	-0.11**	-0.25**	-0.26**	-0.23**	-0.24**	-0.24**	-0.23**	-0.21**	-0.21**
Work seniority	-0.04	-0.04	-0.03	-0.04	0.00	0.00	0.01	-0.01	-0.04	-0.04	-0.03	-0.04	-0.03	-0.02	-0.01	-0.02
Company property	0.01	0.25**	0.30**	0.27**	-0.02	0.23**	0.26**	0.22**	-0.39**	-0.30**	-0.37**	-0.35**	-0.24**	-0.21*	-0.27**	-0.26**
Post property	0.25**	0.19**	0.19**	0.19**	0.22**	0.16**	0.16**	0.15**	0.31**	0.29**	0.23**	0.25**	0.29**	0.29**	0.25**	0.26**
Independent Variable																
Abusive supervision		-0.28**	-0.26**	0.17		0.30**	-0.29**	0.33**		-0.11**	-0.03	-0.04	-0.09*	-0.41**	-0.45**	-0.47**
Mediator																
Procedural justice											0.28**				0.22**	
Distribution justice												0.23**				0.19**
Moderator																
Forgiveness behavior			0.21**	0.39**			0.15**	0.42**					0.26**	0.12*	0.03	0.03
Interaction Effect																
Abusive supervisionX forgiveness behavior				-0.12**				-0.17**						0.09**	0.11**	0.12**
Adjusted R²	0.04	0.10	0.17	0.18	0.04	0.11	0.15	0.19	0.23	0.24	0.30	0.28	0.34	0.35	0.38	0.37
ΔR²	0.05**	0.06**	0.07**	0.02**	0.04**	0.08**	0.04**	0.04**	0.24**	0.01**	0.07**	0.04**	0.10**	0.01*	0.04**	0.02**
F	5.51**	11.10**	17.43**	7.42**	5.10**	12.83**	15.78**	18.76**	34.67**	31.00**	37.42**	32.74**	43.53**	40.23**	42.23**	40.02**

Note: ** $p < 0.01$, * $p < 0.05$

Discussion

The purpose of our study was to explore the mediation mechanism of organizational justice and the moderation mechanism on the relationship of abusive supervision and promotive voice behavior. Our research found that abusive supervision negatively affects subordinate promotive voice behavior. Organizational justice mediates the relationship between abusive supervision and subordinate promotive voice behavior. Employee forgiveness behavior can moderate the relationship between abusive supervision and subordinate promotive voice behavior. The less subordinates receive abusive supervision, the more they have promotive voice, when forgiveness behavior is higher. Employee forgiveness behavior can moderate the relationship between abusive supervision and organizational justice. The less subordinates receive abusive supervision, the more they perceive organizational justice, when forgiveness behavior is higher. The interaction between abusive supervision and forgiveness behavior affects subordinate promotive voice behavior through the mediation effect of organizational justice.

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Study on the Relationship between Interpersonal Disturbance and Self-identity of College Students

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[Abstract] *The purpose of this article is to test the relationship between interpersonal disturbance and self-identity of college students in the Chinese context. The simplified Chinese version of EOM-EIS-2 and interpersonal diagnosis scale were used to collect data from college students. The results show that males' mean scores were significantly higher than females' mean scores in the dimensions of communication disturbance and heterosexual contact disturbance. Identity diffusion, identity foreclosure and identity moratorium had a significant negative correlation with all the dimensions of interpersonal disturbance. Identity achievement only had a significant negative correlation with the way people treat others. Identity diffusion and identity moratorium were predicted to talking disturbance, communication disturbance and heterosexual disturbance. In short, the level of self-identity can predict people's interpersonal disturbance to some degree.*

[Keywords] *self-identity; interpersonal disturbance; interpersonal relationship*

Introduction

Interpersonal relationship needs is one of the basic human needs, and good interpersonal skills is needed for people's *social* development. In modern times, many college students have some interpersonal communication problems. A study (Yang, & Li, 2011) showed almost half of the students surveyed had a serious interpersonal relationship problem. Qian Zhao's (2012) study showed that neither the interpersonal relationships, nor the dormitory relationships of college students were good. Nowadays, people are paying more and more attention to students' interpersonal relationship problems.

The university stage is very important to people, as one will face role switching in this stage. The most important thing is to form a good personality and establish a healthy kind of self-identity. Self-identity signifies the perfection of a healthy personality. In nature, it means the continuity, maturity, integration of personality development (Guo, 2003).

Marcia, et al. (1993) came up with the operational definition of self-identity; they made the behavior characteristics during the development of self-identity as the variable, and divided self-identity status into four different types: (1) Identity diffusion – people in this status don't ever think through self-identity questions, and will never explore any possibility. Moreover, they lack clear direction. It is the most immature and minimum level; (2) Identity foreclosure – people in this status have a low exploration feature and high commitment feature. This means they form a commitment to some goals, values, believes without any exploration; (3) Identity moratorium – these people have a high exploration feature and low commitment feature. People in this status are in the middle of exploration; they are collecting information, trying some kinds of activities, and hoping to find the goals and values which can lead their lives. They are trying some possibilities, but they have not yet put anything consciously into their goals, values, or ideologies; (4) Identity achievement – people in this status have experienced exploration, and considered some possibilities, and they have also made a firm self-commitment to specific goals, values, and beliefs (Marcia, et al., 1993; Kroger, 1993). A study from Clancy & Dollinger showed that in the area of

ideological sphere, students with identity achievement status are mostly externally oriented in the area of interpersonal relationships; these students scored the highest in extrophy. A study from Jinshan Guo and Wenbo Che (2004) showed that identity diffusion had a significant negative correlation with extrophy, and with interpersonal relationships. Identity foreclosure didn't have any significant relationship with extrophy or interpersonal relationships. Previous studies usually explore the relationship between self-identity and interpersonal relationships from the dimension of personality. Interpersonal disturbance means the degree of distress in relationships. In this study, we focused on the relationship between self-identity and interpersonal disturbance.

Method

Participants

A total of 299 college students participated in this study. Each one filled out two questionnaires. The students came from Chongqing Jiaotong University, Chongqing Medical University, Chongqing University, and Southwest University; 166 males and 133 females were included. The average age is 21.46, with ages ranging from 20 to 24. Engineering courses, science subjects and medical subjects were included.

Materials & Procedure

Revised version of EOM-EIS-2. The revised version of EOM-EIS-2 by Shuqing Wang was used to test students' behavior of their self-identity status. There were 32 items, and included four dimensions: identity moratorium, identity foreclosure, identity diffusion, and identity achievement. There were 4 subscales, each with 8 items. The subscales were about politics, career, religions, life-styles in the field of consciousness, gender roles, friendship, entertainment, and dating in the field of interpersonal relationship. The revised version has a good construct validity and internal consistency validity.

Interpersonal Relationships Assessment Scale. This scales was compiled by Professor Zheng (1999) from Beijing Normal University, and has 28 items which measure four dimensions of interpersonal disturbance. The dimensions are: talking, communication, the way people treat others, and heterosexual contact. Higher scores mean more serious interpersonal disturbances. According to the scores, disturbance is divided into three grades: less disturbance, a moderate disturbance, and a serious disturbance. Objects were required to answer the questions according to their situations. The reliability and validity of the scale was good.

Results

The Analysis of Gender Differences in Relationship Disturbance and Self-identity

A series of T-test analyses were conducted to compare the mean scores of the participants' scores in self-identity. The results showed that the college students scored 8.90 ± 8.558 in interpersonal disturbance, and males and females had a significant difference in the dimensions of communication and heterosexual contact. Males' scores (2.87 ± 2.081) were higher than females' (2.83 ± 2.078) ($p < 0.001$). In all the dimensions of self-identity, no significant differences were found between males and females.

The Correlation Analysis of Interpersonal Disturbance and Self-identity

The numbers from Table 1 show that identity moratorium, identity foreclosure and identity diffusion all had a significant negative correlation with all of the dimensions and the total score of interpersonal

disturbance. Identity achievement had a significant negative correlation with the dimension of the way people treat others.

Table 1. The Correlation Analysis of Interpersonal Disturbance and Self-Identity

	Identity Diffusion	Identity Foreclosure	Identity Moratorium	Identity Achievement
Talking	-0.281**	-0.230**	-0.225**	-0.038
Communication	-0.224**	-0.174**	-0.250**	-0.027
The way people treat others	-0.171**	-0.253**	-0.223**	-0.116*
Heterosexual contact	-.0.334**	-0.259**	-0.242**	-0.029
Total Score	-.0.303**	-0.269**	-0.280**	-0.058

Stepwise Regression Analysis of Ego Identity Status on Interpersonal Relationship Problems

The total score and the various dimensions of interpersonal disturbance scores were used as dependent variables, and identity diffusion, identity moratorium, and identity foreclosure were used as the predicting variables, respectively, to the stepwise regression analysis. The results show identity diffusion and identity moratorium can significantly predict the total scores of interpersonal disturbance, talking disturbance, communication disturbance and heterosexual contact disturbance. What can significantly predict the disturbance of the way people treat others is identity foreclosure and identity moratorium.

Table 2. Stepwise Regression Analysis of Ego Identity Status on Interpersonal Relationship Problems

Dependent Variable	Independent Variable	ΔR^2	B	β	t
Total Score of Interpersonal Disturbance		0.125			
	Identity Diffusion		-0.204	-0.240	-4.208***
	Identity Moratorium		-0.208	-0.206	-3.623***
Talking Disturbance		0.094			
	Identity Diffusion		-0.60	-0.234	-4.044***
	Identity Moratorium		-0.046	-0.153	-2.644**
Communication Disturbance		0.080			
	Identity Diffusion		-0.047	-0.200	-3.423**
	Identity Moratorium		-0.058	-0.163	-2.785**
Disturbance of the Way People Treat Others		0.075			
	Identity Foreclosure		-0.041	-0.194	-3.176**
	Identity Moratorium		-0.058	-0.163	-2.353*
Disturbance of Heterosexual Contact		0.127			
	Identity Diffusion		-0.074	-0.287	-5.040***
	Identity Moratorium		-0.047	-0.153	-2.699**

Discussion

This study showed that college students had a significant gender difference in the dimensions of communication disturbance and heterosexual contact. In the communication disturbance dimension, males' scores were higher than females'. Perhaps the idea that women are inferior to men had affected men's active communication with women. They didn't measure the state between men and women correctly; it looks like men are not as good as girls in communication. In the dimension of heterosexual contact disturbance, this is consistent with previous findings (Gao, 2006). The pattern of means revealed that males scored higher than females. This indicates that men are not as calm as women during contact with the opposite sex. In the distribution of self-identity scores, there were no gender differences between males and females,

which was different from the previous research (Wang, 2007) that males and females had a significant difference in the scores of identity achievement and identity foreclosure. It indicates that college students in Chongqing had average scores in all the dimensions of self-identity.

The correlation between self-identity and interpersonal disturbance show that identity moratorium, identity foreclosure, and identity diffusion all had significant negative correlations with the four dimensions and total scores of interpersonal disturbances. It was the same with the previous study that identity achievement had a significant negative correlation with interpersonal relationship (Che, & Guo, 2004). The relationship of the three unhealthy dimensions of self-identity and interpersonal disturbance showed that only healthy status of self-identity was good for the development of interpersonal relationships.

The results of the stepwise analysis showed the scores of identity diffusion and identity moratorium can significantly predict interpersonal disturbance of college students. In the analysis of self-identity in all of the dimensions of interpersonal disturbance, it showed the scores of identity moratorium and identity diffusion can significantly predict the three kinds of disturbance except the way people treat others. According to previous studies, identity diffusion has a significant negative correlation with extrophy and people with identity moratorium have a bad emotional stability (Che, & Guo, 2004). It means people with low commitment personality are not good at talking, communication, contact with the opposite sex and so on. We find that helping college students to form a healthy self-identity status can improve their interpersonal relationships.

This study showed, teachers and parents should be targeting helping students to form a healthy kind of self-identity status, and improve their interpersonal relationships based on some useful training programs.

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The Effect of Job Resource on Teachers' Career Success: The Role of Work Engagement

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[Abstract] *The key of this research was to investigate how job resources, which are organizational factors, influence subjective career success and objective career success. A survey was conducted with 295 teachers from 12 primary schools of 2 cities, by cluster sampling. The results revealed that: (1) Job resources played a role of being a partial mediator between work engagement and subjective career success; (2) Job resources had an effect on objective career success thorough work engagement, which played a role of being a partial mediator. This research has reference value for teachers' professional development and school administration.*

[Keywords] *job resource; work engagement; career success*

Introduction

Career success gained high popularity among researchers because career success is meaningful not only for the individual, but also for the organization. Investigating the influence mechanism of career success of teachers is beneficial to their professional development, school administration, and career development in other industries. Career success is the positive psychological or work-related outcomes or achievements one accumulates as a result of work experiences (Judge, et al., 1995; London, & Stumpf, 1982; Seibert, Grant, & Kraimer, 1999). Career success is divided into subjective/intrinsic career success and objective/extrinsic career success. We define objective career success as objective accomplishments – those accomplishments that are observable, assessable, and verifiable by an impartial third party (Gattiker & Larwood, 1988; Hughes, 1937) – individuals achieve them as a consequence of their work experiences. We used income and occupational prestige (or status) as indicators of objective career success. We used job and career satisfaction as indicators of subjective career success (e.g., Burke, 2001; Judge, et al., 1999).

There are 4 categories of predictors for objective and subjective career success: human capital, organizational sponsorship, sociodemographic status, and stable individual differences (Ng, Eby, Sorensen, & Feldman, 2005). Human capital refers to individuals' educational, personal, and professional experiences (Becker, 1964) that can enhance their career attainment and is frequently examined as a predictor of career success (e.g., Judge, et al., 1995; Wayne, et al., 1999). Several variables were included as indicators of one's human capital. They include number of hours worked, and work centrality (i.e., work engagement) (e.g., Judge, et al., 1995; Wayne, et al., 1999).

Organizational sponsorship predictors represent the extent to which organizations provide special assistance to employees to facilitate their career success. These predictors include career sponsorship (the extent to which employees receive sponsorship from senior-level employees that help enhance their careers (Dreher & Ash, 1990)), supervisor support, training and skill development opportunities, and organizational resources (measured by organization size).

Socio-demographic predictors reflect individuals' demographic and social backgrounds. Stable individual difference variables represent dispositional traits (Ng, Eby, Sorensen, & Feldman, 2005). So both job resources and work engagement were predictors of career success. Job resources are defined as "those physical, social, or organizational aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands and the associated physiological and psychological costs; (c) stimulate personal growth and development" (Demerouti, et al., 2001, p. 501). Job resources contain these indicators: performance feedback rewards, job control, participation in decision making, job security, and supervisor support (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Recently, the popular Job Demands-Resources (JD-R model) proposed that high resources lead to increased motivation and higher productivity (the motivational process) (Schaufeli, & Taris, 2014).

Work engagement refers to a positive, fulfilling, work-related state of mind that is characterized by vigor (that is, high levels of energy and mental resilience while working), dedication (referring to a sense of significance, enthusiasm, and challenge), and absorption (being focused and happily engrossed in one's work) (Schaufeli, & Taris, 2014). In the JD-R model, engagement is exclusively predicted by available job resources and engagement mediates the relationship between job resources and turnover intention.

From the above analysis we know that: job resources and work engagement have influence on subjective and objective success, and job resources affect work engagement. In this research we investigated the mechanism among job resources, work engagement and career success.

Thus, we propose:

Hypothesis 1: Job resources influence subjective career success thorough work engagement as the mediator.

Hypothesis 2: Job resources influence objective career success thorough work engagement as the mediator.

Method

Participants and Procedures

A survey was conducted with 12 primary schools of 2 cities by cluster sampling. In total, 373 questionnaires were delivered, 318 were collected, among which, 257, counting for 80.8%, were valid. Males made up 16.7% of them. Subject teachers accounted for 65.0%. In this questionnaire, demographic variables include sex, age, education, teaching age, working time in this school, professional title, the grade of teaching, teaching subjects, post and income. During data analysis, these variables were set as the control variables.

We sent the primary school teacher group questionnaires. To ensure data reliability, we stressed that they should be filled out by secret ballot, the survey results are only for academic research, all the information participants provide will be kept confidential, and that it is important to fill out the questionnaires based on their actual situation and feelings to participants.

Measures

Work engagement. We used the Chinese version of the Utrecht work engagement scale which was developed by Schaufeli et al. to measure work engagement. This scale includes three dimensions: vigor, dedication, and absorption, which was verified by Schaufeli's research. There are 17 items in this 5-point Likert scale. The α coefficient of vigor, dedication, and absorption was 0.86, 0.87, and 0.85, respectively; the α coefficient of total scale was 0.93.

Job resources. We used the Job Demands-Job Resources Scale, which was modified by Tang Xuelian. The α coefficient of three dimensions of job resources (Autonomous decision-making, Social Support, and Fair distribution) was 0.79, 0.81, and 0.90; the α coefficient of total scale was 0.86.

Career success. We used the Career Satisfaction Scale which was developed by Greenhaus, et al. to measure subjective career success. There were 5 items. The α coefficient of scale was 0.53. We used the Objective Career Success Scale which was developed by Eby, et al. to measure objective career success. There were 6 items. The α coefficient of scale was 0.83.

Surveying and Data Analysis

The collected data was analyzed by SPSS17.0. To establish mediation, the following conditions must hold: First, the independent variable must affect the mediator in the first equation. Second, the independent variable must be shown to affect the dependent variable in the second equation, and third, the mediator must affect the dependent variable in the third equation.

Results

Descriptive Statistics

Table 1. Descriptive Statistics

Variables	M	SD	1	2	3	4	5	6	7	8
1. Sex	1.780	.413	—							
2. Age	33.890	9.447	-.312**	—						
3. Educational background	3.460	.662	.058	-.376**	—					
4. Income	2.440	.736	-.213**	.327**	.150*	—				
5. Job resources	47.537	9.987	-.072	-.054	-.030	.152*	—			
6. Work engagement	57.48	12.78	-.173**	-.150*	-.083	.059	.610**	—		
7. Subjective career success	14.210	3.296	-.074	.141*	-.089	.144*	.597**	.587**	—	
8. Objective career success	18.245	4.422	-.163**	.006	.108	.092	.429**	.499**	.410**	—

Note: ** $p < 0.01$, * $p < 0.05$; Educational background, post, income are grade variables (Educational background: ①under junior middle school, ②senior middle school/vocational school/secondary school, ③junior college, ④undergraduate, ⑤master or above; Post: ①subject teacher, ②discipline leader, ③grade leader, ④prefect, ⑤vice president, ⑥president; Income: ①1500yuan and below, ②1501 - 3000yuan, ③3001 - 4500yuan, ④4501 - 6000yuan, ⑤6001 - 7500yuan, ⑥7501yuan and below.

According to Table 1, there was significant positive correlation between job resources and work engagement, subjective career success, and objective career success, and there was significant positive correlation between job demands and work engagement, subjective career success, and objective career success and there are significant positive correlations between work engagement, subjective career success, and objective career success. These results provided the analysis of the mediator effect necessary condition.

The Effect of Job Resource on Subjective Career Success: Mediation of Work Engagement

According to the procedure of the mediating effects examination: Firstly, we established a regression equation and tested the direct effect c of the independent variable (job resource) on the dependent variable (subjective career success). Job resource had a positive effect on subjective career success ($\beta = 0.232$, $SE = 0.019$, $t = 12.072$, $p = 0.000$). Secondly, we established a regression equation and tested the direct effect a of the independent variable (job resource) on the mediator variable (work engagement). Job resource had a positive effect on work engagement ($\beta = 0.915$, $SE = 0.074$, $t = 12.407$, $p = 0.000$). Thirdly, we established a regression equation and tested the effect of both the independent variable (job resource) and mediator

variable (work engagement) on the dependent variable (subjective career success). Work engagement had a positive effect on subjective career success ($\beta = 0.089$, $SE = 0.016$, $t = 5.437$, $p = 0.000$), while job resource still had a positive effect on subjective career success ($\beta = 0.150$, $SE = 0.023$, $t = 6.410$, $p = 0.000$). So work engagement played a role of being a partial mediator between job resources and subjective career success. The mediating effect accounts for 33.524% of the total effect. The results are shown in Table 2.

Table 2. Hierarchical Regression Results

Variables	M1: Subjective career success		M2: Work engagement		M3: Subjective career success	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Control variable:						
Sex	-.504	-.115	-4.606*	-3.069	-.504	.158
Age	.003	.046*	.129	.298**	.003	.019
Education	-.289	-.028	-.241	.787	-.289	-.098
Income	.776*	.131	.051	-2.499*	.776*	.353
Independent variable:						
Job resources		.232***		.915***		.150***
Mediator variable:						
Work engagement						.089***
ΔR^2	.039	.378	.040	.390	.039	.446***
ΔF	2.268	145.733***	2.366	153.925***	2.268	96.894
R^2	.039	.417	.040	.430	.039	.485
Adjusted R^2	.022	.407	.023	.417	.471	.471

Note: $N = 257$; sex: male=1, female=2; $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

The Effect of Job Resource on Objective Career Success: Mediation of Work Engagement

According to the procedure of the mediating effects examination introduced above, we came to the conclusion that work engagement played a role of being a partial mediator between job resources and objective career success and the mediating effect accounts for 3.253% of the total effect. The results are shown in Table 3.

Table 3. Hierarchical Regression Results

Variables	M1: Objective career success		M2: Work engagement		M3: Objective career success	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Control variable:						
Sex	-1.618*	-1.228	-4.606*	-3.069	-1.618	-.914
Age	-.031	.012	.129	.298**	.031	-.018
Education	.652	-.913	-.241	.787	.652	.833*
Income	.464	.182	.051	-2.494*	.464	.072
Independent variable:						
Job resources		.232***		.915***		.139***
Mediator variable:						
Work engagement						.102***
ΔR^2	.041	.216	.040	.390	.041	.267
ΔF	2.431*	65.269***	2.366	153.925**	2.431*	43.129
R^2	.041	.257	.040	.430	.041	.308
Adjusted R^2	.024	.240	.023	.417	.024	.289

Note: $N = 257$; sex: male=1, female=2; $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

This study constructed two relation models among job resource, and work engagement, and subjective career success and objective career success. Job resource was revealed to be a variable that can directly and indirectly affect career success and the mediating role of work engagement. In the JD-R model, the absence of job resource hinders the realization of work destination, which results in failure and decreases work motivation, and engagement. So, job resources directly affect job satisfaction and performance.

There was an incentive process of motivation in the JD-R model, and job resource includes potential incentives, promoted work engagement, decreased interpersonal indifference, and created high performance. Though work engagement, job resource had a positive effect on career success.

Job resource has the following functions: (1) it promotes implementation of work goals; (2) it lowers job demands and payment for psychology and physiology; and (3) it impels personnel growth. Enough job resources can lower job demands, which result in cuts of work engagement. Though it can increase job satisfaction. So, work engagement played a role of being a partial mediator between job resources and career success. According to the individual and organizational aspect, job resource as an organizational variable affecting career success was by means of work engagement as an individual variable.

In this research, we investigated the mechanism among those variables which were seldom considered in previous research on teaching and it inspired our thinking on promoting teacher's work. What's more, this research revealed the mechanism of job resource, work engagement, subjective career success, and objective success, which adds to the JD-R model.

Conclusion

The results revealed that job resources played a role of being a partial mediator between work engagement and subjective career success. Moreover, job resources had an effect on objective career success through work engagement, which played a role of being a partial mediator.

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Analysis of the Significance of the Chinese Traditional Culture in Modern Life – A Qualitative Research of ‘Hou Ji De Hui Kuan Dan’

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[Abstract] The ‘Hou Ji De Hui Kuan Dan’ (which means Hou Ji’s Remittance Slip) is one story of the novels entitled ‘Jin Mi’ (which means Golden Rice) by author Xiao-su. This story is very ordinary. There is no breath-taking plot or heroic figure, but just gossip among the villagers. This work shows the significance of social ethics and morality based on the Chinese traditional culture in modern life.

[Keywords] ethics and morality; cultural psychology; traditional folk psychology

Introduction

The *Hou Ji De Hui Kuan Dan* is a story about modern China somewhere in a small village still without blacktop named ‘You Cai Po’ which means Rapeseed Slope. There is an old widower whose name is Hou Ji, suffer from a serious lack of the basic necessities of life, such as his cooking wok leaks, his wooden bed is missing a leg, so sleeping is very unsafe; even the pillow is an old pumpkin alternative. Then he clenches his teeth, goes out and gets a job and becomes a coal worker in Henan Province to solve his urgent need in life. After enduring many hardships, he saves five hundred dollars. He thinks very carefully and decides to send a remittance slip to himself through the post office because of his worry that he might be robbed on his way home. He believes this is a good solution, however, his daughter-in-law is very selfish and greedy. She grabs this remittance note. Hou Ji finally gets his remittance note back after using many people’s relationships and spending lots money, but the money has been depleted in the remittance note. When he prepares to use this very little amount of money to purchase his daily necessities, surprisingly, his daughter-in-law threatens Hou Ji that she will divorce his son if he does not hand over the rest money. Finally, Hou Ji has no alternative but to give his rest of the money to his daughter-in-law. The consequence for Hou Ji is having nothing left but tears after struggling to gain the hard earned money.

How Do the Chinese Act and Think Based on Kinship?

Sometimes the novel is called a mirror of social life. The so-called “mirror” means nothing more than the true reflection of social life. Generally speaking, the mirror can show people who have scandals, and it can criticize and scourge those, which can be a role of vigilance (Wang, 2005a). The story of *Hou Ji De Hui Kuan Dan* is just to ‘present’ a situation of the people living in the modern Chinese rural areas. Hou Ji’s personal benefits and the benefits of his son, his daughter-in-law and his grandson are inseparable, based on the Chinese ethical values which are constructed by the principles of kinship. They are the whole, no

matter what the family emotion is or where the family property is and the only question is dominated by whom. Therefore, Hou Ji's daughter-in-law can grab his remittance slip without hesitation. In her eyes, the belongings of father-in-law are hers as well, and the others have nothing to do about this. Even Hou Ji's remittance slip has been depleted and even though he only had a little money left, he still bought a beautiful school bag for his grandson with pleasure. His behavior to his grandson and the behavior of his daughter-in-law are just different reflections based on the same values. Hou Ji is abused by his daughter-in-law. The neighbors can only secretly blame his daughter-in-law and feel sorry for him, but they dare not have any substantive blame. This is because the Chinese have known the difference between the inside and outside of people's relationships since ancient times. There is an old saying, "Not even good officials can settle family troubles." The contradiction between Hou Ji and his daughter-in-law just fits the family troubles category. Hou's family are an indivisible whole in the neighbors' eyes. The five hundred dollars is still in Hou's family no matter whether it is in Hou Ji's hands or the hands of his daughter-in-law.

The traditional ethics of the Chinese are based on the concepts of kinships in the Chinese traditional culture. Kinship is the principle during interpersonal relationships and it becomes Chinese ethics. At least, there is no difference about what is yours or mine in the kinship family. This situation must lead to an individual who has the sense of identity about this value and would melt in the group. In other words, any of the individual resources should be shared by the members of kinship family while distributing the real benefits (Sima, 2001). In China, everything of the individual basically has a relationship with the whole family (or groups), such as your property, emotions, dignity, and so on. They do not entirely belong to you, and you cannot be the owner alone and enjoy the right to control them as long as the recognition of kinship is the main framework of the ethical values. Hou Ji earned five hundred dollars, which is quite a bit of money in the village. Therefore, it would be inevitable to share this money with villagers like buying some packs of cigarettes or some fruits to give to everybody. The thought process of the villagers is the same psychological background as the daughter-in-law of Hou Ji, but only in different forms: one is occupied by the remittance and the others took gifts. The relationship between Hou Ji and his daughter-in-law is closer than villagers based on the kinship principles, thus the behavior of daughter-in-law is unbridled and the villagers' are more mildly. So one is preemptive and others are gratified, the possession degree is different based on the near and far of the relationship, however the comfortably essence of possession is the same. On the other hand, Hou Ji has also obviously agreed this principle. We can see that Hou Ji is not only the victim but also the faithful practitioner of this principle through his actions of giving money or presents to relatives and villagers. For example, he buys a school-backpack for his grandson and a couple of tea cans for the honest barber shop owner while he has not much money. He also voluntarily buys cigarettes with very little hard-earned money to thank folks who care about his matter. Finally, he dumps all the rest money to his daughter-in-law.

In general, the marriage relationship of his son and daughter-in-law is nothing to do with Hou Ji. However, Hou Ji treats it as more urgent thing than the daily necessities because his son and grandson happiness or not directly depend on his daughter-in-law. As a result, the life quality of his son and grandson decided by leaving or staying of his daughter-in-law. From the view of Hou Ji's 'kinship family', daughter-in-law is an outsider, so Hou Ji want to send remittance slip of five hundred dollars to his son in the beginning, but he very worries about the remittance slip will be took by his daughter-in-law and finally he wrote a remittance slip to himself. On the other hand, from the view of his son's 'kinship family', his daughter-in-law becomes indispensable member. Moreover, Hou Ji is more like outsider than his daughter-

in-law in this circumstance. Hou Ji and his daughter-in-law both are well aware of this, thus Hou Ji can only compromise while his daughter-in-law raises a claim.

Analysis

Xiao Su presents the process of how the abstract principle of ‘kinships’ are specifically implemented in daily life. Like tragedy, Hou Ji is a typical representative of those who follow this principle. In this regard, the sorrow of Hou Ji is the whole nation of peoples’ sad fate, which is built based on the kinship of family and where everyone is trapped and suffering whether they are aware or not, or have feelings or not. The development of the story and the demeanors of the characters seem to be the normal daily events, such as the postman is the key figure in the story. If he does not regard Hou Ji and his family members as the same, and strictly follows the working procedures to deliver the remittance slip, then Hou Ji’s remittance slip would not reach the hands of his daughter-in-law and there would be no chance to take it

On the surface, the problem seems to start from his daughter-in-law and end with his daughter-in-law as well. However, not only his daughter-in-law deprive’s Hou Ji; many participants who deprived Hou Ji were terrible too. In such a cultural atmosphere, people can only act in a corresponding way, that Hou Ji is doomed to be deprived clearly of his own. This value, just like black hole veils out all of those who agree with this value, including property, emotion and dignity by the sentimental veil of ‘favors’. In this kinship society, an individual will be ‘destitute’ and increasingly marginalized in their social life if he does not follow this principle. This principle is not like the modern collectivism, but clannism, which is constructed by the kinship neighborhood, like gangs. Thus, this traditional ethical and moral concept influences our ways of doing things among the modern Chinese area. If we have some kind of relationship, then business is just a piece of cake, otherwise business is business. This is similar sometimes to an officer who does not follow the rules when he is familiar with the person or has some kind of relationship with the person.

Therefore, Hou Ji not getting his remittance slip back through the normal way is an inevitable result. The only thing he can do is build a private relationship with the villagers, but this relationship must pay price in giving tips or gifts to the villagers. This is the reason money is so short when Hou Ji gets his remittance slip back the first time and when, finally, \ there is no money left in the remittance slip but tears. This story has a few characters in a small area, and every detail that happened in the story is inevitable. In this ordinary story, every detail has been filled with sadness and sorrow, or “hurts the bottom line of our emotions” (Ember, et al., 1988).

The ‘relationship’ is very important in Chinese society, because the ‘relationship’ is bigger than law and justice in some certain circumstances. Moreover, the ‘relationship’ can influence our ways of doing things. For example, I hand over someone’s private things to someone’s family member without someone’s agree. Meanwhile, sometimes people can use money to build the ‘relationship’ when they need it. I give you some money and you do me a favor. This is a very common thing during Chinese society. No one knows what human rights are or what dignity is, they just know the ‘relationship’ – The savage and greedy daughter-in-law, the treacherous and shameless grocery shop boss, the taking advantage of another’s difficulty by the Chinese medicine shop boss and village head, and the abusive power and corruption of the post office staff when they had just presented the modern situation of the entire Chinese society.

Conclusion

The author, Xiao Su, depicts the status and favor of the world and explores the common root of ordinary people. The sad ending of Hou Ji, and his daughter-in-law dare vexations and all of the villagers’ behaviors

are not particular in this case, they are just caused by the people's common mentality of the Chinese traditional ethics atmosphere which is based on the idea of 'kinship'. As a result, how can the Chinese personality based on 'kinship' handle this situation? How can the Chinese race stand among the nations in the world during this situation? If the Chinese can not build an individual personality apart from the Chinese culture itself, i.e. not have enlightenment via the Chinese culture itself, then the termination of the Chinese culture is inevitable (Wang, 2005b). Xiao Su's work helps us to realize the shortcomings of the Chinese traditional culture when most Chinese feel happy about the traditional cultural revival. The traditional Chinese culture might be well developed but it is supposed to be changed first, otherwise it might be beat by the western culture.

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The Effect of Core Self-Evaluation on Chinese Adolescents' Academic Achievement: The Mediating Role of Perceived Social Support

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***[Abstract]** The Chinese culture has always placed great importance on adolescents' academic achievements. The present study aims to explore the moderation role among core self-evaluation and academic achievements after controlling demographic variables. This study examines indirect relations between core self-evaluation and academic achievements via perceived social support. A sample of 426 adolescents from 4 schools (170 boys and 256 girls, $M_{age}=15.26\pm 2.09$) was recruited for this study to complete self-reporting questionnaires which included a core self-evaluation scale, the perceived social support questionnaire and an academic achievements questionnaire. The results indicated that: (1) core self-evaluation is positively associated with adolescents' academic achievements; (2) perceived social support plays a partial mediating role between core self-evaluation and adolescents' academic achievement. Perceived social support indirectly influences academic achievements; (3) The mediating model significantly reveals the effect mechanism of core self-evaluation on adolescents' academic achievements.*

***[Keywords]** adolescents; core self-evaluation; perceived social support; academic achievement*

Introduction

Academic achievement is an important goal for youth development, which also reflects the important results of school education; it is the core index of education teaching quality, which is related to adolescents' confidence in their academic success. According to the eight stage theory of Erickson's personality development, academic success in middle school is beneficial to the enhancement of self-value, and can aid healthy development in the process of growth. Therefore, it is of great significance to pay attention to the factors and mechanisms of academic achievement. Core self-evaluation is a kind of personality concept proposed by Judge, Locke, and Durham (1997). It includes four personality traits, namely self-esteem, locus of control, neurotics, and general self-efficacy. It is a deep and stable personality structure, which can be more effective in assessing individual personality tendencies. The core self-evaluation in China is more applicable to the study of the relationship between the variables of academic behavior and so on (Li, & Nie, 2010). But few studies have explored the psychological mechanism between core self-evaluation and academic achievements. Perceived social support is an important factor that affects the academic achievement of adolescents, and many studies abroad have shown that perceived social support can promote individual academic achievements (e.g. Bahar, 2010; Rueger, Malecki, & Demaray, 2010). In China, a similar conclusion was reached (Ye, Hu, X., Yang, Hu, Z., 2014).

In different backgrounds, the more the empirical study repeated conclusions, more reliable the conclusion will be (Kim, Kwak, & Yun, 2010). To sum up, it is necessary to study the relationship between core self-evaluation and academic achievement in Chinese culture background. Based on the review above, this study puts forward Hypothesis 1.

Hypothesis 1: Under the Chinese culture background, core self-evaluation can promote the academic achievement of adolescents.

Recently, some researchers noted that the direct link between the variables is far from enough, and to introduce an mediating effect is needed to reveal the relationship between two variables. This research suggests that perceived social support may be an important mediate variable that is worthy of consideration. So we propose Hypothesis 2.

Hypothesis 2: Perceived social support is a mediation variable between the core self-evaluation and academic achievement.

Method

Participants and Procedure

We used the convenience sampling method in two middle schools' students in two cities; 500 questionnaires were distributed and 426 valid questionnaires were returned. The valid rate was 85%. The specific distribution of the participants were as follows: from the gender perspective – boys = 170 (39.9%), and girls = 256 (60.1%); from the perspective of family origin – city adolescents = 307 (72.1%), and rural adolescents = 119 (27.9%); from the study section perspective – Junior = 194 (46%), and senior = 232 (54%); from a grade composition perspective – seventh = 97 (22.8%), eighth = 48 (11.3%), ninth = 49 (11.5%), Freshman = 37 (8.7%), Senior = 81 (19%), and twelfth grade = 114 (26.8%); and from an only-child perspective – only children = 228 (53.5%), non-only-child = 198 (46.5%). At first, the school leaders and the youngsters themselves were informed and provided consent. Prior to the actual survey, they were told that the contents of the questionnaire would be kept strictly confidential, questionnaire results were only for scientific research, participants were required to self-report seriously and independently. It took participants 15 minutes to complete all of the questionnaires. At the end, participants were thanked for their collaboration and were debriefed. It was stressed that their participation was voluntary and the results would be kept anonymous.

Measures

The self-reporting survey was divided into four major sections. In the first section, students responded to individual items, such as their age, sex, birthplace and their academic level of three main subjects at the middle-school. The remaining three sections assessed the adolescents' core self-evaluation, perceived social support and academic achievement.

Core self-evaluation. According to Judge, Locke and Durham (1997) the core self-evaluation scale was translated and revised by Du Jianzheng, et al. (2012). In this study, we adopted the self-rating method, a total of ten questions were asked and we used a Likert-5 point score; the internal consistency reliability test was carried out. The results showed that the α coefficient of the scale was 0.856, 95%, and the confidence interval of the sample was [.84, .88], which showed that the scale had good internal consistency reliability.

The overall fit indices of confirmatory factor analysis were as follows: $X^2/df = 2.15$, NFI=0.90, RFI=0.85, IFI=0.91, TFI=0.88, CFI=0.91, and RMSEA=0.093; confirmatory factor analysis results also used a support scale of 10 items loaded on the assumption of a single factor. The project in the corresponding dimension of the factor loadings between 0.44-0.75. This study used the questionnaire total score as a statistical analysis of the indicators, fitting the total score of the project 2, 3, 5, 7, 8, 10 reverse scoring; the higher the scores, the higher the sense of self-value.

Academic achievement. Wen Chao (2010) compiled the questionnaire for academic achievement, which asked the adolescents to subjectively evaluate their Chinese, mathematics, and English majored on academic performance. Using a five point scoring, from “very bad” to “very good”, respectively 1 ~ 5, we calculated the three subjects’ average; the higher scores indicate higher adolescent academic achievement. The academic achievement questionnaire and the measurement of the composite reliability was 0.77, 95% and the confidence interval was [0.75, 0.80].

Perceived social support questionnaire. According to Xie, Chen, Zhang, and Hong’s (2011) research, Jjiang (1999) revised the perceived social support questionnaire, which included 12 items and reflected the degree to which students reported their perceived social support from their families, friends and teachers. All items used a 7-point Likert scale – the scale ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). The higher the score, the better the adolescents perceived social support, and the internal consistency reliability was 0.88, 95%, and the confidence interval was [0.86, 0.90].

Statistical Analyses

Analyses were conducted using SPSS 17.0. The frequency distributions of all variables was examined for outliers and for meeting assumptions for parametric tests. Missing data analyses were performed, comparing means and proportions of demographic characteristics between completers for this study and non-completers using t-tests. Bivariate correlations were computed among all main variables using two-tailed Pearson correlations. A hierarchical linear regression was used to test the mediation effect of perceived social support between core self-evaluation and academic achievement of adolescents.

Results

Preliminary Statistical Analysis on Core Self-Evaluation, Social Support and Academic Achievement

Independent sample t test was used to analyze the differences in gender and the only child on core self-evaluation, social support, and academic achievement, and the results are shown in Table 1.

Table 1. Differences in Gender and the Only Child in the Core Self Evaluation, Social Support and Academic Achievement (n=426)

Variables	Male (M±SD)	Female (M±SD)	t	Only-child (M±SD)	Non only-child (M±SD)	t
Core self-evaluation	3.59±0.67	3.40±0.68	2.83**	3.54±.66	3.40±.68	2.00*
Perceived social support	4.96±1.11	5.29±1.00	-3.14**	5.13±1.05	5.19±1.06	-.67
Academic achievements	3.09±0.89	3.27±0.74	-2.32*	3.22±.90	3.18±.68	.46

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

From Table 1, we can see that gender difference in core self-evaluation, perceived social support and academic achievement is extremely significant ($p < 0.01$). While the scores of male students on core self-evaluation were higher than those female students, the scores of female students on perceived social support

and academic achievements were higher than that of the boy students. The scores of the only children on core self-evaluation were higher than non-singleton children, and reached a significant difference ($p < .05$). With respect to the only-child and the non-only child, there were no significant differences on perceived social support and academic achievements ($p > .05$).

Descriptive and Bivariate Analyses

Table 2 presents descriptive statistics for all the primary variables in the study; Pearson correlation analysis were conducted.

Table 2. Descriptive Statistics and Bivariate Correlations for Major Variables in the Study (N=426)

Variables	M±SD	1	2	3
1. Core self-evaluation	3.47±0.68	-		
2. Perceived social support	5.16±1.06	0.36 ^{***}	-	
3. Academic achievements	3.20±0.81	0.21 ^{***}	0.32 ^{***}	-

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

The mean of the study variables, the standard deviation and correlation matrix are reported in Table 2. The bivariate correlations among the three variables also are presented in Table 2. These findings indicate that core self-evaluation variable was related positively to one another, ($p < 0.001$), which shows that core self-evaluation and perceived social support are the protection factors of academic achievement.

The Relationship Between Core Self-Evaluation and Academic Achievement: The Mediating Model of Social Support

Stepwise regression test of mediation effect. In order to explore the effects of core self-evaluation on academic achievement, social support and academic achievement, Wen Zhonglin, Hau Kit-Tai, Chang Lei (2005) proposed a three-step test method, to test these variables and, namely stepwise regression analysis was used to conduct the regression analysis, and the results are seen in Table 3.

Table 3. The Mediating Effect Test of Social Support in the Relationship between Core Self Evaluation and Academic Achievement Test

Steps	Independent Variable	Dependent Variable	B	SE	β	t	R²
1	Academic Achievement	Core Self-evaluation	0.38	0.06	.32	7.02 ^{***}	.104
2	Social Support	Core Self-Evaluation	.57	.07	.36	8.04 ^{***}	.13
3	Academic Achievement	Social Support	.08	.04	.10	2.07 [*]	.11
		Core Self-Evaluation	.34	.06	.29	5.82 ^{***}	

Findings from the regression analyses are presented in Table 3. Core self-evaluation has a positive effect on academic achievement ($\beta = .32$, $t = 7.02$, $p < .001$). It shows that core self-evaluation has a promotion effect on academic achievement, so Hypothesis 1 was supported. Core self-evaluation has a positive effect on perceived social support ($\beta = .36$, $t = 8.04$, $p < .001$). In the equation $y = c'x + bM$, core self-evaluation of academic achievement has a positive effect ($\beta = .29$, $t = 5.82$, $p < .001$), $c' = 0.29$, therefore, Hypothesis 2 was validated.

Sobel test of mediation effect. It is common sense in the academic community that the test power of stepwise regression analysis is relatively low, so we used the Sobel test to verify the mediating variable. Core self-evaluation, through the perceived social support indirectly affects the students' academic

achievement; the Sobel Test Z value = $ab / (b^2S^2a + a^2S^2b) = 2.25^{1/2}$ ($p < 0.05$), b for the corresponding path b, the standard regression coefficient, Sa and Sb were standard error of a and b.

Table 4. Social Support in the Relationship Between Core Self-Evaluation and Academic Achievement Test

Path c	Path a	Path b	Path c'	Path a × path b	Zsobel
.32(.06) ^{***}	.36(.07) ^{***}	.10(.04) [*]	.29(.06) ^{***}	.04	2.25 [*]

Note: 1.) The data in the table out of the brackets are unstandardized regression coefficient, and the data in brackets are corresponding to the standard error.; 2.) Control the role of age, gender, grade and birthplace

Table 4 shows that the core self-evaluation has a significant positive effect on social support (a path) and path (c) after controlling age, gender, grade and birthplace. The perceived social support can significantly predict academic achievement (b path), and further test partial mediating or complete mediating, namely, the positive predictive effect of core self-evaluation on academic achievement is still significant, but the regression coefficient was reduced (path c=0.32→path c'=.29). The core self-evaluation has a direct effect on academic achievement, the ratio of $ab/c = 0.115$ the mediating effect explains the variance of the variable of independent variables $0.109 - 0.102 = 7\%$, which suggested that perceived social support mediated partly positively the prediction role between core self-evaluation and academic achievement.

Discussion

The present study was designed to increase the understanding of Chinese adolescents' academic achievements and extend its integration into a broader framework of academic achievements by addressing two broad goals. One goal was to study the relationship among main variables. A second goal was to explore how core self-evaluation was related to perceived social support and academic achievement. Together, these findings provide evidence that core self-evaluation was positively related to the other variables. Meanwhile, perceived social support played a mediating role between core self-evaluation and academic achievement. The findings and implications of this research should be considered in light of certain limitations. One limitation of the present study is that the data are correlational and based on a self-reporting instrument. In addition, the correlational nature of the data and the expected reciprocal relations among these constructs make it impossible to draw any causal conclusions about these relations. Another limitation is that perceived social support sometimes partially mediated, rather than fully mediated, the effect of core self-evaluation on adolescents academic achievement. Despite these limitations, the present study provides a valuable extension of the work on academic achievement. It contributes additional empirical support for inclusion. As such, it also serves to push the field to continue to investigate and broaden the research in this area. In particular, the findings support the need for additional research identifying the range of self-regulation learning strategies that are used by adolescents in China, their relation to other aspects of self-regulated learning, and their role in increasing adolescents' academic achievement. Given these limitations, future research using more experimental designs and/or other forms of data is needed to explicate the causal connections between these factors.

Conclusion

This general conclusion is based on several more focused points that can be drawn from the present study. Core self-evaluation, perceived social support and academic achievement are significantly related. Core self-evaluation can positively predict academic achievement, and perceived social support has an intermediary effect on the relationship between core self-evaluation and academic achievement.

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The Relationship between Ambivalence over Emotional Expression and Brief Symptom under Chinese Culture Background

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[Abstract] *The present study explores the mediation effect among Ambivalence of Emotional Expression (AEE), and four dimensions of the Brief Symptom Inventory (BSI) after controlling demographic variables under the Chinese cultural background. The study not only examines the direct relationship between AEE and BSI, but also examines the indirect relationship between AEE and BSI via social support from family and friends. A sample of 1090 undergraduates from 2 schools was recruited for the study to complete self-reporting questionnaires. The results indicated that: (1) AEE is positively associated with four dimensions of BSI; (2) Social support from family and friends plays a partial mediating role between AEE and the four dimensions of BSI.*

[Keywords] *ambivalence emotional expression; brief simple symptom; social support*

Introduction

The Chinese culture is characterized by family. It emphasizes interdependence and obligations toward family members, so the Chinese may benefit more from support from the family. Ambivalence over Emotional Expression (AEE) is defined as an individual's inner conflict concerning the desire to express emotions, yet failing to do so (King, & Emmons, 1990). A number of previous studies have found that higher levels of AEE are associated with significantly higher levels of depressive symptoms in various populations including college students, rheumatoid arthritis patients, Chinese breast cancer survivors and the general population (King, & Emmons, 1990; Krause, Mendelson, & Lynch, 2003; Lu, Uysal, & Teo, 2011; Mongrain, & Zuroff, 1994; Tucker, Winkelman, Katz, & Bermas, 1999; Katz, & Campbell, 1994). Social support appears to be one of the most widely and successfully used ways of coping with feelings of distress (Cohen & Wills, 1985; Seeman, 1996; Thoits, 1995). Social support catalyzes the use of healthy coping mechanisms, reduces psychological distress and predicts positive mental health (Budge, et al., 2013; Sanchez & Vilain, 2009). Friends can serve as a vital source of emotional support for youth, sharing concerns they may not otherwise share with adults (Cobb, 2007). Consequently, peer support may also help ameliorate the negative effects of violence exposure on depression risk. While some researchers have found that both peer and parental support play a role in adolescents' mental health (Laible, Carlo, & Raffaelli, 2000), many suggest that parental support is more robustly associated with reducing risk of depressive symptoms (Stice, Ragan, & Randall, 2004). While few researchers have simultaneously examined multiple sources of social support and AEE over time on some negative emotions among youth, the goal of the present study is to investigate AEE's associations with the four dimensions of BSI in Chinese undergraduates. To examine the underlying mechanisms, we propose the following:

sources of social support and AEE over time on some negative emotions among youth, the goal of the present study is to investigate AEE's associations with the four dimensions of BSI in Chinese undergraduates. To examine the underlying mechanisms, we propose the following:

Hypothesis 1: AEE would be significantly associated with BSI and social support.

The second goal of the study is to investigate the mechanisms underlying the link between AEE and BSI. So we propose:

Hypothesis 2: Social support would mediate the relationship between AEE and BSI.

Method

Participants and Procedure

Participants were recruited from undergraduates at two large universities in southern China; $M_{age}=20.26 \pm 2.09$; 821 females (75.5%) and 265 males (24.4%); 191 freshmen (17.5%), 348 sophomores (31.9%), 333 juniors (30.7%), 207 seniors (19.0%), and a remainder of 9 (0.9%). At the end, participants were thanked for their collaboration and were debriefed. It was stressed that their participation was voluntary and the results would be kept anonymous.

Measures

1. AEE. AEE was assessed using the Ambivalence of Emotional Expression Questionnaire (AEQ) (King, & Emmons, 1990). This self-reporting questionnaire asked participants to rate from 1 to 5, with 1 indicating that the respondent never feels what the statement suggests and 5 indicates that the respondent frequently feels that way. This measures the individuals' inner conflict of having the desire to express emotions while fearing the consequences of expressing emotions; The internal reliability in the current research was good ($\alpha=0.87$), and the scale was shown to be predictive of psychological distress among college students.

2. BSI. Depression, anxiety, hostility and interpersonal sensitivity sub-scales were from the Brief Symptom Inventory (BSI). BSI uses a 5-point rating scale ranging from 0 (not at all) to 4 (extremely severe) and measures the extent to which one has experienced depressive symptoms during the last week. The internal consistency of the four dimensions of BSI was 0.84, 0.79, 0.86 and 0.78, respectively, and CI was [0.812, 0.843], [0.758, 0.800], [0.847, 0.872] and [0.743, 0.788], respectively, in this sample. The BSI's internal reliability was good in this current study ($\alpha = 0.94$).

3. ASS. Social support was measured by the social support scale. This scale measures how often the kinds of support from family or friends are available to the respondent if needed. (e.g. "Someone you can count on to listen to you when you need to talk."). The internal reliability in the current study was 0.92.

Statistical Analyses

Analyses were conducted using the SPSS 20.0. The frequency distributions of all variables were examined for outliers and for meeting assumptions for parametric tests. Missing data analyses were performed, comparing means and proportions of demographic characteristics between completers for this study and non-completers using t-tests. Bivariate correlations were computed among all study variables using two-tailed Pearson correlations. A hierarchical linear regression was used to test the main study hypotheses.

Results

Preliminary Statistical Analysis on AEE and BSI

From Table 1, we can see that gender in AEE, ASS_fa, ASS_fr, depression and hostility scales differed significantly ($p<0.01$, $p<0.05$, $p<0.001$). The scores of females are higher than males in AEE, ASS_fa, and ASS_fr, and there are significant differences in depression and hostility dimensions ($p<0.01$, $p<0.05$, $p<0.001$); males' scores are higher than females' and they reached a significant difference ($p<0.01$, $p<0.05$). Males and females are not significantly different in anxiety and interpersonal sensitivity ($p>0.05$).

Table 1. Analysis of Gender Differences in the Major Variables

Variable	Male M±SD (n)	Female M±SD (n)	t	p
AEE	2.42±0.76(218)	2.57±0.83(677)	-2.38*	0.013
Depression	1.03±0.88(228)	0.86±0.76(723)	2.69**	0.007
Hostility	0.93±0.84(228)	0.79±0.72(720)	2.41*	0.016
Anxiety	1.03±0.89(226)	0.91±0.83(716)	1.79	0.074
Interpersonal sensitivity	1.19±0.94(227)	1.15±0.89(721)	0.65	0.516
Ass_fa	3.64±0.94(227)	3.89±0.87(722)	-3.57***	0.000
Ass_fr	3.40±0.87(227)	3.57±0.80(721)	-2.69**	0.007

Note: * $p<0.05$; ** $p<0.01$; *** $p<0.001$. AEE=Ambivalence over emotional expression; Ass_fa= social support from family; Ass_fr=social support from friend.

Relations between AEE, and ASS, and ASS and BSI Variables

Means, standard deviations and Pearson correlation matrix among the main study variables are presented in Table 2.

Table 2. Means, Standard Deviations and Intercorrelations among Major Variables

Variable	M±SD	1	2	3	4	5	6	7
1. AEE	2.99±0.76	-						
2. Depression	0.90±0.79	.41***	-					
3. Hostility	0.83±0.75	.30***	.71***	-				
4. Anxiety	0.94±0.84	.42***	.78***	.69***	-			
5. Inter-sensitivity	1.16±0.90	.46***	.77***	.67***	.76***	-		
6. Ass_fa	3.83±0.89	-.14***	-.24***	-.18***	-.19***	-.18***	-	
7. Ass_fr	3.53±0.82	-.11***	-.21***	-.16***	-.18***	-.19***	.50***	-

In Table2, we can see that AEE and depression ($r=0.41^{***}$), hostility($r=.30^{***}$), anxiety($r=.42^{***}$) and interpersonal sensitivity ($r=0.46^{***}$) are significantly positively correlated; AEE and ASS_fa ($r=-.014^{***}$), ASS_fr ($r=-0.11^{***}$) are significantly negative. The findings are consistent with Hypotheses 1.

The Independent Effect of Emotional Expression on BSI

Hierarchical regression analysis was conducted and the results are shown in Table 3.

Table 3. Regression Analysis of BSI in the Ambivalence of Emotion Expression

Variable	Depression		Anxiety		Inter- sensitivity		Hostility	
	β	t	β	t	β	t	β	t
Step 1								
Gender	-0.08	-2.64**	-0.05	-1.60	-0.01	-0.34	-0.08	-2.67**
Grade	-0.07	-2.33*	-0.05	-1.63	-0.12	-3.89***	-0.04	-1.38
	$\Delta F=$ 6.60***	$\Delta R^2=$.012	$\Delta F=$ 2.77	$\Delta R^2=$ 0.005	$\Delta F=$ 7.74***	$\Delta R^2=$ 0.014	$\Delta F=$ 4.76*	$\Delta R^2=$ 0.009
Step 2								
AEE	0.37	12.92***	0.40	14.22***	0.42	15.46***	0.27	9.13***
	$\Delta F=$ 60.67***	$\Delta R^2=$ 0.132	$\Delta F=$ 69.58	$\Delta R^2=$ 0.156	$\Delta F=$ 86.00***	$\Delta R^2=$ 0.178	$\Delta F=$ 31.23***	$\Delta R^2=$ 0.071
AdjR ²	0.141		0.159		0.190		0.077	

Table 3 shows that regression analysis was conducted with depression, anxiety, hostility and inter-sensitivity as dependent variables. Gender and grade were entered in Step 1 as covariates. AEE was entered in Step 2 as the independent variable. After control of gender and grade, ambivalence of emotional expression has a significant positive effect on depression, anxiety, interpersonal sensitivity and hostility ($\beta=0.37^{***}$; $\beta=0.40^*$; $\beta=0.42^{***}$; $\beta=0.27^{***}$). The interpretation rates were 13.2%, 15.6%, 17.8% and 7.1%, respectively.

Mediating Effect of Social Support on Emotional Expression

As AEE has a significant effect on the four dimensions of BSI, we further investigated the mediating role of social support. In this research we adapted Zsobel = $ab/(b^2S^2a + a^2S^2b)^{1/2}$ – a formula to test the effect of mediation. In the formula, a and b are unstandardized regression coefficients of Path a and Path b, Sb and Sa are the standard errors of a and b , respectively.

Table 4. Mediating Effect of Social Support on the Relationship between Ambivalence of Emotional Expression and Depression

Variables	Path c	Path a	Path b	Path c'	Path a × Path b	ZSobel
ASS-fa	0.40*** (0.03)	-0.149*** (0.036)	-0.187*** (0.027)	0.378*** (0.03)	0.028	3.17***
ASS-fr	0.40*** (0.03)	-0.12*** (0.033)	-0.275*** (0.037)	0.327*** (0.03)	0.03	3.46***

Note: ① The data in the table out of the brackets are the unstandardized regression coefficients, and the data in the brackets are corresponding to the standard error.; ② We controlled the role of gender & grade; ③ Ass_fa=social support from family; Ass_fr=social support from friends; all tables below are the same.

Table 5. Mediating Effect of Social Support between AEE and Anxiety

Variables	Path c	Path a	Path b	Path c'	Path a × Path b	ZSobel
ASS-fa	0.401*** (0.03)	-0.123*** (0.036)	-0.143*** (0.026)	0.383*** (0.03)	0.018	2.90***
ASS-fr	0.40*** (0.03)	-0.109*** (0.033)	-0.151*** (0.029)	0.385*** (0.03)	0.016	2.79***

Table 6. Mediating Effect of Social Support between AEE and Hostility

Variables	Path c	Path a	Path b	Path c'	Path a× Path b	ZSobel
ASS-fa	0.273*** (0.03)	-0.123*** (0.036)	-0.164*** (0.025)	0.253*** (0.03)	0.020	3.03***
ASS-fr	0.273*** (0.03)	-0.109*** (0.033)	-0.155*** (0.027)	0.256*** (0.03)	0.017	2.86***

Table 7. Mediating Effect of Social Support between AEE and Interpersonal Sensitivity

Variables	Path c	Path a	Path b	Path c'	Path a× Path b	ZSobel
ASS-fa	0.432*** (0.03)	-0.123*** (0.036)	-0.138*** (0.027)	0.416*** (0.03)	0.017	5.11***
ASS-fr	0.432*** (0.03)	-0.109*** (0.033)	-0.165*** (0.030)	0.415*** (0.03)	0.018	1

The tables above show that after controlling for sex and grade, the negative effect of AEE on social support (Path a) is significant ($p < 0.001$), and the positive predictive effect of the four dimensions of BSI (Path c) is also significant ($p < 0.001$). When AEE and social support together predict the four dimensions of BSI, social support has a significant negative effect on the four dimensions of BSI (Path b). The positive predictive effect of AEE on depression is still significant, but the prediction coefficient is decreased (namely Path c becomes Path c'). Through the Zsobel test, family social support partially mediates the positive predictive effect of AEE in the four dimensions of BSI ($Z = 3.17, 2.90, 3.03, 5.11, p < 0.01$). Friends' social support partially mediates the positive predictive effect of AEE in three dimensions of BSI ($Z = 3.46, 2.79$ and $2.86 (p < 0.001)$).

Discussion

In the current research, we investigated how and why AEE influences the four dimensions of BSI, and we consistently found that AEE led to these negative emotions. This effect can be at least partially mediated by the social support of family and friends. Our findings were consistent with Cohen and Wills (1985), Seeman (1996), and Thoits' (1995) research. Social support from family can reduce these risk factors, which is consistent with the research of Stice, Ragan, & Randall (2004). Our findings have two major contributions. First, we extended previous research on AEE, which suggests that beyond trait variables, construction of the world colors the perception of relating social phenomena. Second, our findings emphasized the importance of acquiring social support from family and friends, its effectiveness in reducing negative emotions, and it may eventually lead to learning to express emotions properly and decrease AEE in daily life. Therefore, we speculate that an emphasis on social support may reduce AEE and the four dimensions of BSI. This effect can be further examined in other population.

Several limitation are worth noting. One limitation is that social support of family and friends sometimes partially mediated, rather than fully mediated, the effect of ambivalence of AEE on four dimensions of BSI. Another limitation is that we used self-reporting measures of all variables. The major concern of using self-reporting measures is common-method bias, which may exert a systematic effect (e.g., acquiescence or leniency effects) on the observed correlation between the measures (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Thus, the observed correlations between the measures could be

inflated because of common method bias. Given these limitations, future research may further explore experimental design and longitudinal research to validate the mediation relationship.

Conclusion

In conclusion, the present study extends prior findings by revealing AEE's associations with four dimensions of BSI and revealing social support as a mechanism through which AEE relates to these symptoms among the Chinese culture. The partial mediation of social support suggests the need for exploring additional mediating variables to provide further understanding on the underlying mechanisms through which AEE associates with psychological health outcomes among undergraduates. Moreover, this is a cross-sectional study with a convenience sample, and to what extent the findings can be generalized to other culture should be tested.

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Attachment, Acculturation, Acculturative Stress and General Health of Chinese Students in Japan

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[Abstract] This study examines how attachment and acculturation are associated with acculturative stress and general health of Chinese students in Japan. In this study, the participants included 190 Chinese students (N = 190) living in Japan, who were asked to complete a set of self-reported measures. After a series of multiple regression analyses, the findings suggested that attachment anxiety predicted all subscales for acculturative stress and general health, and attachment avoidance and acculturation predicted some aspects of acculturative stress and general health. In addition, years of residence in Japan and Japanese language proficiency were also found to be associated with acculturative stress and general health. The purpose of this study is to inspire discussion for more intercultural communication between Asian countries as well as clinical intervention and prevention.

[Keywords] adult attachment; acculturation; acculturative stress; general health

Introduction

To date, research on the acculturation of different ethnic groups and their cultural adjustment has mainly focused on the conflicts and assimilation of Eastern and Western cultures, with examples of Asians living in the United States, Canada, or other European countries. However, little is known about how acculturation proceeds between two Asian ethnic groups. The present study attempts to fill this gap by investigating how adult attachment orientations are associated with the acculturation and psychological outcomes in two relevant, but different cultural systems: China and Japan.

The findings from some experimental studies suggest that sociocultural variables may influence the relationship between attachment and psychosocial outcomes (Patel, 2008). In a recent study conducted by Wang, et al. (2006), attachment anxiety was negatively associated with students' acculturation to the U.S. culture. It also found that attachment avoidance, attachment anxiety, and acculturation to the U.S. culture were significant predictors for students' psychosocial adjustment. Another study based on a Chinese-American sample (Wang, et al., 2010) suggested that the adult attachment perspectives appeared to be an effective framework in understanding the psychosocial function of individual Chinese-Americans. In addition, high endorsement of independent cultural norms was found to buffer the aversive impact of attachment anxiety on social difficulties experienced by Chinese-Americans. In O'Donovan's (2006) study, attachment styles were important for reciprocal attitudes between immigrants and members of the host society, and a secure attachment style provided the best starting point for the interaction between them.

A few studies have examined acculturation as a factor in psychological adjustment (Cheung- Blunden & Juang, 2008; Kwok, 2007). Acculturation and mental health are thought to have a complex relationship since acculturation in U.S. and Asian cultures show various effects on mental health (Patel, 2008). The findings from several studies support the relationship between the aspects of ethnic identity and acculturation toward ethnic culture and the positive well-being of Asian-American college students.

On the other hand, some findings suggest that dimensions of acculturation and identification with American culture are associated with positive well-being. One study with Korean-American, Chinese-American, and Japanese-American parents and adolescents (Kim, et al., 2006) found that being marginalized in Western culture was associated with depression among male parents, whereas being marginalized in one's country of origin was linked to depression among female parents. For adolescents, marginalization in both Western and Asian cultures also led toward depression. However, in another study, acculturation levels were not found to be directly related to depression (Skinner, 2000).

The main purpose of this study is to broaden the prior and existing research on attachment, acculturation, and psychological adjustment. Since most of the research in this area has primarily focused on Asian-American groups (Chung, 2001; Liu, et al., 1999), with few exploring acculturations in Asian countries (Sun, 2007), this study centers on Chinese international students in Japan because of their rapidly increasing numbers beginning in the mid-1980s.

Method

Participants

Participants in the current study included 190 Chinese students who have lived in Japan for an average of 1.20 years ($SD = 1.29$). All participants completed the surveys in their native language of Chinese. The sample comprised of 87 (45.8%) males and 103 (54.2 %) females between the ages of 18 and 36 ($M = 23.46$, $SD = 3.10$).

Measures

Experiences in Close Relationships Scale (ECRS) (Brennan, et al., 1998). ECRS was administered in order to assess the participants' attachment orientations. It included two subscales, each comprised of 18 items designed to measure attachment anxiety and attachment avoidance. In this study, a Chinese version (Li, T., & Kato, K., 2006) of ECRS was used for the student sample. Internal reliability (alpha coefficient) was 0.73 for the avoidance subscale and 0.89 for the anxiety subscale.

General Health Questionnaire (GHQ) (Goldberg & Hillier, 1979). GHQ was developed to assess the extent of psychiatric illness in general practice. GHQ-30 (Goldberg & Hillier, 1979) consisted of six subscales. In this study, a Chinese version (Chan, 1985) of GHQ-30 was used for the student sample. Internal reliability (alpha coefficient) was .93 for the total scale and between 0.56 and 0.93 for the six subscales.

Vancouver Index of Acculturation (VIA) (Ryder, et al., 2000). The VIA used in this study was a 20-item pan-ethnic instrument designed to measure the heritage (home) and mainstream (host) dimensions of acculturation. In this case, internal reliability (alpha coefficient) was 0.83 for both subscales of home and host cultures.

Riverside Acculturation Stress Inventory (RASI) (Benet-Martinez, et al., 2005). The 15-item RASI provided a brief but comprehensive measure that reflected the interpersonal, intellectual, professional, and structural pressures associated with acculturative stress. Internal reliability (alpha coefficient) was 0.61 for the subscale of work challenges, 0.77 for language skills, 0.63 for intercultural relations, 0.81 for discrimination, and 0.47 for cultural isolation.

Social dysfunction in GHQ-30 and cultural isolation in RASI were excluded from all subsequent analyses because the alpha coefficients of these two subscales were below 0.60.

Results

The Pearson correlation coefficients among the subscales of ECRS, VIA, RASI, and GHQ-30 were assessed for the overall sample and the results are shown in Table 1.

Table 1. Correlations Among ECRS, VIA, RASI, and GHQ-30

	J	E1	E2	V1	V2	S1	S2	S3	S4	G1	G2	G3	G5	G6
Years of Residence	.57**	-.04	.06	-.04	-.10	-.15*	-.17*	.14	.12	.30**	.34**	.27**	.34**	.29**
Japanese		-.02	-.03	.11	-.10	-.15*	-.29**	-.02	.03	.23**	.26**	.18*	.25**	.19*
E1 Avoidance			.09	-.02	-.24**	.08	.12	.18*	.05	.13	.14	.09	.07	.17*
E2 Anxiety				-.02	-.03	.26**	.38**	.44**	.33**	.35**	.32**	.31**	.45**	.42**
V1 Host Culture					.37**	.05	-.08	-.11	-.22**	.03	.02	.05	-.01	-.02
V2 Home Culture						.19*	-.01	-.07	-.06	-.06	-.10	-.02	.03	-.19*
R1 Work Challenges							.34**	.19**	.24**	.05	-.00	.08	.11	.06
R2 Language Skills								.34**	.28**	.13	.04	.08	.06	.11
R3 Intercultural Relations									.49**	.29**	.20**	.17*	.26**	.34**
R4 Discrimination										.18*	.16*	.15*	.26**	.25**
G1 General Illness											.61**	.52**	.64**	.48**
G2 Somatic Symptoms												.69**	.66**	.64**
G3 Sleep Disturbance													.66**	.56**
G5 Anxiety and Dysphoria														.70**

Note: * $p < 0.05$, ** $p < 0.01$

In order to examine the hypotheses, several hierarchical multiple regression (HMR) analyses were conducted. First, some research has discovered that the years of residence in a host country and the proficiency of the host language influence the acculturation process (Miranda, et al., 2000; Sun, 2007), and in this study, the correlations of these two variables were also significant with other variables. Therefore, we considered these two variables as controlling variables in the model. Following that, attachment avoidance and attachment anxiety were entered as the second block, while host and home cultures of VIA were entered as the third block in the model. The results of the HMR analyses with RASI as the dependent variable are shown in Table 2, and those with GHQ-30 as the dependent variable are shown in Table 3.

Table 2. Multiple Regression Analyses of RASI by ECRS and VIA Subscales and Controlling Variables

Variable	Work Challenges			Language Skills			Intercultural Relations			Discrimination		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β
YR	-0.21	0.10	-0.20*	-0.06	0.10	-0.05	0.14	0.10	0.12	0.09	0.11	0.07
Japanese	-0.01	0.09	-0.01	-0.27	0.09	-0.24**	-0.05	0.09	-0.05	0.01	0.10	0.01
Avoidance	0.08	0.14	0.04	0.22	0.15	0.10	0.37	0.14	0.19**	-0.01	0.16	0.00
Anxiety	0.39	0.09	0.30***	0.59	0.10	0.41***	0.57	0.09	0.42***	0.46	0.11	0.31***
Host Culture	0.00	0.10	0.00	-0.01	0.10	0.00	-0.15	0.10	-0.11	-0.29	0.11	-0.21*
Home Culture	0.25	0.10	0.20*	0.02	0.11	0.01	0.04	0.10	0.03	0.05	0.12	0.03

Note: YR = Years of Residence; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3. Multiple Regression Analyses of GHQ-30 by ECRS and VIA and Controlling Variables

Variable	General Illness			Somatic Symptoms			Sleep Disturbance			Anxiety & Dysphoria			Suicidal Depression		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	<i>B</i>
YR	0.63	0.25	0.22*	0.84	0.28	0.26**	0.79	0.28	0.25**	1.01	0.31	0.27**	0.67	0.25	0.22**
Japanese	0.30	0.23	0.11	0.29	0.26	0.10	0.06	0.26	0.02	0.35	0.29	0.10	0.13	0.23	0.05
Avoidance	0.59	0.36	0.12	0.78	0.41	0.14 ^a	0.34	0.42	0.06	0.33	0.46	0.05	0.45	0.37	0.09
Anxiety	1.05	0.24	0.31***	1.06	0.27	0.27***	1.03	0.28	0.27***	1.76	0.31	0.39***	1.38	0.24	0.39***
Host	0.27	0.25	0.08	0.24	0.29	0.06	0.42	0.29	0.11	0.03	0.32	0.01	0.33	0.26	0.09
Home	-0.09	0.27	-0.03	-0.41	0.30	-0.11	-0.21	0.31	-0.06	0.19	0.34	0.04	-0.72	0.27	-0.20**

Note: YR = Years of Residence; a. Sig. = .057, $p < 0.06$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In regard to RASI, years of residence in Japan, anxiety of ECRS, and home cultural acculturation of VIA predicted the work challenges of RASI with an explained variance that amounted to 13.8%. A short length of time in Japan, strong identification to home culture, and high attachment anxiety led to higher stress derived from work challenges. Japanese language proficiency and anxiety of ECRS predicted the language skills of RASI, which accounted for 25.0% of the total variance. Poor Japanese language ability and high attachment anxiety led toward high stress derived from language skills. Avoidance and anxiety of ECRS predicted the intercultural relations of RASI, which amounted to 23.1% of the total variance. High attachment avoidance and attachment anxiety led to higher stress derived from intercultural relations. Anxiety of ECRS and host cultural acculturation of VIA predicted the discrimination of RASI, which amounted to 11.6% of the total variance. Low acculturation to the host culture and high attachment anxiety led to higher stress derived from discrimination.

In terms of GHQ-30, long-term residence in Japan and anxiety of ECRS predicted general illness, sleep disturbance, and anxiety and dysphoria, which amounted to 18.9%, 14.0%, and 24.9% of the total variance of the dependent variables, respectively. As the years of residence in Japan and attachment anxiety increased, the scores of general illness, sleep disturbance, and anxiety and dysphoria of GHQ-30 also increased. Long-term residence in Japan and avoidance/anxiety of ECRS predicted the somatic symptoms of GHQ-30, which amounted to 21.0% of the total variance. However, anxiety attachment's predictive effect was of borderline statistical significance ($p < .06$). Long-term residence in Japan, anxiety of ECRS, and home cultural acculturation of VIA predicted the suicidal depression of GHQ-30, which amounted to 26.8% of the total variance.

Discussion

Research on acculturation of Japanese and Chinese cultures can extend knowledge of acculturation. The present study examined psychological adjustment from the perspective of the adult attachment theory and acculturation with Chinese international students based in Japan. The findings showed that the association of attachment avoidance is significantly negative with identification to the home culture and not acculturation to the host culture. On the other hand, attachment anxiety did not relate to any host or home culture. In other words, this means that one person with higher attachment avoidance will have lower identification to his own culture. It did not completely support our first hypothesis. In the study with Chinese

international students based in the United States (Wang, 2006), attachment anxiety was negatively associated with acculturation to the U.S. culture, but attachment avoidance was not. Other studies have also suggested that negative relationships emerge only between attachment anxiety and acculturation in the United States, but not between attachment avoidance and acculturation (Patel, 2008). Thus, the result of this study is not in accordance with that of previous research.

In this study, the findings suggest that four variables contribute substantially toward the prediction of acculturative stress, which includes attachment avoidance and attachment anxiety, years of residence in Japan, Japanese language ability, and acculturation to the home and host cultures. Furthermore, attachment anxiety has more predictive effects on acculturation stress compared to attachment avoidance, and different predictors are associated with different dimensions of acculturative stress. As Berry's (1987) research showed, greater knowledge of English was correlated with low stress, this study also supports the predictive effect of Japanese language ability on acculturative stress even though language proficiency only predicts the stress derived from language skills. According to Miranda's (2000) research, as the number of years of living in a new country increases, the acculturative stress decreases. This may be easily understood since the conflicts and shocks brought upon by a new culture become lessened as people begin to adjust to their new life. In addition, some research suggests that low acculturation to the new society might lead toward stressors such as social isolation, employment difficulties, and financial issues (Suinn, 2010). In this study, low acculturation to host culture is only associated with high stress about discrimination, whereas high acculturation to home culture is associated with high stress due to work challenges. Since the result did not completely cover the previous study, the relationship between acculturation and acculturative stress was re-examined.

In terms of the predictive variables of GHQ-30 examined in this study, years of residence predicted all of its five subscales: general illness, somatic symptoms, sleep disturbance, anxiety and dysphoria, and suicidal depression. This result is consistent with another longitudinal study of Chinese international students in Japan where GHQ increased once they remained in Japan for a period of at least four months (Sun, 2007). In regard to attachment, attachment anxiety predicted all subscales of GHQ-30, while attachment avoidance only predicted somatic symptoms. Similar to the results of acculturative stress, the effects of attachment avoidance are weaker than those of attachment anxiety. This difference between the two dimensions of attachment was also found in another study with Chinese students in the United States (Wang, 2010), in which attachment anxiety significantly predicted depressive symptoms, whereas attachment avoidance did not.

No significant correlations among acculturation and general health are found in this study, except for acculturation to home culture and suicidal depression. With depression in general, suicide is a major issue. Despite the importance of this subject, few studies have been conducted on Chinese populations in Japan regarding the influence of acculturation and suicide. Leong, et al. (2007) concluded that these findings consistently demonstrated a relationship between strong identification with the culture of origin and suicidal thoughts and behaviors. However, in this study, since low identification to home culture leads to high suicidal depression, we need to consider the nature of Japanese society. In Berry, et al.'s model (1987), the nature of a larger society is one of the most important factors in the acculturation process. This moderating factor refers to the attitudes of people in the dominant culture of the host society, which can vary from high tolerance for cultural diversity to high pressure for a single cultural standard. Even though Chinese students seemed to suffer less from public ostracism than did the Koreans a decade ago or the Brazilian Nikkejin today, the press and public opinion tend to blame the rise of crime on the Chinese. On the basis of this fact,

it is questionable whether they have really been accepted into the Japanese society. Japanese ethnic and national identity rests today upon a homogeneous concept of the nation. This shared concept among the people presupposes that the Japanese people are united by both blood and a unique society where race and culture are intimately linked. This concept has until recently been influencing the Japanese to reject the minorities living in Japan and fueling their continuing resistance to change in regard to citizenship or even the definition of Japanese identity (Bail, 2005). Therefore, it is difficult for foreigners to be fully accepted by this society. If one person without the acceptance of his new society can't identify his home culture, as a result, he will become hopeless, lonely and susceptible to poor general health, and in extreme cases, have suicidal tendencies.

On the basis of the current findings, this study provides implications for the evaluation, intervention, and treatment of foreigners in Japan, especially in regard to prevention against suicidal behavior. The findings highlight the influence of attachment and acculturation on acculturative stress and general health. In other words, the initial clinical evaluation should assess adult attachment, acculturation, and other factors that are related to acculturative stress, such as Japanese language level and the length of stay in Japan. Furthermore, the roles of these factors, the migration experience, and changes in the acculturation process are issues that should be explored throughout the course of treatment. In addition, foreigners suffering from depression should be carefully treated because of possible suicidal tendencies. Attachment and acculturation may be a crucial factor in relation to their suicidal thoughts and behaviors. Each person who encounters difficulties during their acculturative process has a unique history that modulates and defines the parameters of his/her specific problems.

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Body Height Promotes Adolescents' Subjective Well-being in China: The Moderating Role of Gender

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[Abstract] *The present study focuses on how body height affects adolescents' Subjective Well-Being (SWB) and the moderating effect of gender on the effect in China. A sample of 182 Chinese adolescents were included in this study. We found that body height was significantly correlated with the cognitive component of SWB ($p < 0.001$), life satisfaction, but was unrelated to affective components of SWB ($ps > 0.05$), positive effects and negative effects. Moreover, we found gender can moderate the relationship between body height and life satisfaction ($p = 0.05$). The findings were explained in the context of Chinese culture. Implications for future research are also discussed.*

[Keywords] *subjective well-being; height; China*

Introduction

Considering the predictive value of happiness on mental health, social relationships, work productivity and major physical health outcomes (e.g., Diener, 2013), identifying the factors that influence happiness are of importance for researchers and policy makers. Humans' search for the determinants of happiness began in ancient times and continues today as a central focus of scientific study (Seligman, 2008). Happiness is the colloquial term of "Subjective Well-Being" (SWB), which is the subjective definition of quality of life (Diener, 2000). Determinants of SWB have been widely examined at the macro level, such as national income, culture (Diener, 2013), and the micro level, such as genetic factors (e.g., genes) (De Neve, 2011), personality (e.g., extraversion) (Diener, 2013), and demographic factors including age, income, sex, and education level (Diener, 2013). However, the possible role of physical characteristics in predicting SWB have not been well examined. In the present study, we focus on how body height affects adolescents' SWB and the moderating effect of gender on the effect in China.

In our daily life, being tall is associated with a number of advantages. Previous research suggests that tall people are perceived as more attractive, competent, stronger, persuasive, and more sociable than their short counterparts (Sohn, 2014; Sorokowski & Butovskaya, 2012). Theoretically, people tend to take on the attributes that others ascribe to them (Judge & Cable, 2004). Thus, tallness may also positively affect how individuals perceive themselves. Indeed, evidence has shown that tall people are more satisfied with their physical stature, develop higher levels of confidence and self-worth, and demonstrate better mental health than their short counterparts (Judge & Cable, 2004).

All of these findings together seem to indicate that taller people are more likely to enjoy a better life and be happier. This is confirmed by some empirical research that suggests a positive correlation between

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body height and happiness (Deaton & Arora, 2009; Rees, Sabia, & Argys, 2009; Sohn, 2014). For example, Deaton and Arora (2009) found that taller US individuals were happier, controlling for other covariates. Similar patterns were found in Italy (Carrieri & Paola, 2012) and Indonesia (Sohn, 2014). However, to our knowledge, the relationship between body height and SWB has not been examined in China yet. In our opinion, it is necessary to explore whether body height affects SWB and whether gender can moderate the relationship between body height and SWB in the Chinese culture. The reasons can be summarized as follows.

First, despite some attempts to investigate the relationship between height and happiness, the literature has largely ignored developing countries influenced by the Chinese culture. Because previous researches examining the relationship between height and happiness produced subtly different results even between developed countries influenced by western culture (Sohn, 2014), there is no reason to believe that the findings can be generalized to the Chinese before testing.

Second, the few pieces of literature exploring the relationship between body height and happiness did not focus on happiness per se. On the contrary, they focused on depression symptoms, and self-esteem (Rees, et al., 2009). In fact, happiness can be directly measured by SWB (e.g., Diener, 2000). SWB refers to people's overall evaluation of their lives, and includes two components (Diener, Oishi & Lucas, 2003): a cognitive facet, referring to a global evaluation of one's life (life satisfaction); and an affective facet, which includes positive affects and negative affects. Most of the previous research explored the role of body height in the cognitive facet of happiness, but not the affective facet of happiness. In the present study, we want to explore the influence of body height on both the cognitive facet of happiness and the affective facet of happiness.

Third, the results of previous researches exploring the moderating role of gender in relationship between body height and happiness are not consistent. Research conducted in Indonesia showed that taller men and women were happier than their short counterparts (Sohn, 2014). However, another research showed a statistically significant effect of height on the well-being for young males, but not for females (Carrieri & Paola, 2012).

Thus, we aim to explore: (1) whether body height is related to level of happiness among Chinese; (2) the role of body height on the cognitive facet and affective facet of happiness; (3) the moderating role of gender in the relationship between body height and happiness in Chinese culture.

Method

Participants

We recruited 182 undergraduate students (48.40% male, 51.60% female; $M = 19.53$ years, $SD = 1.22$ years) at a university in central China. All participants voluntarily participated in the study and were given a gel pen as a gift for their participation.

Procedure and Measures

Upon arrival, participants were first asked to complete the five-item Satisfaction With Life Scale on a 7-point Likert scale ($M = 3.87$, $SD = .98$, $\alpha = .77$) (Diener, Emmons, Larsen, & Griffin, 1985). Positive affect and negative affect were measured using the short form of the Positive and Negative Affect Schedule (Thompson, 2007). Participants were asked to estimate the extent to which they generally experienced five positive emotions and five negative emotions on a 5-point Likert Scale (1 = never, 5 = extremely). Finally, demographic information including body height, gender, age, body weight, and

subjective SES was collected using self-reporting measures. BMI was calculated as weight in kilograms divided by height in meters-squared (kg/m²). Subjective SES was measured with the MacArthur Scale (Kraus, Piff, & Keltner, 2009).

Results

Table 1 shows the descriptive statistics and correlations of the variables in this study. Correlations between body height and life satisfaction was significant ($r = 0.29, p < .001$). But positive affects and negative affects were both unrelated to body height ($ps > .10$). Gender was associated with body height ($p < 0.01$), but was unrelated to life satisfaction, positive affect, and negative affect ($ps > .05$). Subjective SES was significantly correlated with life satisfaction and positive affect ($ps < .05$), and was unrelated to height and negative affect ($ps > .05$). Both age and BMI were unrelated to height, negative affect, positive affect, and life satisfaction ($ps > .05$). Nonetheless, previous research suggests that BMI can be related to life satisfaction (Linna, Kaprio, Raevuori, Sihvola, Keski-Rahkonen, & Rissanen, 2013). Thus, we still controlled BMI, and subjective SES in the following analysis.

Table 1. Descriptive Statistics and Correlations Among the Key Variables

Variable	M(SD)	Correlation						
		1	2	3	4	5	6	7
1. Gender	0.48(0.50)	—						
2. Age (years)	19.53(1.22)	.14	—					
3. Subjective SES	4.97(1.42)	.01	.01	—				
4. BMI	20.34(2.73)	.16*	.01	.02	—			
5. Positive affect	3.28(0.58)	-.13	-.04	.17*	.06	—		
6. Negative affect	2.39(0.74)	-.02	-.06	-.01	.05	-.13	—	
7. Body height	1.67(0.08)	.80***	.13	.13	.11	.08	.01	—
8. Life satisfaction	3.87(0.98)	.12	.05	.15*	.08	.22**	-.10	.29***

Note: Gender was dummy-coded as 0 for male and 1 for female. * $p < .05$. ** $p < .01$. *** $p < .001$.

Moderating Effect of Gender

We used regression analyses to examine whether gender moderates the relationship between body height and happiness. As specified by Baron and Kenny (1986), the statistical criteria for moderation is a significant interaction between the independent variable and the moderator. In Step 1, demographic covariates identified in the literature as possible confounds (i.e., Subjective SES and BMI) were entered to statistically control the effects of these variables by controlling the variance associated with them. In Step 2, the substantive predictors were entered (i.e., body height and gender) to allow for the examination of the unique predictive strength of the substantive predictors for life satisfaction. Gender was coded as 1 for male and -1 for female. In Step 3, the interaction term (i.e., gender \times body height) was entered. This analysis revealed a significant interaction of body height and gender on satisfaction ($\beta = -0.14, p = 0.05$), providing support for the hypothesis that gender moderates the effect of body height on SWB. Specifically, we found that the correlation between body height and life satisfaction was stronger among females ($r = 0.43, p < 0.001$) than that among males ($r = 0.25, p < 0.05$).

Discussion

People have searched for happiness since ancient times. Researchers across different disciplines (e.g., economics, and psychology) have made tremendous efforts to understand the factors that influence SWB.

Determinants of SWB have been widely explored at the macro and micro levels (Diener, 2013). In contrast, the possible predictive role of body height in SWB has been less examined. In the present study, we focused on the relationship between body height and individuals' SWB, and the possible moderating effect of gender on the relationship in China. Using undergraduate samples in China, we found that taller body height was positively associated with higher level of SWB and gender moderated the relationship in the Chinese culture. Specifically, we found body height was correlated to the cognitive facet of SWB (life satisfaction), but not the affective facet of SWB (affects).

These findings have three major contributions. First, we extended previous research on antecedents of SWB in the Chinese culture, and found that height is an important predictor of SWB (life satisfaction) among the Chinese people. Indeed, Chinese adolescents and young adults were significantly more concerned about being of shorter stature than about being overweight or having facial flaws, a pattern replicated among both males and females (Chen, Jackson, & Huang, 2006). Second, the current research contributed to the literature on relationship between body height and happiness, and found body height had distinct effects on the cognitive facet of happiness and the affective facet of happiness, respectively. Third, we found that gender moderated the effect of body height on SWB in China. In contrast to previous research (Deaton & Arora, 2009), the correlation between body height and life satisfaction was stronger among females than that of males. A possible reason is that female young people are more likely to care about their physical appearance than their male counterparts, and physical appearances can be a source of life satisfaction (Chen, et al., 2006).

The current research has several limitations to be addressed in future studies. First, we used self-reporting measures of body height and SWB. The findings could be subject to an overestimation of common variance due to common-method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Future research may measure height by trained personnel using a stadiometer. Moreover, the present study is correlational, future studies may explore the causal relationship between these variables by manipulating body height within an immersive virtual reality simulation in laboratory setting (Freeman, Evans, Lister, Antley, Dunn, & Slater, 2013).

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The Emotional Display Rules and Emotional Labor Strategies of Mediators: An Interview Study of Twenty Mediators in China

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[Abstract] By interviewing 20 Chinese grass-root mediators in Xiangtan, Hunan Province, it is found that the emotional display rules of the mediators include positive emotion displays, negative emotion hidings, empathy displays, and interaction controls. This deep acting is used by most of the 20 excellent mediators. They deepen their understanding of the parties by identifying their professions, stressing responsibilities and using transposition thinking, and supplementing the resources consumed in emotional labor by the social capital obtained in their work such as their sense of achievement, reputation and “face”.

[Keywords] emotional display rule; emotional labor strategy; mediator

Introduction

Emotional labor was elaborated on by Hochschild (1983) in his book, *The Managed Heart*, for the first time. According to him, in order to show facial expressions and body movements which can be observed in public, individuals devote time to psychological adjustment and control. Then emotional labor is concerned and a growing number of related studies were subsequently aroused. Emotional labor has the following characteristics: (1) it occurs in the context between employees and others (Morris & Feldman, 1996); (2) employees need to make efforts to adjust their emotional displays constantly (Morris & Feldman, 1996; Grandey, 2003; Diefendorff & Gosserand, 2003); (3) emotional displays must be in accordance with the display rules required by organizations (Ashforth, & Humphrey, 1993; Morris, & Feldman, 1996).

The empirical studies of emotional labor have mainly focused on the professional fields of service industry. In the Chinese culture, this kind of study is concentrated in Taiwan, but it's less well established in the mainland area of China. Most of them have focused on the service industry, and the field of education and management, discussing the relationship between emotional labor strategy and work performance and behavior by questionnaire surveys and experiments. Moreover, their main measure tools are the translated and adapted scales popularized in western culture. Thus, as far as existing researches of emotional labor in the Chinese culture, there are relatively few empirical researches of emotional display rules in different organizations and professions, lacking consideration of cultural context. Actually, emotional display rules and emotional labor strategies, as well as their influences may be different in diverse culture backgrounds and professional situations. Therefore, this study focuses on the mediators, who work to help their parties resolve conflicts and reach accommodations with others, and is placed in the Chinese cultural context.

Methods

Participants

Twenty (20) excellent grass-roots mediators were selected in Xiangtan, Hunan Province, China. They were basically recommended by the principals of local justice institutes, and most of them have gained the honor of mediator master in their counties, provinces, or even in the whole country. They include 16 males and 4 females, and 8 are from urban areas and 12 are from rural areas. They have worked as mediators for 2 to 30 years.

Data Collection Method

For learning mediators' emotional display rules and emotional labor strategies, it's necessary to put the study into a specific society and work situation. This study was carried out by semi-open interviews, and centered on the following three facets: (1) the mediators' emotional experience and displays in mediation; (2) the rules and aims of their emotional displays; (3) individuals' psychological feelings and cognition, and their influences on work behaviors when they express emotions according to the emotional display rules.

Results and Discussion

Mediators need to resolve their parties' conflicts, and are required to have full contact and interactions with their parties. They need to deal with their parties' complex emotions, and their emotional display rules are regulated by their roles. Therefore, mediators need to continuously adjust and control their emotions and emotional displays to work efficiently. So, this job demands a certain level of emotional labor.

The Emotional Display Rules of the Mediators

Emotional display rules refer to the regulations about the emotions employees should express in their work situations to realize their goals (Rafaeli, & Sutton, 1987). There may be different contents of display rules in different jobs. Most of them use comprehensive emotional display rules, namely to promote positive interpersonal interactions by expressing positive emotions and hiding negative emotions (Ashforth & Humphrey, 1995; Wharton & Erickson, 1993). According to the interviews with the excellent grass-root mediators in China, it is found that their professional roles have determined their emotional display rules possess the following characteristics in Chinese culture:

Displaying positive emotions. In order to gain the trust of their parties and provide a peaceful and optimistic talking environment for their angry parties in disputes, the mediators need to show their goodwill, concern and confidence. A number of interviewees believe that it is crucial to display positive emotions in dealing with the parties:

“You have to show the parties your enthusiasm to close your friendship, or they will think you are cold and won't trust you, and think you are nothing, and unwilling to talk with you.”

It was said by an old prestigious mediator when he introduced his experiences:

“Sometimes telling jokes and making fun are also necessary. To be a mediator is means to get along well with the parties, and that is my biggest strength. Usually, I would chat about ordinary daily life with them for several minutes before the talks.”

The positive emotions displayed by mediators not only include cordial feelings and enthusiasm, which are similar with other service occupations, but they also display confidence. Just as it was said by an interviewee that:

“Whether you have confidence or not, you have to encourage yourself at first: I can mediate it and will close it today. Make others feel that you’re confident.”

Hiding negative emotions. Mediators are required to control and hide their negative emotions in front of the parties who are angered, hard to communicate to or have prejudice. It was said by an interviewee that:

“We’ve met all sorts of situations, some parties even would abuse you. We just laugh away.”

Another experienced mediator talked about the importance of “good temper”:

“No matter how unreasonable the parties are, you need to be patient and keep your temper. To be a mediator really need a good temper.”

When asked how to face the parties’ misunderstandings and criticisms, a mediator said:

“Keep calm and don’t care about him! Sometimes, someone can’t understand us, or have verbal conflicts with us. But we can’t dispute with them or lose our tempers, more can’t talk dirty.”

Displaying empathy. Strong emotions are always together with conflicts. The parties in disputes usually have lots of negative emotions, such as anxiousness, anger, sadness, and they can’t discuss solutions rationally with others while in these states. Therefore, mediators are required to communicate with the parties by displaying their empathy. It was said by a senior mediator when he talked about his work experience for these years:

“To be a mediator, you need to talk heart-to-heart with the parties at first to understand their situations and feelings by putting yourself in their shoes, especially when we talk with the vulnerable group. It can help us to gain their trust easily.”

Another mediator talked about a case he had handled. A party who had lost his son was in an excitable state and the mediator expressed his fully understanding and sympathy to him:

“He must be tortured since he had only this son. While he was so miserable, we can do nothing but understand his feelings, show our sympathy and concern.”

Controlling interactions. The mediators not only need to gain the favor and trust of their parties, but also need to lead both parties to communicate reasonably and efficiently, and find a solution according to the principle of heqingheli (reasonableness) that satisfies both sides. Consequently, mediators have to control the parties’ emotions and the interaction processes. The work was described by an interviewee:

“The mediation is work to deal with man, while man is an advanced animal. So if we don’t have good mentality, we would be controlled by others.”

Therefore, in some situations, the mediators need to control their interactions with the parties by displaying appropriate emotional displays. For those parties who are extremely unreasonable and want to use extreme ways to get what they want, all the mediators agree to use laws and other deterrent forces:

“It’s necessary to tell them (the parties), their thoughts and actions are illegal and are absolutely not allowed. We can’t succumb to their unreasonableness!”

“Sometimes, it’s necessary to use power and authority to suppress them.”

And, “cold treatments” would also be used:

“If both parties performed bad, I would usually let themselves calm down and pay no attention to them. Can’t be urgent, instead take it easy, or even be cold. Let them be anxious and ask my help. Then their motivations of solving the problems would be stronger.”

Overall, the particularities of mediators’ emotional displays have been determined by their professional roles: (1) like in all other service occupations, they’re required to display positive emotions and hide negative emotions; (2) the mediators’ professional roles not only demand them to show their enthusiasm, goodwill and optimism, but more importantly reflect fairness. Therefore, all the emotional display rules are restrained by fairness. For example, the degree of displaying positive emotions should be paid attention to. The mediators should display their emotions equally to both sides, otherwise, the parties would consider it as favoritism. Furthermore, when the parties are extremely unreasonable, the mediators also need to become serious and criticize them, which is regulated to be rational and objective, and it’s better not perform this in front of the public, especially the other party. It is widely agreed by the mediators interviewed that saving the parties’ faces and maintaining fairness are the basic principles.

The Emotional Labor Strategies of the Mediators

Emotional labor strategies include surface acting and deep acting (Hochschild,1983). Surface acting means employees display the emotions that their organizations demand by changing their behaviors that can be observed, while there is no change of their real feelings. Deep acting refers to the strategy that employees change their feelings by continual efforts and thoughts in accordance with the emotional expressions demanded by their organizations. It is found in existing studies that surface acting more easily exhausts employees’ emotions and results in job lassitude more than deep acting (Grandey, 2003; Grandey, & Fisk, 2005).

In this study, the interviewees are all excellent mediators who are highly thought of by their organizations and service targets (the parties), so deep acting is mainly found in their emotional labor strategies. They have also talked about their changes from when they started working:

“When I started to do this job, I would always be annoyed about the hard-communicating parties. But after a long time of this work, I have learned that it is my job to communicate with the parties patiently, whatever kind of people they are.”

It suggests that most mediators use surface acting at the beginning, and thus they usually have to repress their negative emotions and find it hard to work efficiently. With accumulated experience gradually, however, they begin to adjust their professional cognition and emotional labor strategies, and supplement the resources consumed in their work by deep acting:

Identifying with professional requirements and emphasizing responsibilities. The mediators interviewed in this research all performed at a higher professional self-identity, therefore, they stressed their professional responsibilities more and considered displaying the emotions required by their organizations as their duties:

“We have to be responsible. This job demands us to deal with the parties in disputes. It’s already very hard, and if we don’t be responsible, the cases would more likely to be resolved in a perfunctory way.”

When asked what would they do if they were misunderstood by their parties, most mediators thought they should exercise their duties and guaranteed fairness at first. If this had been done, they would have a clear conscience about their parties' misunderstandings and wouldn't have a lot of negative emotions:

“Be peaceful and calm. Never mind it. You said I had taken bribery, and must it be truth? Only if that hasn't been done, he (the party) would finally understand you.”

When encountering extremely unreasonable parties, the mediators would also have negative emotions (such as anger), but:

“A mediator needs self-adjustment. He should be clear about the aims of the job and find out why his parties are unfriendly to him. All the problems naturally arise in the work.”

The mediators' deep acting makes them identify with their professions and value their responsibilities, therefore, they would consider emotional labor as the duties of their work.

Understanding the parties' feelings by transposition thinking. The negative emotions of the mediators often result from those of their parties', such as over-excitement, irrationality, misunderstandings and insupportable charges. It was said by the mediators interviewed that when faced such situations, they would also be frustrated and annoyed, and wanted to release their negative emotions, however, they finally hide them by reminding themselves of their responsibilities and transposition thinking:

“I want to get mad at them sometimes, but I could also understand them when putting myself in their shoes. How could we ask them to be rational as soon after they have suffered such great misfortune. So we can only be patient and communicate with them softly.”

“Sometimes, we would also be worried about the tough parties or even be impatient with them. But it's not difficult to understand them by transposition thinking. What they want is nothing but striving for benefits for themselves or their families, and there is nothing wrong.”

For many mediators, this kind of transposition thinking is also a way of self-regulation. After talking about much hardships and grievances they experienced in mediating, most mediators summarized, “well, nobody has it easy (themselves and their parties).”

Supplementing the Consumed Resources by the Sense of Achievements and External Returns in Works

Many mediators talked about the trifles and hardships in their works, but they also stressed the returns after hard work. Organizational performance appraisals and rewards are only parts of the returns; what they value more is the psychological rewards. A young mediator who has worked for two years talked about his experience:

“It would give me a great sense of achievement if I solved the problems for the parties by mediating and hard work.”

An experienced mediator described the gratification which is brought by the job:

“Well it can be very fulfilling to mediate a case successfully. They (the parties) would greet you with smiling once meet you outside for they remembering your helps.”

“In my deep heart, I never want them to give me any rewards. Whenever I meet them, they would always say, ‘Thank you for giving me such a great help!’ and eagerly invite

me to chew them arecas¹. It would make me very happy. And that is just their rewards for me.”

The parties' thanks and respect are crucial to the mediators. It not only pushes them to work much harder and more actively, but also supplements the resources consumed in emotional labor. Furthermore, it lets them win reputations and “face” (prestige) in their areas, which could provide the mediators psychological satisfaction and social capital benefits. An experienced mediator said the popularity and prestige he has won for these years was one of the reasons for his success in mediation:

“Maybe for a long time mediation and much contact with them, the locals are willing to give me face. So lots of problems could be solved easily once I interfering. For one thing, I have fine guanxi with the locals. And I have so good reputation that they trust me.”

It suggests that the grass-root mediators can build up a virtuous circle by hard work. That means hard work can help them to obtain their parties' recognition and achieve the public praise and reputation at first. Then it would provide convenience for their work afterwards since the locals are more willing to accept prestigious mediators' advice and “give them face”(accept their advice out of respect). It can not only help the mediators work more efficiently, but also improve their reputations.

Conclusion

The analysis results of the interview materials have indicated that the emotional display rules of grass-root mediators in China have something in common with those of general service occupations, but also have their own particularities. The former is mainly characterized by displaying positive emotions and hiding negative emotions to impress the parties with goodwill, enthusiasm and trustworthiness. However, the latter is mainly displayed by empathy and interaction control with all the emotional displays regulated by fairness to impress the parties with fairness, objectiveness and authority. For emotional labor strategies, deep acting is basically taken by the excellent mediators interviewed. Specifically, they deepen their understanding of the parties by identifying their professions, stressing responsibilities and using transposition thinking, and supplementing the resources consumed in emotional labor by the social capital obtained in their work such as the sense of achievement, reputation and “face”. It can not only avoid emotional exhaustion and job lassitude, but also helps the mediators work more efficiently.

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¹It is a kind of snack popular in the local. In social interaction, when one person invites the other to chew his areca, it would mean he is displaying the goodwill and politeness.

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The Meaning in Life in China and the United States: A Cross-Cultural Comparison Research

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[Abstract] Meaning in life is a core need of humanity, and this kind of need could be shaped by culture. However, cultural variations of meaning in life have rarely been examined. The present study tested the differences and similarities of meaning in life between the United States and China using the Meaning in Life Questionnaire (MLQ). Samples include Americans ($N=549$) and Chinese (398). Results show there are no significant differences of presence of meaning between the two countries. Search for meaning had significant differences with Chinese participants reporting a higher search for meaning than those in the United States. Regression analysis suggests that culture moderates the relationship between presence of meaning and search for meaning.

[Keywords] meaning in life; cross-cultural; presence of meaning; search for meaning

Introduction

Existential philosophers and psychologists have long argued that the experience of meaning lies at the heart of human existence (Hicks & Routledge, 2013). While philosophers had their own perspective of debating whether meaning exists or whether certain contingencies must be fulfilled in order to experience “real” meaning, psychologists have primarily used empirical approaches to measure the meaning in life, which has greatly promoted the research of meaning in life and generated a large number of outcomes. Meaning in life is a positive indicator of well-being (Ryff, 1989), and is associated with higher quality of life (Krause, 2007), and a lower incidence of psychological disorders (Mascaro, & Rosen, 2005; Steger & Kashdan, 2009). But most of the theory-building and empirical investigation about meaning in life has originated within Western cultures (Steger, Yoshito, Satoshi, & Keiko, 2008). Actually, culture may have a great influence on the meaning in life either on its resources, the frame of understanding implication of meaning, or on the feelings and experience of meaning in life. Because culture “is a prearranged design for living...a set of inventions that have arisen in various parts of the world (or with subgroup of populations) to make life efficient and intelligible for mortals who struggle with the same basic problems of life: birth growth, death, the pursuit of health, welfare, and meaning” (Allport, 1961). Culture is an important source of an individual’s values, expectations, and needs (Markus & Kitayama, 1991), which could further shape the specific experiences of meaning (Kitayama & Markus, 2000). China has a very different culture than the United States, including collectivism and individualism, independent self and interdependent self, dialectical thinking and linear thinking; all of these differences may influence the perspectives about meaning in life. Steger, et al. (2008) investigated the difference of the two dimensions of meaning in life (presence and search), and found cultural differences of meaning in life between Japan and United States; they bring out a dialectical model of meaning in life. Inspired by Steger, et al. (2008), we are interested in the differences of meaning in life between China and the United States, and what kinds of an effect culture could exert on the meaning in life between these two very different countries.

Method

Participants

The combined sample consisted of 947 undergraduate students from first to fourth year, included 549 American students (15.4% males), all of whom are above age 18, and 398 Chinese students (36.9% males), with an average age is 20. In order to ensure the equivalence of samples, all students were recruited from ordinary universities which are in the mid-rank both in China and the United States. Table 1 shows the descriptive statistics of the measures.

Table 1. Descriptive Statistics for Measures

Nation	Sample	% Male	Measures	M	SD
US	N=549	15.4	MLQ Present	5.09	1.32
			MLQ Search	4.98	1.50
China	N=398	36.9	C- MLQ Present	5.03	1.01
			C- MLQ Search	5.42	1.08

Measures

Meaning in life. The Meaning in Life Questionnaire (MLQ) consists of two five-item sub-scales, Presence of Meaning in Life and Search for Meaning in Life. The Presence sub-scale measures the extent to which participants perceive their lives as significant and meaningful (e.g., “I understand my life’s meaning” and “My life has no clear purpose”). The Search sub-scale measures the extent to which respondents are actively seeking meaning or purpose in their lives (e.g., “I am always searching for something that makes my life feel significant.” and “I am seeking a purpose or mission for my life.”). All items are rated from 1 (Absolutely Untrue) to 7 (Absolutely True). The *Cronbach’s a* of the United States sample in the present study is $a = .899$ for Presence, and $a = .908$ for Search).

Chinese version of Meaning in Life Questionnaire was also conducted in our research. We refer to the translation of a Chinese version MLQ revised by Chinese researcher Liu Si-Si and Gan Yi-Qun (2010) and a MLQ edition translated by Hong Kong researcher Fung to formulate a Chinese version of the Meaning in Life Questionnaire (C-MLQ). The internal consistency of the C-MLQ scores appeared reliable in the sample from China ($a = .749$ for Presence, $a = .852$ for Search). EFA and CFA were conducted to test the construct and factor validity and reliability of C-MLQ. The result of CFA ($\chi^2 = 145.63$, NFI = 0.903, CFI = 0.923, IFI = 0.924, and RMSEA = 0.078) indicates the Chinese version of meaning in life meets the measurement requirements. Except for one factor loading, the 9th item (“My life has no clear purpose”) which belongs to the sub-scale of presence of meaning in life, was not so good, $\lambda = 0.33$. The reason of the low factor loading of this item may lie in that westerners have higher scores on negative questions or reverse-score items than Easterners, which represent individuals’ cognitive differences under different cultures (Spencer-Rodgers, Peng, & Wang, L., et al., 2004).

Structural Equivalence Test

Before it was possible to compare the results across countries, it is necessary to ensure that the underlying structure is equal across cultures. To establish measurement invariance of the MLQ in the Chinese and American samples, we conducted a series of multi-group confirmatory factor analyses (see Steger, et al., 2008) on the combined data from the United States (N = 549) and China (N = 398) using AMOS20.0. The first model tested consisted of the two-factor structure of the MLQ, allowing factor loadings to vary across cultural groups. The result shows that the two-factor model fit well in both cultures (CFI = .944,

NFI = .932, RMSEA = .067). With this level of weakness, invariance, comparing correlations using the scale is tenable. We next tested the same model, but with factor loadings constrained to be equal across cultures. This model was also acceptable across cultures (CFI = .941, NFI = .927, RMSEA = .065). Finally, to establish strong, also known as scalar, invariance, we fixed the regression intercepts across cultures. This model was also acceptable (CFI =.909, NFI = .894, RMSEA = .076,) which allows us to assume that any differences in mean levels are due to culture, rather than lack of measurement equivalence.

Results

Cross-Cultural Comparison of Meaning in Life Dimension

T-test was used to compare the difference of MLQ sub-scales presence of meaning and search for meaning in China and United States. Culture was entered as the grouping variable, while presence of meaning and search for meaning was regarded as the test variable. The results are shown in Table 2. Presence of meaning in life scores have no significant differences between United States (M = 5.09, SD = 1.32) and China (M = 5.03, SD = 1.01, p = .420). But the SSearch for meaning scores was significantly higher in China (M = 5.42, SD = 1.08, t = -5.276, p < 0.001).

Table 2. Result of T-test of Presence of Meaning and Search for Meaning between the United States and China

	US (n=549)		China (n=398)		t	p
	M	SD	M	SD		
Presence of meaning in life	5.09	1.32	5.03	1.01	0.806	0.420
Search for meaning in life	4.98	1.40	5.42	1.08	-5.276***	0.000

Relation Between Presence of Meaning and Search for Meaning

In order to test the moderate effect of culture between the MLQ-Presence of meaning in life and MLQ-Search for meaning in life, we performed a hierarchical multiple regression, with Presence of meaning scores as the dependent variable. Sex was entered as the control variable in the first step, and in the second block we put in Search for meaning as the independent variable and culture as the moderator. The interaction term of culture and Search for meaning scores were entered in the third step. Sex and culture were coded as the dummy variable, and MLQ-Search and MLQ-Present scores were standardized before being put into the regression analysis. The results of the regression analysis are presented in Table 3. The interaction term was significant ($\beta = .248$, p < .001).

Table 3. Moderation by Culture of the Relation Between the Presence of Meaning and Search for Meaning

	b	SE _b	β	ΔR^2	ΔF	Adj. R ²
Step 1				.000	.001	-.001
Sex	.002	.067	.001			
Step2				.006	2.698	.003
Culture	-.043	.076	-.021			
MLQ-Search	-.072	.033	-.072*			
Step3				.042	40.707	.043***
MLQ-Search \times Culture	.455	.071	.248***			

N = 932, Note: sex coded female = 0; male = 1; Culture coded United States = 0; China = 1; *p < .05, **p < 0.1, ***p < .001.

Further simple slopes analysis (Aiken & West, 1991; Fang & Wen, 2015) was conducted to test the gradients of the lines. The results are significant for both lines. For the United States, the gradient of simple slope = -0.206, $t = -4.606$, $p < 0.000$; and for China, the gradient of simple slope = 0.249, $t = 4.546$, $p < 0.000$. The slopes of the two lines are also significantly different from each other ($t = 6.433$, $p < 0.05$). From simple slope analysis, we can see that there was a negative relation between Presence and Search in the United States; in contrast, the relation between Presence and Search in China was positive. The interaction was depicted graphically in Figure 1.

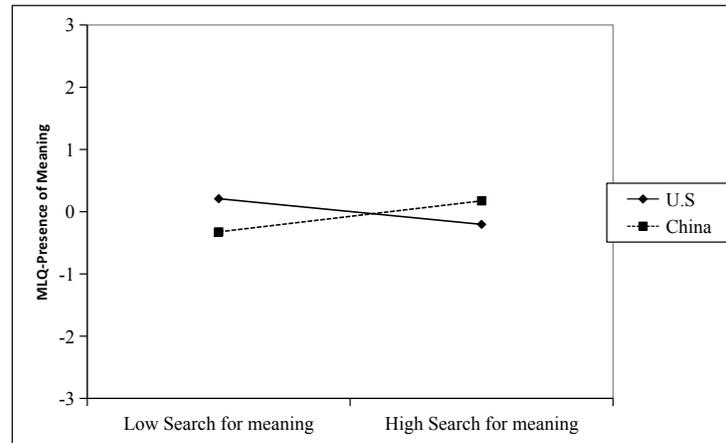


Figure 1. The Relation Between Presence of Meaning and Search for Meaning with the Moderation of Culture

Discussion

Meaning in life has long been studied in western countries for decades, its theory, measurement, and conclusion all on the basis of western cultures, but little literature had focused on the difference of meaning in life with its two dimensions – presence and search –and the relation between Presence of meaning and Search for meaning in different cultures. Our investigation of meaning in life in the United States and China has found that levels of Presence of meaning in life have no significant difference between the countries. But the Search for meaning was significantly different than the Chinese participants who reported higher levels of search for meaning. Another important finding is that culture can moderate the relation between Presence of meaning and Search for meaning. There was a positive correlation between Presence and Search in China, and a negative relation between Presence and Search in the United States.

Our findings are generally consistent with other recent evidence that culture factors mediate the relation between the Presence of meaning and Search for meaning. For example, Steger, et al. (2008) also found there were cultural divisions between Presence of meaning and Search for meaning. But the different findings in our research shows that Presence of meaning has no cultural difference between the United States and China, which may indicate college students in China are content with their life, and had clear purpose for their present life. The higher scores on Search for meaning in China were consistent with Steger, et al.'s (2008) investigation, where they found that Japanese participants reported higher scores for Search for meaning in life than Americans. The findings of a higher score for Search for meaning in China suggests that Search for meaning is also a positive thinking about life, which can also explain the positive relationship between Presence of meaning and Search for meaning. An explanation

for this in college students in China regard Presence of meaning and Search for meaning are different aspects of one same thing. These kinds of thinking are in accordance with the dialectical thinking or both, and thinking, which stresses connectedness between things. In contrast, the negative relationship of Presence of meaning and Search for meaning in United States indicates they emphasize distinctions and then lead to their either/or thinking (Bagozzi, Wong, & Yi, 1999; Markus & Kitayama, 1991).

Frankl maintained that “man’s search for meaning is the primary motivation in his life” (1959/1985, p. 121). The results of our investigation show that Chinese college students report higher scores on Search for meaning and the same levels of Presence of meaning than American college students told us that a higher Search for meaning does not necessarily lead to lower Presence of meaning in life. Search for meaning could be and should be consistent with the level of Presence of meaning. Otherwise, people would need not to search for meaning in life, which is contradictory with Frankl’s theory. It is important to consider the culture and subculture of our study object to clarify the relation between Presence of meaning and Search for meaning. Future research should find more evidence to clarify the relation between the two dimension of meaning in life, and conduct more experimental researches to explain when and why they are consistent and inconsistent, or even complex relationship in different situations.

Maybe it’s better to put the study of meaning in life under the framework of well-being, so that meaning in life will have its’ own meaning; this is one of the limitation of our research. Same with all of the questionnaire research, our study is based on cross-sectional data and correlational analyses among college students with only one variable; all of these constrained the inferences of the present research.

Conclusion

The present study of meaning in life in had discovered a different relation between the two dimension of Meaning in Life Questionnaire (presence of meaning and search for meaning) in China and United States. There is positive relation between present and search in China and negative relation in United States. Another finding is that Chinese college student has the same scores of presence of meaning in life and higher scores on search for meaning compare with college students from United States.

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Qualitative Research on Counselor Professional Identity Structure

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[Abstract] The purpose of this study is to construct a theoretical model for a counselor professional identity structure, and provide a theoretical framework to develop measuring tools for counselor professional identity. We used grounded theory to analyze counselors' typical professional psychology and behavior in the process of career development through interviewing thirteen (13) counselors, and explored the core elements of counselor professional identity structure. It was found that the counselor professional identity is a multi-dimensional structure which consists of four factors. They are professional philosophy, professional norms, role behavior, professional emotion and professional loyalty.

[Keywords] counselor; professional identity; dimension; theoretical model

Introduction

Existing research suggests that counselor professional identity is a multi-dimensional structural system (Gray & Remley, 2000; Emerson, 2010). But for the specific dimensions of counselor occupation identity, there is no consensus in the academic circles. Most of the research is only based on a narrow sample, poor definition and the scale lacks reliability and validity, which is difficult to form an overall grasp of the structure of counselor professional identity and a deep understanding of the connotation of each dimension. At present, there is no research on the understanding of the complex structure of counselor professional identity from the career development process. Using qualitative methods, this research will explore the core elements of counselor occupation identity structure and understand the connotation of the concept thoroughly by analyzing the typical occupational psychology and behavior of counselors in the career development process.

Research Methods

In this study, grounded theory approach was used. Based on the raw data obtained by interviews, a theory was gradually formed by inductive analysis. Data was collected through a semi-structured interview method. The interview time was 90 minutes.

Interviewees

In this interview, there were thirteen (13) professionals engaged in psychological counseling – 6 of them are from schools, 3 from social institutions, and 4 from the medical system. Five of them are male, and 8 are female. Their average age was 42.8 ± 13.5 years old. All had a national professional qualification certificate and intermediate title or above. Five had 5-6 years of consulting experience, five had 9-11 years of consulting experience, and three had over 15 years of consulting experience. Respondents were recommended by peers according to the principle that “the one who has been fully engaged in psychological counseling and treatment for more than 5 years or is engaged in this work part-time for more than 10 years” and “considering the sample representativeness and diversity”. The interviews were fully recorded after gaining the consent of the respondents.

Interview Outline

The outline of the semi-structured interview mainly includes job description, career experience, career involvement and career expectations. The main content of the job description required respondents to describe their roles in the consultation and services provided, service objects, specifications and requirements for consulting work, the characteristics of qualified and excellent counselors, evaluation criteria for consulting results, the focus and difficulty of consulting work, etc.

The experience and evaluation part of their career used the Behavioral Event interview to understand the career identity development of each stage. In the interviews, we asked respondents to talk about one behavioral event which made them willing to take this occupation and a behavioral event which rocked their willingness to take this occupation. Respondents were asked to describe the event in detail according to clue of “Scenario - Target - Behavior - Result - Feeling“.

The section of career involvement and career expectation asked respondents to describe the degree of their personal involvement, the overall evaluation of their career and career expectations according to their own work experiences and backgrounds. Finally, the respondents were asked to explain the characteristics of highly professional identity counselors according to their own understanding of professional identity.

Interview Data Coding

After transcribing the recorded material of the interviews into text, nearly 250,000 words was obtained. On this basis, coders strictly followed the coding process of grounded theory, and divided the coding manual formulation into “bottom-up“ stage and “top-down“ stage. In the “bottom-up“ stage, we conducted an open coding on some interview text first. We summed up all typical professional psychological and behavioral factors involved in the text and tried to name it in the respondents’ language and then analyzed the hierarchical relationship, category relationship and logical relations between the obtained elements. We summed up the levels and categories of similar factors, and formed a coding manual with a certain openness. In the “top-down“ stage, the formed coding manual was used to recode and analyze all interview texts, aiming to analyze the interview content in the framework of the coding manual, extract structural elements of professional identity, rename it according to the need and initially determine the relative importance of each element.

Two researchers conducted a coding analysis independently, in parallel. To ensure the reliability of coding, for the text whose consistency coefficient between coders was over 0.8, content analysis was included. The one whose consistency coefficient between coders was lower than 0.8 was recoded after the discussion so as to meet the requirements of coding consistency.

Results

Structural Elements of Counselor Professional Identity

According to the formed coding manual, the “top-down“ approach was used to recode and analyze all interview texts and extract structural elements of professional identity. In the encoding process of this phase, based on the above theoretical ideas, we used two-level and three-level concepts to code relevant professional identity elements. The first-level concept is the category of professional identity, including “cognition”, “emotion” and “intention”. The cognitive level of identity refers to the counselors’ cognition and understanding of consultation meaning and value, work objects, professional norms and the role of counselors. The emotional experience level of identity refers to counselors’ good feelings and positive

experience gained from this job as a counselor. The behavioral level of identity refers to the counselors' work motivation and commitment. This classification method is considered based on the theoretical perspective of mental process and mental components (cognition, emotion, behavior) included in professional identity. The two-level concept is the elements covered by the "cognition", "emotion" and "behavior" of identity. Among them, "cognition" can be divided into "professional philosophy", "professional norms" and "role behavior". "Emotion" mainly refers to "professional emotion". "Intention" mainly refers to "professional loyalty". The three-level concept refers to specific components contained in every identify element. "Professional philosophy" mainly involves the concept of development, health, prevention and self-help. "Professional norms" involves "normative consciousness", "ethical requirement" and "counseling outcome evaluation". "Role behavior" mainly involves "role function" and "role requirement". "Professional emotion" mainly involves "pride", "achievement" and "sense of belonging". "Professional loyalty" mainly involves "professional involvement" and "professional will". All of the elements of professional identity were initially defined by the key expression point of cognition, emotion and intention. Table 1 is the generalization and refinement of counselors' professional identity structure elements.

Table 1. The Generalization of Counselors' Professional Identity Structure Elements

First-level Concept	Second-level Concept	Third-level Concept	Specific Expression in Interview Data
Cognition	Professional philosophy	Development view	Problems are developmental. The one who has serious psychological problems can also benefit from counseling; People can change.
		Concept of health	All visitors' aspects of life should be considered when providing advisory services. Counseling is to help everyone to achieve the greatest degree of mental health.
		Prevention view	The problem itself is the opportunity to grow. Mental health education can prevent problems from getting serious. Prevention is as important as correction.
		Self-help	To develop visitors' potential; To believe in visitors' own strength; To promote visitors' personal growth; To enhance visitors' ability to solve problems independently.
	Professional norms	Normative consciousness	Respect visitors' wishes, cultural background, and peers' opinions; Constantly evaluate your consulting results; Know your limitations.
		Ethical requirement	The necessity of informed consent; the compliance of confidentiality agreements; Special case process; counselors' permissions
		Counseling outcome evaluation	Visitors' subjective experience, behaviour change and relational schema change; the view of the people around you.
	Role behaviour	Role function	Counselors have multiple roles. Mental health education is one of the responsibilities. To actively promote professional advice to others.
		Role requirement	The ability to interact with different people, professional experience, the ability to summarize clients' problems in theory.
Emotion	Professional emotion	Pride	Get a sense of achievement in work, experience the sense of value from work; Having confidence in this occupation.
		Sense of belonging	Having a feeling that you are a member of the organization; Feel good with your peer; Can feel the value of your work.
Intention	Professional loyalty	Professional involvement	Participate in professional activities. Conduct professional research; Join a professional organization.
		Professional will	Job satisfaction; Work commitments; Job stability.

In order to further enrich the concept connotation of professional identity structural elements and improve its structural relationship, we carried out frequency statistics on the components of professional identity structural elements (See Table 2). We selected the component of structural elements whose selection frequency was above 5 as the core elements of counselor professional identity structure. Taking into account their rationality in the component of professional identity structural elements, although the frequency of “prevention” and “professional involvement” was less than 5 times, we reserved it.

Table 2. The Frequency of Counselor Professional Identity Structure Elements

Category	Element	Component	Frequency
Cognition	Professional philosophy	Development view	9
		Concept of health	6
		Prevention view	2
		Self-help	12
	Professional norm	Normative consciousness	13
		Ethical requirement	11
		Counseling outcome evaluation	2
	Role behaviour	Role function	8
Role requirement		7	
Emotion	Professional emotion	Pride	10
		Sense of belonging	6
Intention	Professional loyalty	Professional involvement	3
		Professional will	7

The Theoretical Model of Counselor Professional Identity Structure

After synthesizing two coding results, we proposed a theoretical model of counselor professional identity structure, including professional philosophy, professional norms, role behavior, professional emotion and professional loyalty. Each element consisted of several core components. Professional philosophy includes the concept of development, health, prevention, and self-help. Professional norm consists of normative awareness and ethical requirement. Counseling effect’s evaluation standard aims at cases. According to the consulting concept that each can benefit from the consultation, it is difficult for the evaluation of consulting results to have a fixed standard. As a result, it is not a component of professional norms, but a kind of behavior expression of normative consciousness because effectiveness evaluation is required conduct by professional norms. Role behavior involves internalized role function consciousness and external role behavior requirements. Professional pride refers to pride and a sense of belonging. Professional loyalty is reflected in the involvement degree of professional activities and professional will behavior. The specific ingredients contained in each element are shown in Figure 1.

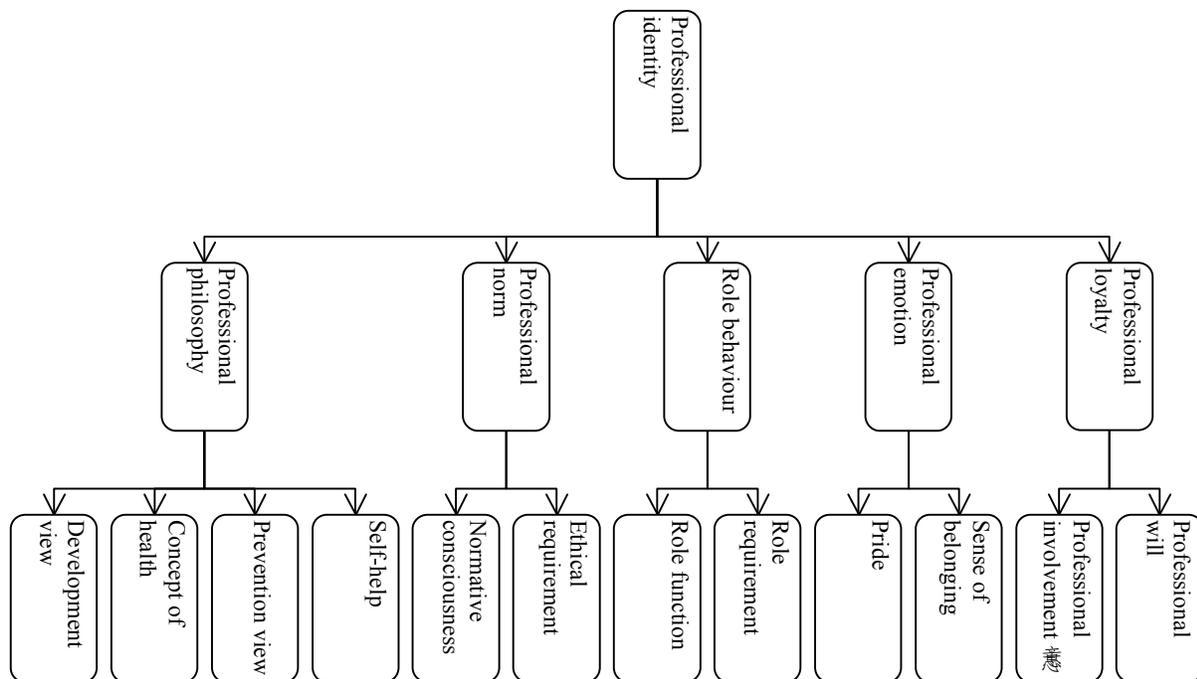


Figure 1. Theory Conception Structure of Counselor Professional Identity

The Connotation of Counselor Professional Identity

The element of “professional philosophy” in counselor occupation identity structure is defined as a belief system of professional counseling. It consists of four components of development, health, prevention and self-help. Counselors with strong professional identity should be able to clarify these ideas in the consulting industry.

“Development” is based on the assumption that life challenges must be faced by people in the process of growing (Remly & Herlihy, 2007). From the perspective of development, counselors will observe visitors’ problems and obstacles from a positive development direction, and regard it as a part, instead of a pathological problem, in the process of individual development.

“Health” means that counselors pay close attention to visitors’ overall development of mental health, emotional health, behavioral health, spirit, culture and systems from their own advantages, and help everyone realize her/his individual mental health to the maximum extent. Myers (1991, 1992) pointed out that in the consulting area, the concept of health is the most deep-rooted part in the history of this industry.

“Prevention” means that counselors can use education and guidance as a tool to help visitors avoid potential emotional, psychological and interpersonal problems (Herr & Niles, 2001), and encourage early intervention rather than correction on any problems. One of the methods to reduce the prevalence of mental disorders and other problems is to improve people’s abilities to master the skills of coping with life stress.

“Self-help” is consistent with the concept of “empowerment” referred in Remley and Herlihy’s view (2007). Counselors try to give help-seekers the necessary tools to allow them to overcome development obstacles instead of relying on counselors, which is completed by teaching help-seekers communication skills and problem-solving strategies, providing psychological education, improving help seekers’ self-understanding and understanding ability. “Self-help” means that based on the respect and acceptance of

visitors, counselors try to help them find the roots of their problems, tap into their own potentials, improve their ability to adapt to life and adjust to their surrounding environment.

The element of “role behavior” in the counselor professional identity structure is defined as counselors understand the uniqueness of their occupation as a professional, and have a comprehensive understanding of their roles, duties and responsibilities, and the range of services provided to the community, including role specifications and role requirements.

“Role function” is that counselors are clearly aware of their roles and responsibilities as a professional, and can actively promote the right consulting ideas to the public. Counselors work in many different environments, including schools, community and private agencies, mental health centers and hospitals. Nyström, et al. (2008) believed that when an individual could identify this occupation, it also meant a stable role and an understanding of their own work.

“Role requirement” includes two meanings. One is that counselors must have professional knowledge and basic skills as a professional when providing counseling; the other is the inherent quality a good counselor must have. Consulting is a highly professional career, and it has already formed a specialized knowledge system, professional accreditation and practical skills requirements (Emener & Cottone, 1989).

The “Professional norm” element in the Counselor Professional Identity Structure is defined as knowing and understanding the ethical guidelines of counseling, applying the understanding to their daily professional activities, and knowing what behaviors are appropriate and professional, so as to strengthen the implementation of ethical norms, including the components of “standard consciousness” and “ethical requirement”.

“Normative consciousness” means that counselors are familiar with and can comply with professional codes of ethics. Professional advisory bodies (such as ANCA, ASCA and ANCA) have already developed a written code of ethics, which consulting professionals should be familiar with and abide by. Codes of ethics not only inform what behaviors of counselors are appropriate and professional, but they also inform the public and visitors what kind of behaviors they can expect from professional counselors.

“Ethical requirement” means that counselors should not stereotype or expand the application of code of ethics and conduct in consultation, which leads to the weakening of the ethical norm. It is not easy to apply codes of ethics in practice. Many respondents mentioned the confusion on visitors’ voluntary medical treatment, informed consent and the confidence level of confidentiality when talking about the plight of consultation. Therefore, without violating basic patient ethical norms, it is very important to specifically analyze specific situations.

The element of “professional emotion” in the Counselor Professional Identity Structure is defined as counselors knowing and understanding their profession, feeling good about being a member of the industry, and feeling a sense of pride and belonging.

“Pride” refers to a kind of a positive emotion that counselors have choose in engaging in this profession, which is from a kind of reverence to the past industry, a practice committing to now and a brief to industry future (VanZandt, 1990). Counselors with strong professional identity have a sense of professional pride. They can communicate their feelings and positive awareness, cognition and understanding of the industry with others. Having a sense professional pride is the cornerstone of professional identity. Myers, et al. (2002) noted that as a part of a professional identity, professional pride is not only necessary to professional publicity, but also crucial to the future of the consulting community.

Sweeney (2001) showed that “pride and clear occupation identity” (p. 24) should be the first priority of counselors and the counseling industry in the future.

“Sense of belonging” means that counselors feel that they are a part of the consulting team, feel acceptance, respect and support from others, and feel good when keeping in touch with others. When counselors know and understand their profession and feel a professional connection, they will feel good about becoming a member of this profession.

The element of “professional loyalty” in the Counselor Professional Identity Structure is defined as the individual counselors’ loyal, professional attitude and investment behavior to the profession of psychological counseling, including professional involvement and professional will.

“Professional involvement” refers to a series of professional investment behavior of counselors. These behaviors include becoming a leader and member of a professional organization, attending professional academic conferences, legislative lobbying, providing propaganda for help-seekers and the industry, participating in workshops and seminars, and expressing their occupation identity to others. These acts have been labeled as a part of a “professional” and professional identity in literature (Spurill & Benschhoff, 1996).

“Professional will” refers to counselors’ stability and positive attitude in their career choices, and they are willing to make an obvious effect in it. Professional will is from a professional’s deep understanding of the job and firm professional belief. They have a positive emotional experience to work, accept the role of counselors in their hearts, and are willing to overcome the difficulties met in their careers through continuous learning, peers’ support and supervision. Therefore, it means that a highly professional identity counselor has a strong professional will.

Conclusion

From the above analysis, the following conclusions have been obtained in this research: Through the analysis on counselors’ typical occupational psychology and behavior in the process of career development, it was found that Counselors Professional Identity includes the psychological factors and processes of cognition, emotion and consciousness. Counselor Professional Identity is a multi-dimensional structure system. Professional philosophy, professional norms, role behavior, professional emotion and professional loyalty are five core elements that constitute the concept of the occupation. The development of these five elements is hierarchical in the whole process of the career. Professional idea begins to build when receiving training. Professional norm is a necessary part in taking up the occupation as a counselor. Role behavior is a condition to be a good counselor. Professional emotion and professional loyalty integrate the individual counselors and their careers.

According to these conclusions, we create the following definition of counselor professional identity: counselor professional identity is a multi-dimensional structure system, including an individual’s awareness and understanding of the core values and beliefs, roles and functions, ethics and ethics norms of the profession, positive emotions of profession and loyalty behavior to their career, which is a unified process for the individual counselor to constantly achieve cognition, emotion and consciousness throughout their career development.

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The Career Decision-Making Self-Efficacy and Academic Stress of Chinese Undergraduates

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[Abstract] *With the Academic Stress Questionnaire and the Chinese Revised Career Decision-Making Self-Efficacy Scale-Short Form (CDMSE-SF), this study explored the relationship between academic stress and career decision-making self-efficacy of undergraduates. Responses from 736 undergraduates revealed that the subscales of CDMSE, i.e., Self-appraisal, Information gathering, Goal selection, Planning, and Problem-solving were all significantly and negatively correlated with academic stress. Especially, Goal selection and Planning significantly and negatively predicted undergraduates' academic stress. This indicates that undergraduates' high ability and skills in job-searching can effectively moderate their academic stress.*

[Keywords] *career decision-making self-efficacy; academic stress; mental health; undergraduate*

Introduction

In recent years, the mental health of undergraduates has been increasingly emphasized. Many undergraduates have been suffering from serious mental problems due to all kinds of stressors in school (Pancer, Hunsberger, Pratt, & Alisat, 2000). Prior researches have found that academic stress is very high (Zhu, 2007; Liu, 2007), or even the highest of all stress confronting undergraduates (Li, & Kam, 2002; Che, Zhang, Huang, & Zhang, X. D., 2003). Academic stress can effectively predict undergraduates' depression and anxiety (Meng, & Yang, 2012), positive and negative emotions (Li, & Kam, 2002), as well as self-esteem and health conditions (Li, & Kam, 2002). As a result, many researchers have been focusing on undergraduates' academic stress to provide better counseling for them.

With the development of China's education and especially the implementation of college enrollment expansion since 1999, the number of undergraduates has been rapidly increasing, which results in severe employment problems for graduates. In recent years, it has been increasingly difficult for graduates to find a job (Lai, 2001). Many undergraduates have been eager to acquire good academic performance to have greater advantages in job-seeking. Their academic performance plays an important role in scholarship, and diplomas, as well as their career development (Che, Zhang, Huang, & Zhang, X. D., 2003). The Exploratory Factor Analysis of undergraduates' academic stressors found that the first factor was the stressor of learning perspective (Chen, 2010). Thus, the increasing employment pressure makes undergraduates suffer greater academic stress. Ruan's (2014) study showed that academic stress is significantly and negatively correlated with career decision-making self-efficacy, of which the factor of planning can significantly and positively predict undergraduates' employment pressure. Career decision-making self-efficacy (CDMSE) refers to individuals' beliefs in their ability to implement and adhere to relevant behaviors in career decision-making (Betz & Hackett, 1997). CDMSE changes significantly with the level of the graduates' anxiety in career decision-making (Xiao, Xiong, & Ye, 2013). Career decision-making self-efficacy is significantly and positively correlated with problem-solving and rationalization in coping style, but is significantly and negatively correlated with negative coping style (Yu, Xu, & You, 2015). Therefore, individuals with higher career decision-making

self-efficacy will feel less employment stress, as well as less academic stress. The purpose of this study is to investigate the relationship between career decision-making self-efficacy and academic stress to provide guidelines for career counseling.

Method

Participants

Participants are 736 undergraduates (aged 17-27, mean=20.60, SD=1.51), among which 248, 110, 216, 162 are freshmen, sophomores, juniors and seniors, respectively, with 369 males and 367 females.

Measures

The questionnaire of Academic Stress was revised from Zhu's study (2007). Zhu's research showed that the main stressors of undergraduates included five aspects: social stressor, job-seeking stressor, stressor of love, financial stressor, and academic stressor, and there were eight items in the academic stressor subscale, such as competitive examination and feeling confusion in class. Li & Kam (2002) suggested that the measurement of stress should be designed to measure an individual's reaction to stressors, as stress is the evaluation of whether individuals feel stressed by stressors. The stressor is objective, whereas the reaction to stressor is subjective. Therefore, items should be designed in terms of stressor instead of stress. On the basis of proposition of Li & Kam's (2002), this study will measure academic stress from stressors which were proposed in Zhu's study (2007). The instruction is "whether the events listed below make you feel stressed". Participants responded on a 4-point Likert scale (0 = never stressed, 1 = slightly stressed, 2 = moderately stressed, and 3 = seriously stressed). The higher the average score indicates higher academic stress. The Cronbach's Alpha coefficient was .81 in this study.

The Chinese Revised Career Decision-Making Self-Efficacy Scale in this study was revised by Long in 2013, on the basis of Career Decision-Making Self-Efficacy Scale- Short Form developed by Betz, et al. in 1996. This Chinese revised version includes five factors of Self-appraisal, Information gathering, Goal selection, Planning, and Problem-solving. The test-retest reliability coefficients after 2 months of the subscales with the total scale were .723, .759, .863, .788, .681, and .851, respectively; and the Cronbach's Alpha coefficient was .895 (Long, 2003). Each item was scored on a 5-point Likert-type scale (1 = never confident, 2 = slightly confident, 3 = moderately confident, 4 = highly confident, and 5 = completely confident). The items were averaged so that the higher score denotes higher career decision-making self-efficacy.

Results

Means, Standard Deviations and Correlations of Undergraduates' Career Decision-Making Self-Efficacy and Academic Stress

The scores of five subscales in career decision-making self-efficacy are higher than the theorized midpoint ("3"). Means, standard deviations and correlations are presented in Table 1.

Table 1. Means, Standard Deviations and Correlations for CDMSE and Academic Stress

	Academic stress	Mean	SD
Academic stress		1.34	.634
Self-appraisal	-.281***	3.46	.77
Goal selection	-.293***	3.41	.78
Planning	-.310***	3.21	.81
Problem-solving	-.291***	3.34	.79
Information Gathering	-.298***	3.29	.76

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

The Regression Analysis of CDMSE on Academic Stress

In order to explore how CDMSE predicts academic stress, with academic stress as the dependent variable, and the five subscale scores of CDMSE as the independent variables for multiple stepwise regression analysis. As shown in Table 2, Planning (Beta = $-.210$, $p < .001$) and Goal selection (Beta = $-.127$, $p < .05$) had significantly negative effects on academic stress.

Table 2. Predictive Effects of CDMSE on Academic Stress

	Beta	<i>t</i>	<i>p</i>	R^2	ΔR^2
Planning	-.210	-3.676	.000	.096	.096
Goal selection	-.127	-2.223	.027	.102	.006

Discussion

The study found that the academic stress of undergraduates was between slight and medium. However, previous studies indicated that academic stress was the highest of all stressors confronting undergraduates (Li, Kam, 2002; Che, Zhang, Huang, & Zhang, X. D., 2003), which seems inconsistent with this study. But the score of academic stress in previous studies was between slight and medium, which suggests that the level of academic stress is not that high. As a result, undergraduates' academic stress is moderate instead of serious, which is consistent with the current situation. In China, those who get into colleges would almost always get a diploma after graduation, which makes them feel less stressed.

The results showed that undergraduates' career decision-making self-efficacy was moderate, which is consistent with previous studies (Long, 2003; Ruan, 2014; Yu, Xu, & You, 2015). However, the scores of career decision-making self-efficacy were higher than 3 (moderately confident), but lower than 4 (highly confident), which suggests that their career decision-making self-efficacy is not very high. The mean scores of Planning and Information gathering were the lowest in the five factors of CDMSE, which indicates that these two aspects should be emphasized in undergraduates' career guidance.

Our study found that the subscales of career decision-making self-efficacy were significantly and negatively correlated with academic stress, suggesting that undergraduates with higher career decision-making self-efficacy will feel less academic stress. Especially, Planning and Goal Selection can significantly and negatively predict undergraduates' academic stress. In fact, some researchers proposed that undergraduates are inexperienced in career planning, career orientation or self-realization (Long, 2003). Ruan (2014) reported that the score of Planning was the lowest in the factors of CDMSE. As for the predictive effects of Self-appraisal, Problem-solving and Information gathering on academic stress being insignificant, it is probably that the undergraduates have high levels of self-appraisal, feeling they have sufficiently ability to gather information and solve problems in job hunting. Factually, the results of this study show that the scores of those three factors were higher. Therefore, the ability of career planning

and goal selection should be emphasized in career guidance for college students to improve their career decision-making self-efficacy to relieve their academic stress.

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Work-Family Conflict, Spouse Conflict, and Adolescent School Performance

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[Abstract] *The current article aimed at examining the relationship between work-family conflict and spouse conflict and adolescent school performance, and at investigating the role of spouse conflict as a mediator in the relationship of work-family conflict and adolescent school performance. The article uses data from 305 junior middle school students and their parents. The results showed that parents' perceptions of their own family-to-work conflict, their own work-to-family conflict, and their partner work-to-family conflict all significantly correlated to spouse conflict, and spouse conflict significantly correlated to adolescent conflict with parents, teachers, classmates, and final marks in term examinations. Linear regressions revealed that work-family conflict was significantly associated with spouse conflict; spouse conflict was significantly associated with adolescent conflict; and adolescent conflict was significantly associated with final marks. Further research should pay more attention to the transmission mechanisms, like spouse conflict, to better understand the impact of work-family conflicts on individual mental health and behaviors.*

[Keywords] *work-family conflict; spouse conflict; school performance; family resilience*

Introduction

The work-family conflict is “a form of inter-role conflict in which role pressures from the work and family domains are mutually incompatible in some respect” (Greenhaus & Beutell, 1985, p. 77). It is a bidirectional phenomenon consisting of two concepts: work-to-family conflict (WFC) and family-to work conflict (FWC) (Choi & Kim, 2012). WFC occurs when work interferes with family life, and FWC occurs when family life interferes with work (Frone, Yardley, & Markel, 1997). Previous studies have revealed a variety of work, non-work and health related consequences associated with work-family conflict, including job performance and job satisfaction (Hoobler, Hu, & Wilson, 2010), turnover intentions (Karatepe & Uludag, 2008), life satisfaction (Zhao, Qu, & Ghiselli, 2011), negative emotions (e.g., depression, anxiety, resentment, frustration, and anger) (Greenhaus, Allen & Spector, 2006), psychological strain (Kalliath, Hughes, & Newcombe, 2012), sleep (Lallukka, Arber, & Laaksonen, et al., 2013) and other the health outcomes (cholesterol, body mass and physical stamina) (Van Steenbergen & Ellemers, 2009).

The literature also documented relationships between work-family conflicts and family-related outcomes, although limited, such as partner relationships (Kalliath, Hughes, & Newcombe, 2012), parent-child interactive behaviors (i.e., educational, recreational, and passive activities) (Cho & Allen, 2012), and children's mental health (Strazdins, O'Brien, Lucas, & Rodgers, 2013). Given the challenges families face nowadays, work and family issues have received the greatest research attention (Bianchi & Milkie,

2010), and researchers have called for future research on the association of work-family conflict with family-related outcomes, especially children's school performance, children's career choices, and spouse and children's life satisfaction, psychological strain, and negative emotions (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Tsionou & Konstantopoulos, 2015).

The present study examined first the relationship between parents' work-family conflicts and spouse conflicts and adolescent school performance using data collected in one Chinese junior middle school. Based on the literature, it was expected that parents' work-family conflict positively related to spouse conflict and negatively related to adolescent school performance. Second, spouse conflict was investigated as a mediator. According to the family resilience framework (Patterson, 2002), a family's resources or capabilities allow it to evaluate imposing demands and to cope with them. Work-family conflict, thus, might alter family environments through its association with parents' mental health and parent-child interactions and influence children's health and well-being (Grzywacz & Bass, 2003; Strazdins, et al., 2013).

Method

Sample and Procedure

Participants were students in grades 7, 8, and 9 (i.e. junior middle school students) in one public school in Hangzhou city, Zhejiang province. Among the students in the school, 81% came from migrant families. The 12 teachers in charge of the classes (four classes per grade) were organized to collect data after the term examination in February 2015. They distributed a set of questionnaires to each student, including a student questionnaire and a parent questionnaire, that surveyed the information on both spouses and the family. Students were excluded from the database when they or their parents did not complete the questionnaires.

The final sample consisted of 305 students. Among them, 43.3% (132/305) parent questionnaires were filled in by the mother, 38.4% (117/305) by the father, and 18.4% (56/305) did not report which parent filled in the parent questionnaire. The ANOVAs showed no significant difference whether the mother or father filled in the parent questionnaire in their own WFC ($F_{1,247}=3.48, p=.06$) and their own FWC, partner WFC, spouse conflict, and adolescent conflict with parents, teachers, and classmates ($F_{1,247}=.006\sim 2.11, \text{ all } ps>.15$). The characteristics of the final sample are shown in Table 1. The final sample did not differ from students who were excluded in final marks ($M_{\text{sample}}=327.02, SD_{\text{sample}}=79.46, M_{\text{excluded}}=311.08, SD_{\text{excluded}}=90.82, F_{1,383}=2.40, p>.12$).

Table 1. Characteristics of Students and Their Parents by Grade

	Grade 7 (n=111)		Grade 8 (n=96)		Grade 9 (n=98)	
	n /M	% /SD	n /M	% /SD	n /M	% /SD
Gender of student						
Female	49	44.1%	50	52.1%	49	50%
Male	62	55.9%	46	47.9%	49	50%
Number of children in family						
One-child	50	45.0%	45	46.9%	47	48.0%
Two or more children	43	38.7%	46	47.9%	38	38.8%
Age						
Mother	39.38	3.24	40.06	4.83	40.96	3.85
Father	41.92	3.50	42.92	5.40	43.52	4.29
Education of mother						
Technical secondary school/lower	45	40.5%	40	41.7%	45	45.9%
High middle school	27	24.3%	28	29.2%	29	29.6%
Bachelor	17	15.3%	8	8.3%	6	6.1%
Education of father						
Technical secondary school/lower	40	36.0%	36	37.5%	44	44.9%
High middle school	31	27.9%	36	37.5%	31	31.6%
Bachelor	23	20.7%	10	10.4%	7	7.1%
Master/higher	2	1.8%				

Measures

Work-family conflict. Six items were adopted from an EU-Project, “Family Life and Professional Work: Conflict and Synergy” (www.eu-projekt-famwork.org), to assess the person’s perception of his/her own FWC, own WFC, and partner WFC, both time- and strain-based (Carlson, Kacmar, & Williams, 2000). Example items included, “My situation at home makes it hard for me to fulfil my professional commitments (arriving on time, managing daily tasks, and working overtime, etc.)”, “My professional work keeps me from spending as much time with my family as I would like to do”, and “Professional work keeps my partner from spending as much time with the family as my partner would like to do.” A 4-point rating scale was used with two end poles, “rarely” to “always.” The internal consistency of this questionnaire in the present study was $\alpha=.88$.

Spouse conflict. Nine items taken from the Schneewind and Wunderer’s (2001) study and one open question (others) were used to assess different life areas, e.g., professional work, family work division, and children’s upbringing and discipline, with regard to their conflicts within the relationship during the past one month. A 4-point rating scale was used with two end poles, “very little” to “very much.” The internal consistency of this questionnaire in the present study was $\alpha=.91$.

Adolescent school performance. Students’ school performance was estimated with final marks in the term examination (February 2015), including four courses in Chinese, mathematics, English, and science (120 points per course). The performance was also estimated with adolescent conflict, using eight items to assess students’ conflict experiences with parents, teachers, and classmates in daily life areas (e.g., chores, friend making, spending money, dressing, differences of opinion, and annoying behavior etc.). A 5-point rating scale was used with two end poles, “not at all” to “severely.” The internal consistency of this questionnaire in the present study was $\alpha=.89$.

Data Analysis

ANOVAs were used to examine student gender, grade, parents' highest education level, and one-child family difference in the work-family conflict (FWC, WFC, and partner WFC), spouse conflict, and adolescent school performance (final marks and adolescent conflict with parents, teachers, and classmates). Hierarchical linear regressions were used to test the influence of work-family conflict (the mean score of six items) on spouse conflict and adolescent school performance (Baron & Kenny, 1986), with spouse conflict, adolescent conflict (the mean score of eight items), and final marks being dependent variables, respectively. To test the mediation hypothesis, the work-family conflict and all nine control variables of student gender, grade (2 dummy variables), mother's age, father's age, mother's education (2 dummy variables), and father's education (2 dummy variables) were entered into Step 1 (Grzywacz & Bass, 2003), and spouse conflict was then entered into Step 2 to assess the change in the associations between parents' work-family conflict and adolescent school performance. All analyses were carried out using SPSS 22.

Results

As shown in Table 2, the three grades differed significantly in spouse conflict, adolescent conflict with parents, and final marks. Further analyses revealed that the seventh grade reported significantly less spouse conflict and adolescent conflict with parents than the eighth and ninth grades, while the latter two did not differ significantly in the two variables. The seventh grade reported significantly higher final marks than the eighth and ninth grades, while the latter two did not differ significantly.

Table 2. Means (M) and Standard Deviations (SD) of Variables by Grade

	Grade 7 (n=111)		Grade 8 (n=96)		Grade 9 (n=98)		F	P
	M	SD	M	SD	M	SD		
Work-family conflict								
Family-to-work conflict	1.59	.76	1.51	.63	1.51	.74	.39	.68
Work-to-family conflict	1.68	.83	1.60	.72	1.53	.79	1.02	.36
Partner work-to-family conflict	1.67	.80	1.71	.85	1.69	.83	.05	.95
Spouse conflict	1.47	.45	1.67	.52	1.61	.46	4.91	.008
Adolescent school performance								
Conflict with parents	1.78	.66	2.07	.75	1.99	.59	5.26	.006
Conflict with teachers	1.56	.68	1.74	.70	1.68	.65	1.99	.14
Conflict with classmates	1.73	.71	1.90	.75	1.76	.72	1.53	.22
Final mark	345.33	68.28	310.78	75.76	322.18	90.62	5.28	.006

The ANOVAs showed significant student gender difference only in FWC, with male students' parents reporting significantly higher FWC than female students' parents ($M_{\text{male}}=1.63$, $SD_{\text{male}}=.79$, $M_{\text{female}}=1.44$, $SD_{\text{female}}=.61$, $F_{1,303}=5.94$, $p=.02$). There was a significant mother education level difference in WFC ($F_{2,242}=4.77$, $p=.009$) and spouse conflict ($F_{2,240}=6.15$, $p=.002$). Further analyses revealed that mothers with a technical secondary school or lower education reported significantly more WFC than mothers with a middle high school education and bachelor education, while the latter two did not differ significantly. Mothers with a bachelor education reported significantly less spouse conflict than mothers with technical secondary school or lower education and middle high school education, and the latter two did not differ significantly.

The ANOVAs also showed significant father education level difference in WFC ($F_{2,257}=6.63$, $p=.002$), partner WFC ($F_{2,257}=4.55$, $p=.01$), spouse conflict ($F_{2,257}=3.98$, $p=.02$), and final marks

($F_{2,257}=4.39, p=.01$). Further analyses revealed that fathers with a technical secondary school or lower education reported significantly more WFC than fathers with a middle high school education and a bachelor education, while the latter two did not differ significantly. Fathers with a bachelor or higher education reported significantly less partner WFC and less spouse conflict than fathers with technical secondary school or lower education and middle high school education, and the latter two did not differ significantly in the two variables. The students of fathers with a bachelor or higher education got significantly higher final marks than those students of fathers with a technical secondary school or lower education and middle high school education, and the latter two did not differ significantly. There was no significant difference between families with one child and families with two or more children in all the variables ($F_{1,247}=.78\sim 3.12, \text{all } p_s>.08$). The correlations between these variables were shown in Table 3.

Table 3. Correlations Between Variables (n=305)

	1	2	3	4	5	6	7
1. Family-to-work conflict	1						
2. Work-to-family conflict	.58**	1					
3. Partner work-to-family conflict	.54**	.66**	1				
4. Spouse conflict	.21**	.13*	.19**	1			
5. Conflict with parents	.03	.04	.05	.29**	1		
6. Conflict with teachers	.04	-.001	.06	.19**	.57**	1	
7. Conflict with classmates	.06	.05	.04	.15*	.45**	.59**	1
8. Final mark	-.08	-.08	-.07	-.20**	-.11	-.21**	-.13*

Note: * $p<.05$, ** $p<.01$.

The results of regression analyses of spouse conflict, adolescent conflict, and final marks are presented Table 4. In the final marks regression, work-family conflict and control variables were entered in Step 1, spouse conflict was entered in Step 2, and adolescent conflict was entered in Step 3. In Model 2, the work-family conflict ($B=2.30, \beta=.02, t=.26, p=.79$) and spouse conflict ($B=-12.58, \beta=-.07, t=-.95, p=.34$) both failed to be significant predictors of final marks. Table 4 presents the results in Model 3.

Table 4. Regressions of Spouse Conflict, Adolescent Conflict (Model 2) and Final Marks (Model 3) (n=189)

	Spouse conflict		Adolescent conflict		Final marks	
	B	Beta	B	Beta	B	Beta
Gender	.13	.14	-.05	-.04	13.91	.09
Grade 8	.18	.17*	.12	.09	-30.83	-.18*
Grade 9	.25	.25**	.05	.04	-14.82	-.09
High middle school_M	-.26	-.26**	-.30	-.25**	-3.60	-.02
Bachelor_M	-.36	-.25**	-.29	-.16	12.71	.05
High middle school_F	.19	.20*	.27	.23*	-7.00	-.04
Bachelor_F	.21	.16	.54	.33**	29.96	.13
Age_M	.01	.08	.01	.05	2.28	.12
Age_F	-.01	-.11	.01	.09	-.26	-.02
Work-family conflict	.10	.15*	.02	.02	2.75	.02
Spouse conflict			.26	.21**	-5.65	-.03
Adolescent conflict					-26.88	-.19*
R^2	.15**		.15**		.11*	
ΔR^2			.04**		.03*	

Note: M=mother, F=father; * $p<.05$, ** $p<.01$.

Discussion and Implications

To answer the call for future research on the association of work-family conflict with family-related outcomes, especially children's school performance (Eby, et al., 2005; Tsionou & Konstantopoulos, 2015), the present study first examined the relationship between parents' work-family conflict, spouse conflict, and adolescent school performance, and then tested the mediating role of spouse conflict in the relationship between work-family conflict and adolescent school performance, using data collected in one Chinese junior middle school.

As expected, the parents' FWC, WFC, and partner's WFC all positively correlated with spouse conflict, and family-work conflict turned out to be a significantly positive predictor of spouse conflict in regression analysis when demographic characteristics were controlled, supporting the influence of work-family conflict on family-related outcomes, such as partner relationship, which has been found in previous studies (e.g., Kalliath, Hughes, & Newcombe, 2012). The linear regression also resulted in a significantly positive association between spouse conflict and grade 8, grade 9, and the father's high middle school education; however, a significantly negative association between spouse conflict and the mother's high middle school and bachelor education levels, suggesting more spouse conflicts in families with the eighth and ninth grade students, a high middle school education of the father, and a technical secondary school or lower education level of the mother.

Inconsistent with expectations, the parents' work-family conflict was not significantly associated with adolescent conflict or final marks in the present study. The current data, thus, provided no support for the direct association between work-family conflict and adolescent school performance. Due to the lack of significant association between work-family conflict and adolescent school performance, the mediation hypothesis of spouse conflict was not supported in the present study. However, the current data still showed a significant impact of spouse conflict on adolescent school performance. Correlations revealed significantly positive relations between spouse conflict and adolescents' conflict with parents, teachers, and classmates. Spouse conflict also turned out to be the significantly positive predictor of adolescent conflict after other variables were controlled in the linear regression. Adolescents tend to report higher amounts of conflict with parents, teachers, and classmates when their parents report more spouse conflict within their relationship. Adolescents' final marks in school were negatively correlated to spouse conflict. With other variables controlled, final marks were not significantly associated with spouse conflict, but significantly associated with adolescent conflict.

Taken together, the current data indicate the direct impact of the work-family conflict on partner relationships and the indirect relationship of the work-family conflict and adolescent school performance. These findings are consistent with the family resilience framework (Patterson, 2002), supporting the idea that family environment change is associated with family members' health, well-being (e.g., Bianchi & Milkie, 2010; Menaghan, 1991; Perry-Jenkins, et al., 2000; Strazdins, et al., 2013), partner relationships, and children's school performance. It highlights the necessity of investigating the potential transmission mechanisms, such as parent mood, spouse conflict, and parent-child interactions in families, through which work-family conflict influences the well-being of relationships and individuals in family, school, work, and other life areas (Perry-Jenkins, Repetti, & Crouter, 2000; Strazdins, Clements, Korda, Broom, & D'Souza, 2006).

There are some limitations in the present study, and these results, thus, need to be corroborated in further studies. One limitation is the selection of the sample. Our sample was not a representative sample of the population. The students were recruited from three grades (all four classes per grade) in one junior

middle school in Hangzhou. The majority of the students were from migrant families that usually have a lower social status. Most students in the school go to vocational schools rather than colleges after graduation. These findings should, thus, be generalized with caution to those adolescents not meeting the above-mentioned criteria. Limitations also exist concerning the assessments of spouse conflict and adolescent conflict. Future study should use improved measures and collect data from both parents to better examine the relationship between these variables, especially the mediation relationship.

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The Impact Factors of Quality of Life among Rural-to-Urban Migrants

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[Abstract] To explore the impact factors of quality of life among rural-to-urban migrants, convenient sampling was used to investigate 878 urban hukou holders and rural-to-urban migrants with questionnaires. Results showed (1) urban hukou holders had a higher level of quality of life than rural-to-urban migrants; (2) occupation positively predicted all aspects of quality of life of rural-to-urban migrants except physical function, and identity negatively predicted all of them. Occupational status and identity had important influences on rural-to-urban migrants' quality of life, but not income.

[Keywords] rural-to-urban migrants; identity; quality of life; China

Introduction

With the rapid development of urbanization in China, more and more rural-to-urban migrant workers relocated to major cities. In 2012, the data of National Population and Family Planning Commission of P.R. China showed that the number of rural-to-urban migrant workers was around 230 million by 2011. The rural-to-urban migrant worker population in China is attracting more and more attention because of its magnitude and potential economic and social impact on Chinese development. Due to the Household Registration system (*Hukou* system), rural-to-urban migrants who do not have residency status in the cities are considered temporary residents, and they live a marginalized and socially-excluded life in the cities of China. A lot of literature has reported the high level of discrimination against rural-to-urban migrants and the perceived discrimination among them (Chen, 2013; Zhang, Li, Chen, & Lin, 2013), which reinforced a “farmer identity” feeling of them. As a result, rural-to-urban migrants confused their identities. Literature showed that rural-to-urban migrants perceived their identities as vagueness, uncertainty, and self-contradiction (Li & Zhang, 2012; Peng, 2007). Previous empirical studies found that identity was a significant predictor of individual personality (Zheng & Yu, 2009), well-being (Smith & Silva, 2011; Ngunen, Wong, & Juang, 2015) and mental health (Rogers-Sirin, & Gupta, 2012).

Furthermore, most research on rural-to-urban migrants' quality of life and their mental health conditions reported the level of their mental health was significantly lower than the national norms (Qiu, Yang, & Wu, et. al., 2010). For example, in 2006, National Bureau of Statistics (NBS) (2007a) nationally investigated 30,000 rural-to-urban migrants' quality of life and showed that they had worse working and living conditions and less recreation than national norms. Only 30.7% of the sample was satisfied with their quality of life. Another study found 36.3% of the rural-to-urban migrants in Pudong New District of Shanghai expressed satisfaction with their quality of life. They felt higher satisfaction with family relations and social relations, but lower satisfaction with economic conditions and living conditions. Marital status, average monthly income, living type, and health condition had a significant impact on overall satisfaction with their quality of life, and gender, age, education and living time had no impact on it (Jiao, Tang, & Zhou, 2008).

In short, the literature showed rural-to-urban migrants had a lower quality of life and vague identities. However, the impact of identity on quality of life remains unclear. Social identity permeates every facet of

one's living; it exists in one's social interaction, speech and behavior, customer behavior, and leisure life. The different identities among rural-to-urban migrants will have different effects on their quality of life and social adaptation. In addition, previous research on quality of life of rural-to-urban migrants sampled only rural-to-urban migrants and compared their quality of life with national norms. Researchers seldom sampled rural-to-urban migrants and local urban residents simultaneously and compared their quality of life. However, in China, different areas always have different economies, cultures, and customs and have different overall quality of life or mental health status. Comparing rural-to-urban migrants sampled from a certain area with national norms cannot exactly explain the difference between rural-to-urban migrants and local urban residents. In addition, findings about demographic variables impacting on quality of life among rural-to-urban migrants were inconsistent. Therefore, it is necessary to examine the difference between these two groups and explore the impact factors of quality of life among rural-to-urban migrants, especially the relationship between social identity and quality of life..

Methods

Participants and Sampling Procedure

Convenient sampling was conducted at three elementary schools (two were migrant children schools in which over 87% of students were migrant children; one was a public mixed school in which 32% of the students were migrant children) in Wuhan, China. Participants were parents of first-through-sixth- grade students who attended a parents' meeting in October, 2012. Participants finished measures in the form of a group test under the supervision of the interviewer who read the questionnaires for participants. One thousand, one hundred and fifty questionnaires were distributed, and 878 copies were analyzed. Participants ranged in age from 27 to 67 years ($M= 38.52$ years, $SD=5.08$). Individual characteristics of the sample are shown in Table 1. Occupational status was calculated according to "A standard international socio-economic index of occupational status" (Ganzeboom, Graaf, & Treiman, 1992).

Table 1. Individual Characteristics of Sample ($N=878$, $M\pm SD$)

	Urban ($n=303$)	Rural ($n=575$)
Gender		
Male	121	209
Female	182	366
Age	39.90±5.40	37.76±4.73
Occupational Status	42.95±16.15	35.04±12.64
Marital status		
Married	292	560
Single	11	15
Education		
≤Elementary school:	16	127
Middle school	72	336
High school	116	88
Post-secondary education	99	9
Monthly income of family		
≤1000 Yuan	0	19
1000-2000 Yuan	37	132
2000-3000 Yuan	48	166
3000-4000 Yuan	63	103
4000-5000 Yuan	67	85
≥5000 Yuan	88	70

Instruments

Identity survey. Participants were asked to answer the question, “If you have a rural Hukou, you live in Wuhan for () years, and now you feel you are 1) an urban people; 2) a rural people; 3) hard to explain.” Participants choosing 1 meant they identified with urban people; choosing 2 meant they identified with rural people; choosing 3 meant they identified vaguely.

Quality of life. Generic Quality of Life Inventory-74 (GQOLI-74) was used to measure the participants’ quality of life. The inventory consisted of 4 dimensions: physical function, mental function, social function, and material living. Higher scores indicated higher satisfaction with the quality of life.

Results

Comparison of Rural-to Urban Migrants to Local Urban Residents

Means and standard deviations of the variables for males and females in each group are presented in Table 2. ANOVA was conducted to examine the effects of group on all the variables. A significant, main effect was found. Rural-to-urban migrants had lower scores on all variables than local urban residents.

Table 2. Descriptive Statistics of Quality of Life Among Rural-to-Urban Migrants and Local Urban Residents (N=878, M±SD)

	Urban	Rural	F
Physical function	67.93±12.95	66.10±12.61	4.11*
Mental function	65.40±13.85	61.93±13.27	13.05***
Social function	63.93±11.27	60.71±10.91	16.46***
Material living	54.57±16.06	46.84±15.86	46.65***
Total QOL	58.98±10.09	55.30± 9.80	27.07***

Notes: *** $p < .001$, ** $p < .01$, * $p < .05$.

Regression Analyses to Assess the Effect of Identity on the Quality of Life of Rural-to-Urban Migrants

In the present research, we used enter regression analyses to assess the effect of demographic variables and identity quality of life of rural-to-urban migrants. Table 3 presents the results of the regression analyses of quality of life among rural-to-urban migrants. Gender negatively predicted material living; age negatively predicted physical function, mental function, and overall quality of life; marital status negatively predicted physical function; education positively predicted physical function, mental function, and overall quality of life; monthly income of the family positively predicted material living; and occupation positively predicted all variables except physical function. Identity negatively predicted all variables.

Table 3. Multilevel Regression Analyses of Quality of Life Among Rural-to-Urban Migrants (N=575)

	Physical Function	Mental Function	Social Function	Material Living	Total QOL	B p B p B p B p B p
Gender	.027	.426-.058	.091-.003	.937-.111	.001-.064	.059
Age	.122	.001-.094	.007 - .053	.128-.016	.645-.080	.020
Time spent in Wuhan	.013	.706-.018	.606-.005	.894-.044	.204-.011	.754
Marital status	.075	.024-.033	.323-.056	.092.013	.687-.046	.154
Education-Middle school	.155	.001-.130	.006-.079	.092-.077	.087-.140	.002
Education-High school	.110	.031-.030	.552-.003	.949-.079	.103-.071	.149
Monthly income of family (Yuan)						
2000-3000	.078	.057-.051	.213-.020	.618-.029	.465-.057	.156
3000-4000	.063	.120-.017	.671-.046	.255-.012	.752-.035	.382
4000-5000	.023	.569-.010	.798-.038	.350-.028	.469-.005	.894
≥5000	.034	.418-.036	.398-.012	.781-.130	.001-.062	.135
Occupational status	.059	.090-.093	.007-.133	.000-.147	.000-.135	.000
Rural identity	.097	.025-.171	.000-.214	.000-.222	.000-.221	.000
Vague identity	.094	.019-.154	.000-.194	.000-.139	.000-.181	.000
	$F=4.023^{***}$	$F=4.818^{***}$	$F=4.836^{***}$	$F=10.133^{***}$	$F=7.817^{***}$	
	$R^2=.055$	$R^2=.066$	$R^2=.066$	$R^2=.129$	$R^2=.102$	

Notes: *** $p < .001$, ** $p < .01$, * $p < .05$

Discussion

This study explored the influence factors of quality of life of rural-to-urban migrants, especially the relationship between identity and quality of life. First, our survey revealed that except for physical function, rural-to-urban migrants had significantly lower scores on psychological function, social function, material living, and overall quality of life than local urban residents. The results indicate that rural-to-urban migrants had a lower-level of quality of life than local urban residents. National Bureau of Statistics' (2007b) investigation showed that nationwide, the overall level of quality of life in rural-to-urban migrants was only equivalent to 53.2% of the average level in urban residents. Other studies also reported that most of rural-to-urban migrants had a lower overall quality of life. They had lower satisfaction on material and mental life, except for being higher on physical health (Liu & Liu, 2009; Chang, Xu, & Zhang, 2013). These findings indicated that the level of quality of life in rural-to-urban migrants hasn't improved for many years.

The results of regression analysis showed monthly income wasn't a determiner of quality of life among rural-to-urban migrant, but occupational status and identity were. These findings consisted of the "Income-happiness paradox"; that is happiness does not increase as income rises (Easterlin, 1974). The results in the current study indicate that rural-to-urban migrants who had higher occupational status expressed more satisfaction with their quality of life, and identity negatively predicted all aspects of the quality of life in rural-to-urban migrants. That is, rural-to-urban migrants who didn't identify with urban people had lower levels of quality of life than those who identified with urban people. So, the results in the current study suggest that identity plays a very important role in the satisfaction with quality of life among rural-to-urban migrants.

For the rural-to-urban migrants, identity is an indicator of the psychological distance between local urban residents and their rural counterparts. Identifying with urban people indicates rural-to-urban migrants get the sense of belonging to the city and represents that they integrate into city life very well. The results of comparing the quality of life between rural-to-urban migrants and local urban residents in the current

study documented this point. Except for material living, physical function, mental function, social function, and overall quality of life showed no difference between the two groups. It is illustrated that material and economic factors are not determiners, which indicates rural-to-urban migrants are integrating into city life very well but have psycho-social factors. The higher occupational status not only usually means more income, but also improves the level of individual self-esteem and inspires a sense of accomplishment. These make individuals feel more satisfaction with their quality of life. Moreover, although rural-to-urban migrants who identified with urban people had lower satisfaction with their material living, they had a sense of belonging to the city in which they lived because of identifying with urban people; they felt as well as local urban residents, and they adapted and integrated into urban society successfully.

However, the data in the current study showed that most of rural-to-urban migrants hadn't the sense of belonging to Wuhan city, and they didn't identify with urban people. In general, rural-to-urban migrants move from rural to urban areas for jobs and better lives. However, studies document that because of the dual-residential system (*hukou system*) (agricultural vs. non-agricultural) and other government policies in China, most of rural-to-urban migrants have a hard time achieving equal rights to employment, education, housing, healthcare, and social services. They always engage in dangerous, dirty, and low-income job. So, most of rural-to-urban migrants had experienced or perceived discrimination because of their low socioeconomic status (e.g., low-educated, low-income and rural residence status). So, hukou reform is indispensable during rapid urbanization in China. It makes rural-to-urban migrants become urban residents and equally share the achievement of urbanization.

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Features of the Retrieval Process in Visual Spatial Representation for Outdoor Pathfinding Work

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[Abstract] *The identification ability of spatial orientation is an important factor in solving the problem of lost direction, especially for occupations related to flight, navigation, or field activities; it is essential to find the spatial targets fast and accurately. This study focuses on what factors are more effective in helping people to target locations. Participants in the experiments were asked to finish an object-searching task. The results illustrate the following hypotheses: (1) with the egocentric reference frame, the participants retrieve the spatial memory information in a self-centered and onward scanning form; (2) with the environmental reference frame, the participants retrieve the spatial information directly from their memories.*

[Keywords] *egocentric reference frame; environmental reference frame; spatial representation*

Introduction

Whether in personal life environments or in special occupational environments, such as flight, navigation, and field activities, the visual representation of the location of an object holds the key to solving the issue of getting lost or finding a way. In spatial memory, the mental representation of an object's location and its spatial relations must establish corresponding reference frames (Zhao, 2006). In general, the reference frames adopted include two kinds: the egocentric reference frame and the allocentric or environmental reference frame (Klatzky, 1998; Newcombe, 2002). The former, featured by such directional words as "front", "back", "left", and "right", is a body-centered coordinate system in which the an object's location is judged, based on its spatial relation with the observer's body; the latter, characterized by such words as "east", "west", "south", and "north", is an environment-centered coordinate system in which an object's location is judged based on its specific position in the whole environment (Zhou & Zhang, 2002).

The question of interest in this research is that the aforementioned two reference frames can help formulate a more effective spatial representation for locating an object. In this respect, some studies have been carried out from the orientation specific perspective (Roskos, et al., 1998). However, the orientation specific perspective cannot account for the real difference of the spatial representation between the two reference frames. Some other research has been done from the angle of the information source for spatial representation. To be specific, within the egocentric reference frame, the information content of the spatial representation is retrieved by directly experiencing the objects-array structure and its relationship with the observer's body in the physical place; within the environmental one, the information is retrieved based on the inter-object relations and specific object position within global structure (Golledge, et al., 1995; Wen, Toru, & Takao, 2011). Therefore, the real difference between the two reference frames lies in the methods of retrieving the target object in memory (Wang, 2004; Kelly & McNamara, 2008). It has been pointed out that the two methods can be employed for the retrieval of inter-object relations in the visual spatial memory, which are body-centered retrieval and direct retrieval. The former uses the observer's body as the center of the coordinate system, while the latter uses the environment as the center (Easton, & Sholl, 1995).

In order to examine the retrieval properties and effectiveness of the spatial representations within the two reference frames, this research is to conduct two experiments based on the “object-searching” model of Franklin and Tversky (1990).

Experiment 1: Retrieval Features of the Visual Spatial Representation within the Egocentric Reference Frame

Method

Participants. Twenty students at Wuhan University, with right handedness and normal vision or corrective vision, were invited to participate in this experiment. The participants were informed that this experiment was designed to test their visual memory capacity.

Apparatus. A desk computer with a resolution ratio of 1024*768 and a pair of earphones.

Design. This experiment had three independent variables, which were the orientations of the target arrows (orientation variable), the headings of the arrows (arrow variable), and the distance of arrows from the screen center (distance variable). Besides, the orientation variable consisted of 4 values of “front,” “back,” “left,” and “right”; the arrow variable also had 4 values of “up,” “down,” “left,” and “right”; and the distance variable covered 2 values of 5cm(1) and 15cm(2). The participants were asked to make accurate judgments as quickly as possible.

Procedure & Tasks. The procedure of this experiment was designed by the E-prime software and was made up of three stages. In the first stage, the participants were first told to imagine themselves as the figure in the screen’s center throughout this experiment. Next, they would hear a voice informing them of a specific orientation (for example “front”), and then they would see the written words on the screen telling them of the position of the specific orientation. Finally, the participants would learn that the front of the figure represented the “front” orientation, the back of the figure represented the “back,” the left hand stood for “left” and the right hand for “right.” A picture in which the central figure was surrounded by four arrows with four headings (“↑”, “←”, “↓”, “→”) was placed on four orientations of “front,” “back,” “left,” and “right”; the arrows were either 5cm or 15cm away from the center and would appear on the screen for 5000ms. Then the picture would disappear, leaving the screen blank. Next, 2000ms later, the participants would hear a voice informing them of a specific orientation (for example “front”), and they were required to press the corresponding direction button in the keyboard for answering which arrow was in the informed orientation (for instance the “up” button represented “↑” in this orientation). Every time the participants finished a task, the feedback information, including the judgments, response times, and accuracy rate, could be gained. After familiarizing themselves with the tasks through practice, the participants entered into the third stage of formal testing in which there were 40 pictures; each picture would appear twice on the screen in a random order.

Results & Analysis

The repeated 4*4*2ANOVAs on the response time spent by the participants making accurate judgments of the target arrows indicated that there were no main effects of the headings of the target arrows and their distance from the screen center, but that there was a main effect of the orientations on the participants, $F(3,17)=9.882, p<0.001$. Through comparisons of paired-samples, it was found that the time difference between “front” and “back” and between “left” and “right” were not significant, while between “front” and “left” ($t(19)=-2.310, p<0.05$), “front” and “right” ($t(19)=-3.190, p<0.005$), “back” and “left” ($t(19)=-2.979, p<0.05$), “back” and “right” ($t(19)=-4.019, p<0.001$), were all significant. Besides, the response time on the

orientations of “front” and “back” was positively related with distance of from the center, $F(1,19)=0.262$, $p<0.05$, and, thus, the former would increase with the rising of the latter. It was also found that the increase of distance could reduce the differences between the response time on “front” and “back” and “left” and “right,” indicating the mediation of distance on the orientation effect. In addition, the interaction between orientation and heading was also significant, $F(9,11)=5.507$, $p<0.005$. The distance could greatly affect the response time on the “front” ($F(3,17)=0.457$, $p<0.05$), “back” ($F(3,17)=0.66$, $p<0.001$), and “right” ($F(3,17)=0.614$, $p<0.001$). Moreover, through comparisons of paired-samples, it was found that for the arrows with the longer distance of 15cm, the participants responded faster to the left-heading ones than to those with other headings ($t(19)=-2.165$, $p<0.05$; $t(19)=-2.352$, $p<0.05$; $t(19)=-2.247$, $p<0.05$). Taken together, it could be concluded that the participants would be affected by the headings when retrieving the target arrows.

Table 1. Average Accuracy Rate of the Participants

Orientation	Distance of the Arrows from the Screen Center and their Headings							
	Distance 1				Distance 2			
	Up	Down	Left	Right	Up	Down	Left	Right
Front	1.00	0.95	0.80	0.95	0.80	0.75	0.85	0.90
Back	0.80	0.95	0.65	0.90	0.65	0.80	0.85	0.60
Left	0.70	0.80	0.95	0.85	0.80	0.90	0.95	0.80
Right	0.85	0.85	0.85	0.95	0.75	0.80	0.80	0.90

Table 2. Mean Response Time for the Participants to Make Accurate Judgments

Orientation	Distance of the Arrows from the Screen Center and their Headings							
	Distance 1				Distance 2			
	Up	Down	Left	Right	Up	Down	Left	Right
Front	1282.55	1587.53	1752.56	1929.74	1426.75	1720.00	2217.18	1680.56
Back	1658.75	1419.42	2250.62	1718.39	2507.62	1617.06	1719.47	2206.50
Left	2472.29	2115.88	2621.58	2321.47	2347.69	2096.89	1473.21	2467.38
Right	2431.53	2869.53	2189.18	1950.44	2942.40	2480.56	1863.44	1950.44

The interaction between orientation and heading indicated that the response time spent by the participants on retrieving the target arrows in different orientations was affected by the headings of the arrows, which could, in turn, illustrate that the retrieval of the visual spatial information within the egocentric reference frame was directional. As had been mentioned, the interaction between the distance and orientations of “front” and “back” was significant, which could further prove that within the egocentric reference frame, the participants retrieved the spatial memory information in a self-centered and onward “scanning” form. Nevertheless, on the orientations of “left” and “right,” the distance effect might be mediated by orientation effect and, thus, was not significant. The results of the main effect of orientation indicated that the participants responded much slower on “left” and “right” than on “front” and “back,” which was in accordance with the findings of Franklin, et al. (1990).

Within the egocentric reference frame, the participants made judgments about the orientation based on their own bodies; while within the environmental one, they would rely on the environmental layout instead of their bodies. Therefore, within the latter reference frame, the participants would adopt a different mode of retrieving the same targets as those in Experiment 1 due to lack of the central figure as the clue.

Experiment 2: Retrieval Features of the Visual Spatial Representation within the Environmental Reference Frame

Method

Participants. Twenty students at Wuhan University, with right handedness and normal vision or corrective vision, were invited to participate in this experiment. The participants were informed that this experiment was designed to test their visual memory capacity.

Apparatus. The same as those in Experiment 1;

Design. The independent variables and their values were the same as Experiment 1, except the values of the orientation variable comprised “north”, “south”, “west”, and “east”. The pictures used were also the same as those in Experiment 1.

Procedure and tasks. The procedure of Experiment 2 was the same as that of Experiment 1.

Results & Analysis

The repeated 4*4*2ANOVAs on the response time spent by the participants on making accurate judgments of the target arrows indicated that there were no main effects of the headings of the target arrows and their distance from the screen center.

Table 3. Average Accuracy Rate of the Participants

Orientation	Distance of the Arrows from the Screen Center and their Headings							
	Distance 1				Distance 2			
	Up	Down	Left	Right	Up	Down	Left	Right
East	0.60	0.60	0.80	0.95	0.80	0.80	0.85	0.75
South	0.55	1.00	0.80	0.75	0.70	0.70	0.85	0.85
West	0.80	0.65	0.95	0.80	0.80	0.70	0.90	0.70
North	0.95	0.75	0.60	0.80	0.80	0.65	0.90	0.95

In the present research, there were two methods of retrieving all the pictures. Specifically, the representational method of the egocentric reference frame was adopted in Experiment 1 in which the figure in the screen center served as the reference clue; in the environmental reference frame used in Experiment 2 the written word “north” acted as the clue. Therefore, the response time and accuracy of the two experiments could be respectively compared. Through comparisons, it was found that in terms of mean response time, the participants in Experiment 2 did a better job than those in Experiment 1 ($t(31)=-2.16$, $p<0.05$), but in terms of average accuracy, the participants in Experiment 1 did a better performance than those Experiment 2 ($t(31)=2.035$, $p=0.05$).

Table 4. Mean Response Time for the Participants to Make Accurate Judgments

Orientation	Distance of the Arrows from the Screen Center and their Headings							
	Distance 1				Distance 2			
	Up	Down	Left	Right	Up	Down	Left	Right
East	2082.92	2691.17	1839.63	1755.68	2061.44	2240.06	2012.35	2078.33
South	1607.00	1302.75	2235.50	1993.73	2119.07	2052.64	1560.76	2364.29
West	2065.00	2156.85	1885.53	1805.50	2127.75	2473.79	1620.67	2132.29
North	1312.95	1417.87	1867.17	1604.00	1250.50	1553.00	1748.78	1629.79

General Discussion

Based on the object-searching model, the present research conducted two experiments to prove the retrieval features of the visual spatial representation within the two reference frames: egocentric reference frame and environmental reference frame. In Experiment 1, the participants would consider the figure as the center and begin onward scanning from the target orientation, while in Experiment 2, they would directly retrieve the arrow on the target orientation. The judgments of the target orientation made by participants might be influenced by the response advantages they possessed on certain orientation. During the retrieval process, the participants in Experiment 2, compared with those in Experiment 1, adopted a mode different from route-based navigation, and, thus, they would respond faster. Meanwhile, the researcher holds the opinion that the direct retrieval mode on the basis of the overall mental representation could make the participant more vulnerable to the influence of the arrows on other orientations and, thus, lead to more judgment errors in Experiment 2.

The retrieval processes of the visual spatial representation within the two reference frames have their respective advantages. Specifically, the retrieval within the egocentric reference frame is more accurate but more time-consuming; the retrieval within the environmental reference frame is faster but less accurate.

In the real world, individual differences, such as gender and internal proneness can influence the spatial representations (Meneghetti, Pazzaglia, & De Beni, 2011). However, can these differences also affect the retrieval mode of spatial memory? In a certain environment, both the egocentric and environmental reference frames can be available for human beings at the same time, and human beings may tend to choose one of the two according to the spatial tasks (Ciaramelli, et al, 2010). However, the question as to how the retrieval modes of the two reference frames can be integrated to provide better solutions to such issues of navigation and way-finding needs more study.

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Marital Attitude of College Students in Contemporary Chinese Culture: A Comparative Study of Gender and Love Experience

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[Abstract] To examine the relations among gender, love experience, and marital attitudes of unmarried college students in contemporary Chinese culture, 379 participants completed the Marital Attitude Scale. The results showed that the marital attitudes of male and female students were significantly different. Male students had a more positive marriage attitude than female students. Experienced students reported a more positive marriage attitude compared with inexperienced students. Students in love reported a more positive marriage attitude than inexperienced and disappointed-in-love students. The interaction between gender and love experience was not statistically significant.

[Keywords] college student; marital attitude; gender; love experience

Introduction

With the rapid economic development and dramatic social change of contemporary China, people's marital attitude also has changed in the process of inheriting and developing traditional Chinese values, as well as absorbing and blending foreign cultures and values. Being a young group, Chinese college students are more susceptible to other cultures and deeply influenced. Their attitude toward marriage can reflect the change and development of Chinese marital attitude to some extent. Marital attitudes refer to individual opinions about marriage, which include the general concept of marriage as well as the evaluations and feelings about personal present or possibly future marriage (Braaten & Rosen, 1998; Willoughby, 2010). In China, most previous research about marital attitudes focused on the married couples, and little research has examined unmarried young adults. Obviously, for married couples, a harmonious relationship is an important social support that can give them feelings of stability and belonging. Their positive attitude towards marriage can help promote personal positive emotional experience and improve their mental health (Jia, et al., 2012) and subjective well-being (Zhou & Huang, 2014). Their marital attitude plays an important role in individual marital quality and marital stability (Jia, et al., 2012). Therefore, it is necessary to study the marital attitude of married couples.

However, it is also practically significant to study unmarried young adults' attitude toward marriage. Being an important part of human life, marriage usually is a general goal of unmarried young adults. As an ignorable composition of unmarried young adults, college students' marital attitude reflects collision of traditional Chinese culture and its evolution in a transformative era.

Marital Attitude and Gender

Traditional Chinese society was under the control of Confucian ethics. Confucian gender ideals and principles persisted as the protocol for proper family life in China (Chan, 2000; Chan & Lee, 1995). According to the different role assignments within the family, men tended to make major decisions, and women took care of the children and other family members. Men usually had more power and a higher social status than women (Bond, 2010). However, in modern society, along with economic liberalization, political changes, and legal reforms in recent decades, the relative status of men and women has changed

(Chan, 2000; Cheung & Tang, 2008). Women have more opportunities for education and employment. They have more spaces beyond their families, and they also have a greater voice within their families. The change of gender roles, which tends to be more equal, inevitably influences contemporary Chinese marital attitude, including unmarried college students.

Some studies found that contemporary female and male Chinese college students were significantly different in the subjective criteria of their partner selection. Most research investigated the marital attitude of married couples. For example, Zhou and Huang (2014) found that there were gender differences in postgraduates' general concepts of marriage. However, gender differences in the feelings of personal present or possibly future marriage were not statistically significant. In their study, females had a more positive attitude toward marriage than male students in general concepts of marriage, and the participants both included married and unmarried students. There is little research testing unmarried college students' marital attitude. Therefore, the first goal of the present study was to explore whether there were gender differences in unmarried college students' attitudes toward marriage in contemporary Chinese culture.

Marital Attitude and Love experience

In traditional Chinese society, the young adults' marriage was dominated by their parents. They were not free to choose their potential partners or to date with them, so they had very few love experiences or even none at all. Since the new Marriage Law was passed in 1950, arranged marriages have been gradually replaced by love matches (Xu, 1994), and dating behavior has become increasingly common. Many Chinese believe that the purpose of dating is to find a marital partner, as opposed to a social partner (Tang & Zuo, 2000). In the flux of societal change, voluntary dating relationships have become a legitimate step toward marriage (Bond, 2010). The societal attitude to college romance has also changed. Today, many college students have more than one love experience, while love experience was very rare before. Whether different love experiences will have an effect on unmarried college students' marital attitude? No studies have investigated the relationship between love experience and marital attitude. Thus, the second goal of present study was to explore whether college students with different love experiences had different attitudes toward marriage. The first love tends to be quite memorable for most people, so we explored the effect of first love on college students' marital attitudes. We also tested whether interaction existed between gender and love experience in students' marital attitudes, which was our third goal.

Method

Participants

Participants were unmarried undergraduate students from colleges in central China. There were 399 questionnaires distributed, and 379 effective questionnaires (219 female) were taken back. The effective rate was 94.9%. The participants majored in humanities, social sciences, science, and engineering.

Measures

The Demographical Questionnaire was composed of questions about gender, love experience, college, major, family, and parental marital status. Love experience was measured in four categories: *no love experience (NLE)*, *in first love (FL)*, *a relationship ended and presently single (PS)*, and *having love experience before and now in a new relationship (NR)*.

The Marital Attitude Scale (MAS) was modified by Yu, et al. (2011), which was first developed by Braaten and Rosen (1998). The scale had 20 items, including the general concept of marriage (MA-G) and the feelings of personal present or possibly future marriage (MA-P). Sample items were "Every

person should get married” (MA-G) and “I am afraid of marriage” (MA-P). These items were assessed on a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). Cronbach’s alpha of the scale was 0.738.

Results

Distribution of Male and Female Students in Four Different Types of Love experience

Table 1 summarizes the distribution of male and female students in four different types of love experience. Using chi-square test of independence, no significant difference was found in the distribution, $\chi^2(3) = 5.151, P = .161$. About 40% of the college students didn’t have love experience, and over 30% were in first love or had love experience before and were in a new relationship. The rest students ended a relationship and were presently single.

Table 1. Distribution of Male and Female Students in Four Different Types of Love Experience (N, %)

	NLE	FL	PS	NR	Total
Male	68(42.5)	17(10.6)	48(30.0)	27(16.9)	160(100)
Female	84(38.4)	42(19.2)	60(27.4)	33(15.1)	219(100)
Total	152(40.1)	59(15.6)	108(28.5)	60(15.8)	379(100)

Differences of College Students’ Marital Attitude in Gender and Love experience

Table 2 summarizes the scores of male and female students of different love experiences in MA-G, MA-P, and the total scores of marital attitude.

Table 2. Marital Attitude Scores of Male and Female Students in Four Different Types of Love Experience (M ± SD)

		NLE	FL	PS	NR
Male	MA-G	39.71±3.84	43.06±4.29	40.54±4.45	41.63±3.30
	MA-P	17.79±2.16	19.06±2.84	18.54±2.06	19.33±2.65
	Total	57.50±5.51	62.12±5.86	59.08±5.54	60.96±5.23
Female	MA-G	39.83±4.17	40.74±3.99	39.15±3.01	39.94±5.89
	MA-P	17.37±2.30	18.24±2.29	16.98±2.08	18.33±2.81
	Total	57.20±5.85	58.98±5.57	56.13±4.49	58.27±8.30

Gender and love experience were used as independent variables to test their effects on MA-G, MA-P and the total scores of marital attitudes. The results showed that, in the general concept of marriage, the main effect of gender was statistically significant, $F(1, 371) = 7.732, p < .01$, and the scores of male students were higher than the scores of female students. The main effect of love experience was also significant, $F(3, 371) = 3.977, p < .01$, and the post hoc test showed that participants of FL reported a more positive marital attitude than those of NLE and PS. No significant difference was found between participants of NLE and PS. No significant difference was found between participants of FL and NR. However, the interaction between gender and love experience was not significant.

The main effect of gender was significant in MA-P, $F(1, 371) = 12.631, p < .001$, and males reported a more positive attitude toward marriage than female students. The main effect of love experience was also significant, $F(3, 371) = 5.842, p < .01$, and the post hoc test indicated that participants of FL scored significantly higher than those of NLE and PS. Participants of NR scored significantly higher than those of NLE and PS. Significant difference was not found between participants of NLE and PS, FL and NR. The interaction between gender and love experience was not significant, either. The total scores of marital attitude were inconsistent with the scores of MA-P.

To explore whether the marital attitudes of participants was influenced by the state of love (be in love vs. be not in love) and love experience from the macroscopic view, we remerged the four types of love experience into three types and two types, respectively.

We merged FL and NR into a new type (be in love, IL) to test the possible difference in marital attitudes of participants in different states of love. Thus, there were three types of love experience: NLE, IL, PS. Both NLE and PS belong to the state of not in love (NIL). Table 3 shows the scores of male and female students of three different types of love experience in MA-G, MA-P, and the total scores of marital attitude. A 2 (gender: male, female) × 3 (love experience: NLE, IL, PS) mixed model analysis of variance (ANOVA) indicated that in MA-G, the main effect of gender was significant, $F(1, 373) = 5.559$, $p < .05$, and males reported a more positive marital attitude than female students. The main effect of love experience was also significant, $F(2, 373) = 5.080$, $p < .01$, and the post hoc test showed that participants in love reported a more positive marital attitudes than those of NLE and PS. No significant difference was found between NLE and PS. The interaction between gender and love experience was not significant. The scores of MA-P and the total scores of marital attitudes were in common with the results of MA-G.

Table 3. Marital Attitude Scores of Male and Female Students in Three Types of Love Experience ($M \pm SD$)

		NLE	IL	PS
Male	MA-G	39.71±3.84	42.18±3.73	40.54±4.45
	MA-P	17.79±2.16	19.23±2.69	18.54±2.06
	Total	57.50±5.51	61.41±5.45	59.08±5.54
Female	MA-G	39.83±4.17	40.39±4.90	39.15±3.01
	MA-P	17.37±2.30	18.28±2.52	16.98±2.08
	Total	57.20±5.85	58.67±6.86	56.13±4.49

Then, we merged the types of IL and PS into a new type (having love experience, HLE) to explore whether there were differences in marital attitudes between participants of HLE and those of NLE. A 2 (gender: male, female) × 2 (love experience: NLE, HLE) mixed model ANOVA indicated that in MA-G, the main effects of gender, love experience, and their interaction were all not significant. However, in MA-P, the main effect of gender was significant. Males reported a more positive attitude toward marriage ($M = 18.41$, $SD = 2.35$) than female students ($M = 17.58$, $SD = 2.36$), $F(1, 375) = 10.298$, $p < .01$. The main effect of love experience was also significant. Participants of HLE reported a more positive marital attitude ($M = 18.18$, $SD = 2.46$) than those of NLE ($M = 17.56$, $SD = 2.24$), $F(1, 375) = 8.090$, $p < .01$. The interaction between gender and love experience was not significant. The total scores of marital attitude were inconsistent with the scores of MA-P.

Discussion

Male students had more positive marital attitudes than female students, both on MA-G and MA-P, which reflects that traditional Chinese gender ideals and principles may still influence the contemporary Chinese in a more subtle way. In fact, contemporary Chinese women are under more pressures. As mentioned before, in traditional Chinese culture, women were generally assigned no other social roles than daughters, wives, and mothers, and they didn't work outside their homes. Given their differential role assignment in the family and society, men typically had more power and status than women. Nowadays, instead of being confined to domestic activities, about half of Chinese women are expected to participate in paid employment outside their homes at various life stages (Cheung & Tang, 2008). However, Chinese women are still fettered by traditional gender ideals and principles, while their status within family has

elevated a lot with their changes in income and education. For instance, compared to Chinese men, the employment status of Chinese women is affected more by their marital status and family life-cycle stages and is typically contingent on childcare and domestic responsibilities (Yi & Chien, 2002). In keeping with their traditional gender role, Chinese women still shoulder most of the household chores and usually take care of family members (Bond, 2010).

Therefore, although contemporary Chinese women's social status has been improved, in addition to the traditional social roles, there are more social roles for them to take on. As a result, they have to handle conflicts between these roles. The multiple role involvement has brought women more pressures. However, for Chinese men, no essential change has happened in their social roles, and they can still benefit more from marriage and family. This reality of modern Chinese marriage inevitably affects unmarried college students' attitudes toward marriage, especially the female students. The gender differences in their marital attitudes reflect the social reality to some extent. Thus, males have a more positive attitude toward marriage than female students.

In addition to gender differences, we also found college students with different love experiences had different marital attitudes. Specifically, the difference between experienced students and students without love experience was not significant in MA-G. However, in MA-P and total scores, significant differences existed. The experienced students reported a more positive attitude toward marriage compared with those inexperienced. In the meantime, we found students in love reported a more positive attitude toward marriage than those of NLE and PS, and no significant difference existed in marital attitudes between students of NLE and PS. These results were found in both dimensions of marital attitude and total scores. It demonstrates that it is the state of being in love but not the love experience that affects marital attitude.

Love is blind. Marriage is the union of two individuals with different habits and backgrounds. For the students in love, the romance and passion of love make them more positive about the future marriage. As for the single individuals, no matter whether they had love experience or not, they tend to be more rational about the advantages and disadvantages of marriage. Hence, students who are single (including those of NLE and PS) reported a less positive marital attitude than those in love.

The students in love reported a more positive marital attitude, which also proved that Chinese college students were serious and responsible for their romantic relationships. It also reflects the emphasis of Chinese values on collectivism, dependency and responsibility to a certain extent. For many Chinese, the purpose of dating is to find a marital partner. In contrast to western cultures' highlight of self-gratification, the Chinese culture places more emphasis on the interdependent nature of a romantic relationship, and Chinese people tend to maintain a larger degree of closeness with their romantic partners than Westerners (Bond, 2010). It reflects the potential influence of traditional Chinese collectivistic values (Oyserman, et al., 2002) in romantic relationships and the nature of dating relationships as a step toward marriage (Tang & Zuo, 2000).

We also found that there was no significant difference in marital attitudes between students of FL and those of NR. This result indicates that the influence of first love is weakening. In previous eras, romantic relationships were forbidden during college life, so college students usually had few love experiences or even had no love experience at all. In this case, first love was particularly valuable and unforgettable. Students now are free to find romantic partners in colleges, and they often have more than one love experience. So, the first love seems less important to them.

Results also suggested that the interaction between gender and love experience was not significant. It means that the differences of male and female students in marital attitudes are not affected by love

experience. Gender may still be the dominate factor in marital attitudes. As mentioned, the gender differences may be greatly influenced by traditional Chinese culture. This issue is worthy of further study.

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Social Support: A Moderator between Cultural Intelligence and Cross-Cultural Adaptation of International Students in Chinese Universities

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[Abstract] Cross-cultural adaptation is inevitable and critical when people come to a new cultural environment. In the present study, 127 international students in different Chinese universities completed the Acculturation Scale, Cultural Intelligence Scale, and Social Support Scale. The results indicated that the levels of cross-cultural adaptation and social support were not high. Cultural intelligence and social support had a significant positive correlation, and they were both positively correlated with cross-cultural adaptation. The interaction between cultural intelligence and social support was statistically significant, and social support affected as a moderator between cultural intelligence and cross-cultural adaptation.

[Keywords] cross-cultural adaptation; cultural intelligence; social support; international student

Introduction

Cross-cultural adaptation occurs when individuals switch to host cultures from their original cultures. Cross-cultural adaptation is defined as a tendentious and conscious choice and adjustment based on individuals' cognition and emotional dependence on those two cultures (Yang, 2004). The uni-dimension model of cross-cultural adaptation was first described by Parks and Miller, and later developed by Grodon (Flannery, et al., 2001). Berry (1980) developed a double dimensional model that is most frequently used (Berry, 2002; Berry, et al., 2003; Bourhis, et al., 1997). Arends-Tóth and van de Vijver (2004) described the fusion model, a totally different model, to explain acculturation processes. Although these theoretical studies are inconsistent or even contradictory, they all focus on interactions between individuals and new cultures. To examine the process of cultural adaptation, Earley and Ang (2003) first definitely proposed the concept of cultural intelligence, and it is defined as an individual's ability to effectively contact with people from other cultures. Research found the cultural intelligence to be one factor influencing cross-cultural adaptation. It is a new perspective for cross-cultural adjustment based on individual difference (Xiao & Zhang, 2012). Most prior research of cultural intelligence focuses on working place (e. g. Claudelév, 2007; Tang, et al., 2010; Templer, et al., 2006). However, as an important factor in cross-cultural adaptation, little research explores the effect of cultural intelligence in the cross-cultural adaptation of international students in China.

With the economic development of China, increasingly international students study in Chinese universities. Recently researchers began to explore the cross-cultural adaptation of international students in China. Some factors were found to influence their cross-cultural adaptation. For example, Yang (2004) divided those factors into macro factors, micro factors, and cultural interactions. The macro factors include social support that offers emotional and moral support to international students. Unlike Yang, Chen (2006) investigated environmental adaptation, interpersonal adaptation, dealing model adaptation, privacy attitude adaptation, language adaptation, and social support adaptation. They all suggested social support as a key variable in cross-cultural adaptation. Social support helps individuals get closer to others by reducing their anxiety in new cultures, and thus, leads to a better adaptation.

The present study explored the levels of cultural intelligence, social support, and cross-cultural adaptation of international students in Chinese universities and their relations. It was hypothesized that (a) cultural intelligence and social support are both correlated with cross-cultural adaptation, (b) social support is correlated with cultural intelligence, and (c) social support moderates the effect of cultural intelligence on cross-cultural adaptation.

Method

Participants

Participants (age: $M = 21.8$; $SD = 4.56$; 31.5% female) were 127 international students from several universities in central China. Participants came from different continents, including Europe, Asia, Africa, and South America.

Measures

The Demographical Questionnaire included questions about nationality, gender, age, education level, Chinese language proficiency, visiting history, and residence time. The Acculturation Scale was developed by Yang (2004) to test the cross-cultural adaptation in China. It was constituted by 5 dimensions: language adaptation, living adaptation, study adaptation, interpersonal relation adaptation, and mental adaptation. Participants indicated the extent to which they agreed to each statement on a 5-point-Likert scale. A high score means a good cross-cultural adaptation.

The Cultural Intelligence Scale was a widely used 20-item questionnaire that assessed 4 factors of cultural intelligence: metacognitive, cognitive, motivational, and behavioral (Van Dyne, et al., 2008). Participants indicated the extent to which they agreed with each statement on a 5-point-Likert scale. A high score means high cultural intelligence.

The Social Support Scale was a 10-item self-report questionnaire. Participants indicated the extent with which they agreed to each statement on a 5-point-Likert scale. A high score means good social support.

Procedure

Participants signed a consent form and completed four questionnaires. The whole procedure lasted about 45 min.

Data Analysis

Psychometric properties of the questionnaire were analyzed by SPSS 19.0. Means, standard deviations, and reliability coefficients were calculated. Also, the correlation analyses were conducted to investigate the relationship among the variables.

Results

Psychometric Properties

In our test, the Cronbach's α reliability coefficients were 0.68 for the Acculturation Scale ($M = 3.54$, $SD = 0.53$, $N = 127$), 0.72 for the Cultural Intelligence Scale ($M = 3.48$, $SD = 0.66$), and 0.58 for the Social Support Scale ($M = 3.20$, $SD = 0.59$). The item analysis confirmed internal consistency for these 3 scales. Demographical differences on cross-cultural adaptation were tested. Different levels in Chinese proficiency have statistically significant differences in the score of the Acculturation Scale, $t(127) = 6.97$, $p < 0.01$. No significant difference was found in means of other demographical factors.

Correlations

Results are displayed in Table 1. As expected, cultural intelligence and cross-cultural adaptation were positively related, $r(127) = .80, p < .01$. Cultural intelligence was significantly correlated with all the 5 dimensions of cross-cultural adaptation. The correlation coefficient ranged from .40 to .80. Except for the cognitive factor, the other 4 factors of cultural intelligence were highly correlated with cross-cultural adaptation.

Social support also had a positive correlation with cross-cultural adaptation, $r(127) = 0.52, p < .01$. Social support and cultural intelligence were correlated, too: $r(127) = .61, p < .01$. Furthermore, except for the cognitive factor again, social support was significantly correlated with the other factors of cultural intelligence. We examined the moderate effect of social support on cultural intelligence. The result suggested that the interaction between cultural intelligence and social support was statistically significant, and the social support moderated the effect of cultural intelligence on cross-cultural adaptation, $F(3,124) = 13.64, p < .05$.

Table 1. Relations of Three Scales and their Dimensions

Scales	Acculturation Scale	Cultural Intelligence Scale	Social Support Scale
<i>Acculturation Scale</i>			
Language adaptation		.68**	
Living adaptation		.80**	
Study adaptation		.40*	
Interpersonal relation adaptation		.74**	
Mental adaptation		.49**	
<i>Cultural intelligence Scale</i>	.80**		.61**
Metacognitive	.80**		.45*
Cognitive	.40		.35
Motivational	.80**		.59**
Behavioral	.65**		.59**
<i>Social Support Scale</i>	.52**		

Note: * $p < .05$, ** $p < .01$.

Discussion

Participants in this study displayed a medium-level adaptation to Chinese culture. However, differences in gender, age, education level, visit history, or residence time did not lead to different cross-cultural adaptation levels. This means that the cross-cultural adaptation is not influenced by these factors. The scores of the Acculturation Scale suggested that participants performed best in language adaptation. Perhaps this is because the major of most participants is Chinese, and so they had less difficulty in speaking Chinese. The cross-cultural adaptation is influenced by proficiency in Chinese. That is, participants who were better at Chinese had a better cross-cultural adaptation. One explanation for this might be that those who are good at Chinese can communicate and interact more with locals, and, therefore, they perceive more social support. However, the general adaptation level of participants was not high. It means language is important but not enough for a good cross-cultural adaptation. Moreover, the participants also had better performance in living adaptation, compared to study, interpersonal relation, and mental adaptation. This may imply that living adaptation is easier than adaptations that relate to psychological factors (i.e., study, interpersonal relation, mental adjustment). All these results may suggest that international students need more psychological directions and help.

Our participants displayed a high-level cultural intelligence, especially the metacognitive and motivational factors. However, the scores of cognitive and behavioral factors were low. The motivational factor is the motivation and interesting points when a person adapts to a different culture. The metacognitive factor is the awareness and perception when a person interacts with people from other cultures. The cognitive factor is the degree of familiarity with specific regulations, practices, and customs in different contexts. The behavioral factor is the appropriateness of verbal and nonverbal behaviors when a person interacts with people from other cultures (Ang, et al., 2007). So, as to our findings, maybe the reason is cognition and behaviors tend to stick with the original culture, while, in contrast, metacognition and motivation are more flexible as culture changes. For international students who choose to study in China, they must have a high motivation to come here.

The result indicated that cultural intelligence was correlated with social support, but the participants only received a medium level of social support. They had trouble fully agreeing with Chinese social culture and environment and blending with their surroundings. Some international students even reported keeping away from local students because they thought the public morality in Chinese society was poor. This might be one reason why international students didn't report enough social support.

This study predicted a positive correlation between cultural intelligence and cross-cultural adaptation. The correlation analysis provided strong support to this hypothesis. In consistence with other researches (Li, et al., 2012; Tan, 2013), our result also suggested a positive correlation between cultural intelligence and cross-cultural adaptation, indicating that higher cultural intelligence means better adaptation. Specifically, the metacognitive and motivational intelligence had strong correlations with cross-cultural adaptation. This is consistent with the results of Templer, et al. (2006) and Ang, et al. (2006), who reported that individuals with high motivational intelligence had good adaptations in working and interpersonal relations.

A positive correlation between social support and cross-cultural adaptation was also supported by the study result. As an important factor influencing cross-cultural adaptation, social support provides international students emotional support from others and helps them to decrease mental stress reaction and tension in cross-cultural adaptation.

It was expected that the relationship between cultural intelligence and cross-cultural adaptation was moderated by social support. The present study yielded that more social support gave rise to stronger relations between cultural intelligence and cross-cultural adaptation. As other kinds of intelligence, the function of cultural intelligence is affected by environment. During their adaptation to Chinese culture, on one side, the international students inevitably experience some negative emotions, such as anxiety, tension, confusion, frustration, and uncertainty. On the other side, they face some realistic living difficulties. The social support can both provide them the emotional help and living guidance that moderate and promote the function of cultural intelligence on cultural adaptation. Ward & Rana-Deuba (2000) proposed that the cultures of host country and original country both are effective resources of social support, but the former has a greater effect on the cognition and emotion of the international students. However, our study showed that the international students didn't communicate so much with local Chinese. They tended to get social support from their countrymen, which was not good for a better adaptation.

A further investigation might compare the cultural adaptation of international students from eastern and western cultures. The eastern cultures are always regarded as interdependent, while the western cultures are independent (Marquez & Ellwanger, 2014). Since Chinese culture is a typical collectivist

culture, an international student from another eastern culture is reasonably presumed to adapt better than an international student from a western culture. It is an interesting comparison of cross-cultural adaptation in eastern and western cultures, which also devoted to examining whether the differences between the original culture and the new culture influence the adaptation.

In addition, research can also focus on how to improve cross-cultural adaptation. Individuals with high cultural intelligence adapt to new cultures faster and more efficiently. Earley and Mosakowski (2004) suggest that cultural intelligence can be strengthened by cultivation. Tomas (2006) proposes five stages of cultural intelligence cultivation. Additionally, Triandis (2006) suggests some aspects when people cultivate cultural intelligence in new cultures. This research provides important insights on improving individuals' cultural intelligence. Further research can focus on how to increase the cultural intelligence of international students in specific Chinese cultures. Other predictive resources of cultural intelligence also need to be further explored, such as the effect of trait-like and state-like characters in the development and cultivation of cultural intelligence.

As suggested in this study, the social support plays an important role in cross-cultural adaptation, indicating that the social factors could also influence the cross-cultural adaptation, such as how the social media and personal habit of using them influence the cross-cultural adaptation. These are important issues nowadays in a world which is full of different social media. Besides, there are also many other social factors that need to be focused upon.

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Effect of Parenting Styles and Self-Esteem on Subject Well-Being Among Chinese Medical Students

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[Abstract] *The current study discussed the effects of parenting styles and self-esteem on subject well-being among Chinese medical students. A self-administered survey was conducted to collect data from Wei Fang, a middle city in the north part of China. The results showed that parenting styles could affect subject well-being and self-esteem was positively related to subject well-being. In addition, self-esteem also demonstrated moderating effects in some of the parenting styles and subject well-being relationships. The implications of these findings are discussed. This empirical study can provide a reliable theoretical foundation to medical students and promote their subject well-being.*

[Keywords] *Chinese medical students; parenting styles; self-esteem; subject well-being*

Introduction

As the country's future hope, college students suffer all kinds of pressures from society, parents, and peer competition. While, medical students are a special group, they also shoulder the responsibility of healing the wounded and rescuing dying people, so their psychological health deserves more in-depth study. Subjective well-being is an important index of one's life satisfaction and physical and mental health. It also has a significant impact on individual growth and development of a person's future. Parenting styles refer to the idea that parents in daily life have different education ideas and education attitudes. What's more, different styles of parenting obviously have different influences on individual subjective well-being. The level of self-esteem is the leading cause of psychological health. So, we explored the effect of parenting styles and self-esteem on subject well-being among Chinese medical students. This will provide a reliable theoretical basis for improving Chinese medical students' well-being and promoting their health.

Parenting Styles as a Predictor of Subject Well-Being

Nancy Darling and Laurence Steinberg (1993) reported that parenting styles were a series of attitudes in mutual communication between parents and children; the attitudes combined together could form a kind of emotional atmosphere, and parenting styles expressed in this kind of atmosphere impacted children. Deneve (1999) was the first psychologist to study subjective well-being; he thought life satisfaction was the main factor to measure subjective well-being. However, there were also different definitions of well-being. In general, the present scholars divided subjective well-being into three parts: life satisfaction, positive affection, and negative affection.

At the same time, some people thought parenting styles would influence individual psychological health. Liang (1995) pointed that parents had too much punishment, rejection, denial, and interference if they also had preference and overprotection at the same time. This contradiction would probably affect children's mental health level. Guo (2005) thought parents' warm feelings and understanding had a significant negative correlation to students' bad psychological conditions. Parents who were harsh and expressed denial and parents' overprotection and excessive interference all had a significant positive

correlation with students' bad psychological conditions. Wang (1998) also reported that parenting styles had a close relationship with middle school students' mental health. However, different parenting styles had different influences on students' mental health.

On the other hand, parenting styles were an objective factor that could influence subjective well-being. Zheng (2011) pointed out that the family environment and parenting styles could affect adolescents' subjective well-being. Zhang (2006) also thought that there was a significant correlation between parents' positive parenting styles and learning. A mother's warm understanding and a father's severe punishment for primary and middle school students' learning could predict their children's well-being. Moreover, Zhang (2008) pointed out that parenting styles based on different roles could influence the subjective well-being of college students.

The Role of Self-Esteem as a Mechanism Intervening between Parenting Styles and Subject Well-Being

Zhang (2012) believed that personality played a completely intermediary role between fathers' parenting styles and self-esteem. What's more, fathers' styles could improve the level of individual self-esteem via personality. Han (2008) said high self-esteem had a very significant positive correlation or negative correlation with parenting styles. Meanwhile, different high school students' parenting styles had different influences on self-esteem. On the other hand, Han (2005) reported that parenting styles had a huge influence on the formation of children's self-esteem, and improving parenting styles was conducive to the formation of the individual's self-esteem. Peng (2007) thought that children who had democratic parents would possess high self-esteem and others who had arbitrary types of parents had low self-esteem. Zhou (2005) also thought that explicit self-esteem could positively impact on mental health. Zhang (2004) also thought that individual factors, such as self-esteem, social support and attribution, had a significant influence on happiness.

Therefore, this study focuses on the research of medical students' parenting styles, self-esteem, and subjective well-being. The study of this group (medical students) is more difficult compared to other groups (general people). In a word, the effects of their parenting styles and self-esteem on subjective well-being should be further studied. So this research could provide empirical materials and theoretical basis for improving medical students' well-being.

Method

Participants

Using random sampling, we selected 200 medical students in a medical college. Students were asked to complete three questionnaires; later, we collected them and analyzed the data.

Instruments

We used EMBU to measure parenting styles. The scale was made jointly in Swedish Umea University (Perris, 1980); it was used to evaluate attitudes and behaviors of parents. The inventory consisted of 81 titles and 15 kinds of parenting styles. Among them, the fathers' styles were divided into six factors and the mothers' styles were divided into five factors.

The self-esteem scale (SES) could measure personal self-esteem. The questionnaire was designed by Rosenberg (Rosenberg, 1965). It was used to assess the individual about the overall feeling of self-worth

and self-acceptance. The scale was made up of ten items; participants could select one option in accordance with the condition of their body and mind.

We used the Index of Well-Being and the Index of General Affect to measure well-being. The scale was formulated by Campbell (1976). It evaluates the current happiness of participants. The original scale was composed of two subscales: one was overall emotional scale and consisted of eight topics; the other scale was life satisfaction scale and had only one topic. These three scales all had good reliability and validity.

Results

Descriptive Statistics and Correlations

As shown in Table 1, fathers' warmth and understanding, preference, refusal, and overprotection all have a significant correlation with self-esteem, but interference is not significantly correlated with self-esteem. Fathers' warmth and understanding is negatively correlated with self-esteem; other factors are positively correlated with it. Understanding and warmth, refusal, severe punishment, and overprotection are significantly correlated with subjective well-being, but other factors are not significant to well-being.

Table 1. The Relationships of Father's Styles, Self-Esteem and Subjective Well-Being

	1	2	3	4	5	6	7	8
1. Understanding	1							
2. Punishing	-0.32**	1						
3. Interference	0.21**	0.45**	1					
4. Preference	0.02	0.41**	0.12	1				
5. Refusal	-0.32**	0.77**	0.40**	0.36**	1			
6. Overprotection	0.01	0.48**	0.50**	0.23**	0.47**	1		
7. Self-esteem	-0.17*	0.17*	0.04	0.16*	0.19**	0.14*	1	
8. Well-being	0.20**	-0.18*	-0.02	0.00	-0.15*	-0.12*	-0.33*	1

Note: * $P < 0.05$, ** $P < 0.01$

As seen in Table 2, mothers' understanding, refusal, punishing, and preference are significantly correlated with self-esteem, but mother's interference and overprotection are not significantly associated with self-esteem. In a word, mothers' understanding is negatively correlated with children's self-esteem. Other factors are positively correlated with it. Meanwhile, self-esteem has a significant negative correlation with well-being. Mothers' warmth and understanding, refusal, and punishing are correlated with subjective well-being; as for other factors, there are no significant correlations.

Table 2. The Relationships of Mother's Styles, Self-Esteem and Subjective Well-Being

	1	2	3	4	5	6	7
1. Understanding	1						
2. Interference & Overprotection	.10	1					
3. Refusal	-0.45**	0.48**	1				
4. Punishing	-0.44**	0.47**	0.82**	1			
5. Preference	-0.06	0.16*	0.34**	0.34**	1		
6. Self-esteem	-0.19**	0.06	0.18*	0.15*	0.16*	1	
7. Well-being	0.19**	-0.05	-0.16*	-0.14*	-0.03	-0.33*	1

Note: * $P < 0.05$, ** $P < 0.01$

Examining the Mediation Model

As shown in Table 3, we let gender, the factors of fathers' styles and self-esteem be the independent variables, subjective well-being was the dependent variable. We performed regression analysis, and the results show that gender can significantly predict subjective well-being. Fathers' warmth and understanding not only can directly predict well-being, but also will indirectly predict well-being via self-esteem.

Table 3. Parenting Styles and Self-Esteem on Happiness Regression Analysis (Father)

	Independent Variables	R	ΔR2	F	B	t
Step 1	Gender	0.21	0.04	8.96	1.06	3.11**
Step 2		0.27	0.04	1.13		
	Understanding				0.16	2.25*
	Punishing				-0.11	-1.46
	Interference				0.03	0.45
	Preference				0.01	0.20
	Refusal				-0.09	-0.20
	Overprotection				-0.05	-0.59
Step 3	Self-Esteem	0.43	0.15	23.40	-0.34	-4.84***

Note: * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

As seen in Table 4, we let gender, the factors of mothers' styles and self-esteem be the independent variables. Subjective well-being was the dependent variable. We performed regression analysis, and the results show that gender can significantly predict subjective well-being. Mothers' warmth and understanding not only can directly predict well-being, but also will indirectly predict well-being via self-esteem.

Table 4. Parenting Styles and Self-Esteem on Happiness Regression Analysis (Mother)

	Independent Variables	R	ΔR2	F	B	t
Step 1	Gender	0.21	0.04	9.10	0.93	3.02**
Step 2		0.26	0.07	0.97		
	Understanding				0.16	2.20*
	Refusal				-0.09	-1.10
	Punishing				-0.08	-0.99
	Preference				-0.01	-0.09
	Interference and Overprotection				0.04	0.54
Step 3	Self-Esteem				-0.34	-5.00***

Note: * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

Decision and Conclusion

The results found that parents' warmth and understanding was significantly correlated with self-esteem, and it also could predict subjective well-being. This means if parents give their children more warmth, help, and understanding, their children would have higher self-esteem. On the contrary, if parents are relatively harsh and severely punished their children, then these would increase the negative psychology of their children. What's more, their children's self-esteem would be affected. Qian's research (1998) also showed that the more warmth and understanding the parents gave to children, the higher level of self-esteem their children would have. The reason might be that if parents gave their children more love in their children's difficulties, this will increase children's self-esteem and self-efficacy. Research also showed that parents' refusal also had a significant negative correlation with self-esteem. Zhang (1998) also showed that children

with more supports will have higher self-esteem and healthy bodies and minds. Hu (2002) also verified this point.

In addition, Zeng (2010) also found that self-esteem was significantly an effect on subjective well-being. It also proved the result of our study. According to the regression analysis, parenting warmth and understanding could not only directly improve personal subjective well-being, but also could affect well-being via self-esteem. Self-esteem played a very important role in personal well-being. Therefore, parents should be full of support and help and should not overly spoil children. As for decisions children are making, parents should give their children more support, and this will greatly improve the child's self-esteem and self-efficacy and further promote their life satisfaction and happiness. If parents always refuse and deny their children, they will lose confidence and interest in everything.

In conclusion, parents should focus on their parenting styles in our daily life and get along with children in a more harmonious and friendly way. They are supposed to always put the child's physical and mental health first and improve their children's self-esteem. In this way, children will more cherish the time together with their parents and learn good mental quality from their parents. It is very beneficial to children's development. Parents are very important in the process of children's growing; the more things children learn from their parents, the more confidence and self-esteem and strong psychological qualities they will get. This will make them have more well-being and live a better life.

There are also some limitations in our study. First, because the participants were limited to students at a single medical college in China, it is not possible to generalize these findings to students at other universities in China or other countries. Second, we used a cross-sectional study. Future research should use longitudinal research designs to address causality. Third, as all my analyses relied on self-report data, it is possible that the analysis may involve common method biases (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, it still provides a theoretical basis to promote the self-esteem and well-being of Chinese medical students.

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Collective Self-Esteem and Personal Self-Esteem Changes under the Group-Directed Threat within the Chinese Culture¹

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[Abstract] Based on social identity theory, this research investigated how group-directed threats impact collective self-esteem and personal self-esteem within the Chinese culture. The result revealed that collective self-esteem and personal self-esteem under a group-directed threat were significantly lower than under the control condition. Furthermore, the scores of the membership self-esteem and the public collective self-esteem (two dimensions in collective self-esteem) were significantly lower in the threat group compared with the control group. Cultural differences might be the moderator between the group-directed threat and self-esteem. The implications of self-concept under the threat condition are discussed.

[Keywords] collective self-esteem; personal self-esteem; group-directed threat; social identity theory

Introduction

Self-esteem is an important component of self-concept. Individual self-esteem was the first area that was discussed frequently in western culture due to deeply rooted individualism (Crocker & Luhtanen, 1990). After social identity theory was created, researchers suggested that collective self-esteem might be the other part of one's self-esteem. Social identity, as a part of one's self-concept that is relevant to collective self-esteem, is defined as "that *part* of an individual's self-concept which derives from his knowledge of his membership in a social group together with the value and emotional significance attached to that membership" (Tajfel, 1981, p. 225). Accordingly, collective self-esteem refers to the general positive evaluation of the social group that the person belongs to, including both evaluations from people inside and outside the group (Luhtanen & Crocker, 1991).

There are two types of social threat: the personal-directed threat and the group-directed threat (Ellemers, Spears & Doosje, 2002). The group-directed threat refers to the threat that is directed to the social group but not toward a single individual. According to social identity principles, when people perceive a group-directed threat, their self-concept would be damaged (Spears, Doosje & Ellemers, 1997). In other words, under the group-directed threat, one's self-esteem, both personal self-esteem and collective self-esteem, would be affected. Personal self-esteem would decrease under the group-directed threat (Ellemers, Spears & Doosje, 2002). However, there is limited research on how the collective self-esteem is influenced by a group-directed threat, and some discrepancies in the result of collective self-esteem exist under different cultural contexts. In the western cultural context, American participants who had high identity with their social groups showed declined collective self-esteem when a group threat is manifested (Branscombe & Wann, 1994). However, in the eastern culture, Chinese subjects exhibited a higher collective self-esteem under the group threat scenario (Bo, 2014). Therefore, there is not a consistent conclusion about the relationship between the group-directed threat and the collective self-esteem. Crocker, Luhtanen, Blaine and Broadnax (1994) suggested that collective self-esteem might have cultural

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differences. They found that scores of two sub-dimensions of collective self-esteem (i.e., public collective self-esteem and private collective self-esteem) have cultural differences. The relationship of collective self-esteem to well-being with personal self-esteem separated out was non-significant for Whites, small for Blacks, and moderate to strong for Asians.

Therefore, the first aim for the current study is to investigate the collective self-esteem change under the group-directed threat in Chinese culture. We used a national level threat as the group-directed threat in the priming experiment for the following reasons: (1) This perspective of studies in China is limited. In the trend of globalization, there are more international contacts between China and other countries, and the national threats and conflicts are increasing, as well. They might influence the self-concept of Chinese. In contrast to other countries, the nation is a very important social identity and a part of the self-concept for Chinese (Yu, Zhang & Qiao, 2014; Shu, Guo & Huang, 2015). To discuss the self-esteem change of the Chinese by a national threat is helpful for Chinese indigenous psychology; (2) To facilitate studies on the effects of group-directed threats and individual traits on the Chinese collective self-esteem; and in the world, there is still a limited discussion about a national threat compared to other group-level threats, such as race and gender (Stephan, Ybarra & Rios, in press). The second goal of this study is to explore the relationship between group-directed threats and personal self-esteem. An existing study found that a group-directed threat was negatively related to personal self-esteem in the western cultural context (Ellemers & Barreto, 2000), but little is known about it in the Chinese cultural background. It is important to fill in the gap of study on the relationship between a group-directed threat and personal self-esteem in the eastern cultural context. Based on social identity theory and the above deliberations, we condensed the present study into the following causal hypotheses: (1) Group members' collective self-esteem will be reduced under a group-directed threat context; (2) Personal self-esteem will be reduced in a group-directed threat context, as well. The independent variable is the threat condition (threat or not), and the dependent variables are the collective self-esteem scores and the personal self-esteem scores.

Method

Participants

Participants of this research were 107 Chinese undergraduate students from a comprehensive university. There were 96 final, valid subjects. The mean age was 19.85 (ranging from 17 to 22); 43 were male, and 53 were female.

Experimental Design

Participants were all chosen in the library and were randomly allocated in a threat condition or not. They were asked to fill out several paper-writing tasks, which contained a priming task, self-esteem scale, and collective self-esteem scale. After the data collection, each participant was granted a debriefing and a gift for their participation.

Priming Task

There was a news report about the evaluation of Chinese tourists' uncivilized behaviors abroad, which contained 617 words. This report included both the evaluations of in-group members (Chinese) and the evaluations of out-groups (foreigners). In order to exclude irrelevant variables, such as nationalist emotions for special countries, all the country names were blurred. In order to prime enough, participants were asked

to mark the evaluative words in that report. The previous study could be primed effectively (Gadner & Lee, 1999). The control group's material was an equivalent length of global science technology news.

Manipulation Material

Emotional words, such as *happy*, *shame*, *anxiety*, *inferiority*, *anger*, and *joy* were used to test the feeling after reading the report. The previous study suggested that it could reflect the priming effect (Zheng, Bi & Zhao, 2015). Participants were asked to use these words to describe their feeling in a 5-point list ranging from 1 (not at all) to 5 (very much). The higher scores of the negative words mean a higher intensity of emotion and a higher threat level.

Personal Self-Esteem Measure

This self-esteem scale, which was designed by Rosenberg (1965), is the most famous and useful scale in the world. It is a 10-item, 4-point Likert-type measure that shows the thinking of one's own evaluation about one's self. The questions were answered on 4-point scales ranging from 1 (not at all) to 4 (very much). In this study, we used the Chinese revised scale. The revised scale had good reliability (Cronbach's $\alpha = .88$). In the present study, the Cronbach's $\alpha = .86$.

Collective Self-Esteem Measure

The Collective Self-Esteem Scale (CSES; Luhtanen & Crocker, 1992) is a 16-item, 7-point Likert-type measure that shows the thinking of a social group membership based on an ascribed category membership, such as sex, race, religion, nation, and ethnicity. It contains four 4-item subscales: membership esteem, assessing individual's judgments of how worthy one is as a member in one's group; Private CSE (collective self-esteem), measuring one's personal judgments of how good one's social groups are; Public CSE, assessing one's judgments of how positively other people evaluate one's group; Importance to identity, assessing the importance of one's social group memberships to one's self-concept. In the present study, these questions were answered on 7-point scales ranging from 1 (not at all) to 7 (very much). In the present study, the Cronbach's $\alpha = .80$.

Results

Pilot Study

Before the formal experiment, we first checked the effect of the priming task. Thirteen participants read the control material, and 16 participants read the threat condition material. The result of the independent sample text showed that the negative emotions score of threat groups ($M_{\text{shame}}=3.31$, $M_{\text{rage}}=1.85$, $M_{\text{anger}}=2.81$) was significantly higher than the control group ($M_{\text{shame}}=1.62$, $M_{\text{rage}}=3.00$, $M_{\text{anger}}=1.85$). The priming material could arouse the emotion in the national threat context.

Manipulation Check

The 7 emotion scores were all significantly different between the threat condition and the control condition. The result of the independent sample text showed that the negative emotions scores of threat groups ($M_{\text{shame}}=2.84$, $M_{\text{anxiety}}=3.27$, $M_{\text{inferiority}}=2.21$, $M_{\text{rage}}=2.73$, and $M_{\text{anger}}=2.70$) were significantly higher than the control group ($M_{\text{shame}}=1.48$, $M_{\text{anxiety}}=2.65$, $M_{\text{inferiority}}=1.75$, $M_{\text{rage}}=1.50$, and $M_{\text{anger}}=1.48$). It proved that the priming could arouse the threat context effectively.

With an independent sample text, a significant effect for collective self-esteem was found ($t(94)=2.04$, $p < 0.05$, $d = 0.24$), showing that the score among group-directed threat conditions ($M = 80.63$) was lower

than the control conditions ($M = 84.98$). The personal self-esteem score also showed a significant effect ($t(94) = 2.40, p < 0.05, d = 0.45$); the score among group-directed threat conditions ($M = 30.43$) was lower than the control condition ($M = 32.20$).

Furthermore, the subscale of membership esteem showed a significant difference in both groups. The membership esteem score of a group-directed threat ($M = 20.27$) was lower than the control group ($M = 21.90$), $t(94) = 2.31, p < .05, d = 0.48$, and there was a marginal significance between the threat group and the control group in the public collective self-esteem. The score of the public collective self-esteem in the group-directed threat ($M = 18.88$) was lower than the control group ($M = 20.28$), $t(94) = 1.80, p = 0.07$.

Discussion

This study examined the changes in two aspects of self-esteem under the group-directed threat context. Both collective self-esteem and personal self-esteem were reduced in the group-directed threat compared with the control group. We used the material priming, a different priming method in this study. However, the results still supported the conclusion of the referential western study (Branscombe & Wann, 1994) – the group-directed threat reduced group members' collective self-esteem – but not in the eastern study (Bo, 2014). Our results also showed that group-directed threats could reduce one's personal self-esteem, which was consistent with the previous study (Ellemers & Barret, 2000). The above results contributed to the previous western findings that the collective self-esteem and individual self-esteem in the threat group were significantly lower than the control group. As a conclusion, the damage of one's collective self-esteem and personal self-esteem in a group-directed threat has a cross-cultural and cross-context consistency.

Based on and beyond the previous research, which revealed group-directed threat condition would damage collective self-esteem, our study further analyzed whether or not the specific dimensions of the collective self-esteem would be damaged in a group-directed threat scenario (Branscombe & Wann, 1994). In this study, we found that membership esteem and public CSE were reduced in the group-directed threat condition. Since the priming task was a report that contained judgment about Chinese travelers' uncivilized behaviors by foreigners and Chinese, the damage of public CSE (concerning other people's evaluation of one's group) was fair and reasonable. Membership esteem in the threat condition was lower than the control condition. Thus, it seemed that compared to the control condition, people under the threat condition would be more likely to deny their Chinese membership. This result is similar to the conclusion of Spears, Doosje and Ellemers's (1997) study, which found that under the group-directed threat, low identifiers were more likely to opt for the individualistic strategy of dissociating from their group and to deny relationships with their group. This reaction is one of the defensive mechanisms to protect one's positive self-esteem in a prestige-devalued group.

Our finding was consistent with the previous western study but not the eastern study. One possible reason was that different threat types were used. Similar to the western study, the group threat used in the present study was a symbolic threat. However, the group threat in the previous Chinese study was a realistic threat. The realistic threat and symbolic threat are two different threats that lead to different responses (Stephan, Ybarra & Morrison, 2009). This difference might result in a consistent influence on collective self-esteem. The realistic threat could improve the social identity (Turner, 1984), so it might improve the collective self-esteem in the eastern study, while the symbolic threat may not. Obviously, more studies need to be done to support this hypothesis.

How should the impact caused by the group-directed threat on personal self-esteem be understood? The findings of Crocker, Luhtanen, Blaine, and Broadnax (1994) might give us some insights. It was found

that the total collective self-esteem scores of Blacks, Whites, and Asians were not distinct. While in the two sub-dimensions of the collective self-esteem scale, the public CSE and private CSE had different relationships in each race. There was no correlation in the Blacks, a moderate correlation in the Whites, and a high correlation in the Asians. This conclusion was similar to the theory of self-construal, which suggested that individuals in the eastern culture had interdependent self-construal, and individuals under the western culture had independent self-construal (Markus & Kitayama, 1994). With this line, Asian personal self-esteem may contain some concepts of group. Therefore, when a threat is aimed at the group, the personal self-esteem of eastern peoples would obviously suffer and be reduced.

There are some limitations in the present study. 1) It only used negative comments about the uncivilized behavior of Chinese as a threat scenario. Future studies should explore the effects under more forms of threats, such as territorial crisis, national symbols, and other serious humiliation under the national threat. 2) It should be more concerned about the social psychological mechanisms, such as self-promotion and change stereotypes. 3) We should focus on when and how Chinese maintain a positive self-concept under the group-threat circumstances.

Finally, there are still some issues that are not convincing in the present study. The negative judgment in our priming material contained not only the foreigners' views, but also the Chinese people's views. We cannot differentiate their effect while using a public CSE scale to measure with. The public CSE subscale only measured the out-group evaluation. We cannot go further in analyzing the different influences between the in-group evaluation and the out-group evaluation. We suggest that in-group evaluation will influence one's collective self-esteem in a special way compared to the out-group evaluation. "My face theory," suggested by Hwang (2000), took a Chinese cultural perspective to understand this issue. The My Face theory proposes that Chinese pay more attention to one's face in the social context. When they make some embarrassing behaviors, they would consider that others would despise them – which is a kind of "lost face." With this theoretical line, we can hypothesize that when foreigners (out-group members) have a negative evaluation about uncivilized Chinese behavior, Chinese collective self-esteem would be damaged because Chinese would feel face-loss in the face of foreigners. However, when Chinese (in-group members) have a negative evaluation about uncivilized Chinese behavior, Chinese collective self-esteem may be not threatened. In the typical Chinese perspective, the negative evaluation from in-group member is not a threat. It would not arouse the feeling of "lose face." It is obvious that this hypothesis needs further studies to verify.

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What Factors Affect the Effectiveness of Employee Assistance Programs in a Small Start-up Company? A Case Study of EAP from Shandong Province, China

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[Abstract] In China, EAPs have grown dramatically since the 1990s, but there is a lack of conclusive evidence across big and small companies about EAP effectiveness. Using a qualitative approach, this case study investigated the effectiveness of an EAP and some related critical influential factors in a small company with four employees in Linyi City. Four critical factors were associated with the participants' experience with the EAP, which can impact the effectiveness and limitations of the EAP. We conclude with suggestions for improving the effectiveness of EAP for small companies in modern China.

[Keywords] employee assistance program; small company; effectiveness; qualitative research; semi-structured interviews

Introduction

EAP (Employee Assistance Program) is defined as “job-based programs operating within a work organization for the purpose of identifying troubled employees, motivating them to resolve their troubles, and providing access to counseling or treatment for those employees who need these services” (Sonnenstuhl & Trice, 1990). Generally, an EAP has two main goals: to prevent or detect problems that affect work performance and to maintain or restore healthy human resources. Today, research shows the number, focus, scope, and importance of EAP in both private and public organizations in the USA and other western countries have increased substantially since the 1970s (Oss & Clary, 1998; Maiden, 2001). In China, EAP has grown dramatically since the 1990s. Research suggests that more and more Chinese employers are willing to invest in providing EAP as a way to promote employees' well-being (Collins, 2000; Zhang, 2006).

China continues to lag behind the USA in the design and delivery of EAP. Unlike in the USA or Europe, EAP in China rarely includes alcoholism, illegal drug use, and substance-abuse intervention (Zhang, 2015). Generally, EAP in China aims to improve employees' mental health, such as depression, anxiety, compulsive gambling, and marital problems, etc. EAP in China encourages employees to seek confidential assistance with stressful personal situations before a mental problem develops or, even ultimately, job loss occurs. So, Zhang (2015) considers Chinese EAP is unique for two reasons: less focus on alcoholism and the strong involvement of Group Counseling and Enterprise collective mental training. China has some super companies that employ large staffs and have a good tradition called the “big mobilization meeting.” Accordingly, to be more efficient, EAP in China now uses group counseling and collective training lectures in combination with health programs in an integrated wellness program that seeks to provide a full range of lifestyle guidance and support. Wellness strategies learned from group counseling and training help employers identify physical and mental-health problems early and even prevent many of them from happening.

Some observation in practice has suggested that many outcomes, such as productivity, accidents, absenteeism, inattentiveness, poor morale, tardiness, unwillingness to accept new assignments and responsibilities, may be affected by EAP, even if it is over-optimistically claimed that EAP can resolve all problems ultimately affecting organizational performance, productivity, profits, and/or service (Smith, 1999). Most employers and employees who have experienced EAPs view them quite positively, and EAPs can lead to a double winning position: increasing organizational effectiveness and enhancing employees' well-being. Nonetheless, it is obvious that EAP is not a panacea for the solution of all employee job-related problems. While the program or service provides assistance for personal problems, it may not eliminate all tardiness, absenteeism, accidents, and morale problems for some employees or solve all organizational problems. Along with a growing need for EAP, there is an large accumulation of research evidence about EAP effectiveness. A wide range of indicators have been used to measure EAP success, including cost savings, percentage of employees accessing EAP, percentage of employees returning to work after treatment, improvement in work performance, attitudes and knowledge about mental health, and so on. Earlier research found that EAP in the United States claimed a 50% to 85% success rate (Luthans & Waldersee, 1989). However, some controversy always exists. It is fact that we cannot make definitive conclusions about the outcomes of EAP because the evaluation standards of EAP quality are very different across the range of evidences, and the evaluation methods are mainly based on testimonial or anecdotal methods.

Methodological issues lead us to difficulty in determining whether EAP research findings reported are due to the EAP or other potential factors (Sharar & Lennox, 2009). For example, most research has focused on employers' perspectives, and less research has explored the effectiveness from employees' perspectives (Attridge, 2000). The experiences of employees are important in determining the effectiveness and outcomes of EAP because employees are the main force and direct beneficiaries of such programs. However, there is very little research on employees' experiences with EAP in China. Moreover, little research has focused on small-sized companies and organizations. Small start-ups have to face to more and more survival stress. So, EAP may be urgent for them. At last, considering ethical issues, empirical studies in EAP are not suitable for hard-science, e.g. rigorous experimental design, including randomly assigned experimental groups and control groups. So, qualitative methods used to assess the effectiveness of EAP are more popular than experiment.

This study is significant in that it contributes to the understanding of the effectiveness of EAP from the research participants' perspectives and involves each research participant's perception of the extent to which accessing the EAP services has helped or failed to address the problems for which help was sought. Based on the results, we will offer some suggestions to improve the effectiveness of the EAP of small start-up companies .

Method

Context of Study

A business start-up is a hard thing all over the world. Some reports have showed that the mental health of entrepreneurs is a serious problem in America and China (Bradbury, 2013; Li, Sheng, & Xia, 2015). So, the EAP for small start-up companies is urgent. Our study focused on the employees' personal experiences and perceptions about EAP using a phenomenological approach. We interviewed four employee in a small start-up company engaged in baby toy design, manufacture, and sales in Linyi City, Shandong Province, China. Given this context, we asked employees, who utilize EAP, their opinions

about the factors they associate with the effectiveness and limitations of EAP. The ultimate goal of this case study is not to “prove” whether or not EAPs work, but rather to understand the experiences of EAP. That is, we are interested in the employees, and our purpose is to investigate what four clients of an EAP think about the effectiveness or limitations of the program and how the program can improve the employees’ mental health. We tried to understand how “people use their experience to make decisions in complex, dynamic, real time environments” (Meso, Troutt & Rudnicka, 2002, p. 63).

Participants

Four employee (2 male, 2 female) volunteers were recruited; they were willing to frankly talk about their experiences with EAP after using this service for half a year. All participants were born in Linyi City, Shandong Province and worked for above 5 years in this company. Only Kexin Zhang is a senior sales manager, Bo He, Yong Wang, and Xiaohong Jiang are ordinary staff working in sales, customer service, and administration, respectively. Kexin Zhang is a 42-year-old single mother with one teenage daughter. Bo He is 32-year-old single man, who is being forced to find a partner under the pressure of his parents and relatives. Yong Wang is a 38-year-old man with a 5-year-old son, who has been working in this company for eight years. Xiaohong Jiang is a 44-year-old married woman with a bad son.

Procedure of Data Collection

Semi-structured interviews with open-ended questions were used in data collection of this qualitative study, while smart-phone audio was recorded. After I introduced the purpose of my study and participants filled out a consent form, I asked some open-ended questions, such as “What benefits did you get from using the EAP?” and “What are the limitations of this program?” All the interviews were finished at a comfortable, professional location close to the workplace.

Data Analysis and Interpretation

At first, we transcribed the recorded audio. Second, a series of coding procedures were finished using NVivo 10 (Boje, 2002). Third, we searched for categories among the participants’ responses to isolate commonalities relative to program benefits, limitations, and recommendations for program improvement. We analyzed each data category. Finally, we integrated, analyzed, and interpreted the results of this study into themes (based on the categories) according to the literature that was reviewed, the research purpose, and my own experiences with, and judgment, about EAPs.

Results and Discussion

Each participant’s data from the interview transcripts is listed as follows.

Kexin Zhang

She is one of few women in a senior manager position and is perceived as a successful, confident, and independent woman. She thought the company’s top management strongly supported the program, which was essential to program effectiveness. She noted that one factor that limited the effectiveness of the EAP was the lack of follow-up and regular evaluation of the services provided. She thought top management support and supervisor education and training were critical factors in making EAP “more mainstream so people aren’t afraid of them.” At last, she concluded that confidentiality surrounding the use of the EAP was also a key factor associated with the effectiveness of the program.

Bo He

He sought counseling to cope with the pressure of marriage and to learn how to support his parents, who were also suffering from the pressure of their relatives. He viewed ineffective communication as a critical factor that limited the effectiveness of the program. Above all, his knowledge about EAP was limited because he had difficulty remembering some general information about the program. Although Bo He indicated he did not significantly benefit from the counseling experience, he viewed the program as valuable and commented that his employer displayed leadership by offering such a program.

Yong Wang

During this study, he had on-going disputes with his wife on a variety of topics, including how to raise their son and his spending habits and inability to manage money. Their partner relationship was broken. He said he had emotional trouble. His understanding of program effectiveness was related primarily to process issues, such as program evaluation, lack of qualified professionals to run the program, and flexibility in determining the number of available counseling sessions. He thought the counselor responsible for managing the program should display professional leadership. Especially, he mentioned that group counseling is interesting and more effective than private one-on-one counseling. I asked him if he thought the number of group counseling sessions was enough. He answered that the number of sessions he attended, which were paid for by the company, were not adequate to effectively deal with his emotional problems.

Xiaohong Jiang

She was not satisfied in her current position, as she felt unchallenged, and her professional skills in customer services were not adequately utilized. She told me it was stressful to have a promotion and a good relationship with her drug-abusing son. She stated that the provision of EAP information by management at staff meetings was a reflection of management and union support for the program. Research (Clemmet, 1998) suggests management and work union support is critical to the success of EAPs. She considered such support a critical factor in the effectiveness of the program. I asked her what situation she would be in without counseling. At once, she indicated she would have had a nervous breakdown and definitely would have been unable to function well at work. Her counselor provided a safe environment, allowing her to feel comfortable, and provided some coping strategies and mechanisms. At last, she also advised that it would be better to allow her choose different counselors.

Conclusion

Through the examination of the experiences of four employees with EAP, this qualitative study explored the factors the participants associated with the effectiveness and limitations of the EAP. Now, some suggestions are presented for making EAP more effective in small start-up companies. A successful EAP in a small company is determined by four critical factors as follows:

1. Support for EAP by management department and the boss
2. Clear and well-defined statement of confidentiality
3. Group counseling and group training
4. Skilled counselors

Chinese researchers think group counseling and group training are special factors affecting EAP effectiveness in China (Zhang, 2015). Other factors are consistent with previous studies in Canada (Nofield, 2006). At last, we would like to summarize some limitations of our qualitative study. First,

generalizability of case studies like this are generally limited. Our study only focused on specific participants and contexts. Second, we did not collect quantitative survey data. Future study can use a mixed research design. A longitudinal study over a long period may provide more information about the factors that participants associate with the effectiveness and limitations of EAP.

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The Mate Selection Criteria in College Students: From the Perspective of Adult Attachment to Parents

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[Abstract] The research tested the mate selection criteria in college students. The results showed that, majority of college students put “personality” as the first preference criteria rather than other 12 features of the ideal partner. For male students, the dimension of avoidance to mother is correlated with “social resources” positively, and the dimension of anxiety to father was significantly positive with “appearance.” Regression analysis showed that both avoidance to mother and avoidance to father are negative with “appearance” for females. Further, the male student’s anxiety to father can predict the “appearance” positively, while avoidance to the mother of the female student can predict the dimension of “appearance.”

[Keywords] adult attachment; mate selection criteria; college students

Introduction

Mate selection, including mate preference, reflects what people value the most when choosing a partner. Based on Darwin’s theory of sex selection, Buss further studied humans’ mate selection and proposed a sex selection strategy under the framework of evolutionary theory (Buss, 1986, 1989, 1993, 2001). Evolutionary psychology supposed that males and females developed different mating mechanisms in order to pass on their genes. Females tend to choose men who are able to provide enough resources, as well as care for offspring, while males tends to prefer women who are able to bear more children, which translates into youngness and physical attractiveness (Buss, 1989; Buss, 1993). The attachment theory is an effective framework with which to understand interpersonal relationship, especially in intimate relations. The core idea of this theory suggests that attachment relations are formed in infants and will last for a lifetime and further expand to our connection with others (BowlbyJ, 1973; 1980). It has been proved that, based on the viewpoint of the attachment theory, attachment behavior can be transferred to lovers or partners (Fraley & Davis, 1997; Hazan & Zeifman, 1994). Thus, mating reflects how adults build attachment relationships, which means establishing connection with significant others, and significant others are supposed to be warm, responsible, and enthusiastic (Hazan & Diamond, 2000). Most research on mate selection were explained by evolutionary psychology. However, researchers have been less concerned about the attachment relation and the family factors. This research was based on previous studies, and combined with attachment theory hypothesis, tried to explore how parental attachment impacts mating criteria; it further discuss the discrepancy of the mate-selection process between genders.

Method

Participants

A total of one hundred and sixty-seven undergraduate students in East China University participated in this research (44 men and 123 women; 129 students of art and 38 students of science), ranging in age from 19 to 24 ($M=21.03$, $SD=1.09$).

Research Tools

Relationship Questionnaire (RQ). Bartholomew and Horowitz developed a questionnaire to examine four types of adult attachment in intimate relationship (Bartholomew & Horowitz, 1991). The questionnaire includes four short passages in which four attachment styles are described. Participants are required to rate each passage on a 7-point scale to decide which type the participant fits into. We replaced “intimate partner” with “father” or “mother,” since we are mainly looking at parent-child relationships.

Experiences in Close Relationship (ECR). This questionnaire includes 36 questions made by Brennan and that are widely accepted as the standard measurement for adult attachment (Brennan, Clark, Shaver, 1998). Li Tonggui and Kato Kazuo revised the Chinese version of ECR, and the reliability and validity have been proved to be good (2004). We are mainly looking at the child-parent relationship, so we replace “lover” with “father” or “mother.” Exploratory factor analysis has been used to prove the justified questionnaire to be valid.

Mate Selection Scale. All the items used are from the Mate Selection Scale by Buss (1986).

1. The first part is an ordered list of 13 mating criteria traits. For example, “easy-going”, “healthy”, and “good housekeeper”, and participants are asked to rate them by the degree of importance, with “1” being very important to “13” being least important.
2. The second part contains 12 items, including four factors: social resource, communication ability, personality, and physical appearance. Participants were asked to rate from “0” (irrelevant or unimportant) to “3” (indispensable) by importance. The alpha coefficient for the questionnaire was 0.75.

Statistics

Data was analyzed by SPSS13.0. Description statistic, one-way ANOVA, exploratory factor analysis, non-parametric test, correlation analysis, and regression analysis were performed in this research.

Results

College Students' Attachment Relation with Parents

College students' attachment to their mother consisted of security attachment (68.9%), avoidant attachment (22.8%), devoted attachment (2%), and fearful attachment (5.3%). The results of the Chi Square reveals significant difference among four styles ($\chi^2=186.89$, $p<.01$).

College students' attachment to their father consisted of security attachment (57.5%), avoidant attachment (31.7%), devoted attachment (1.2%), and fearful attachment (9.6%). The result of the Chi Square reveals significant differences among them ($\chi^2=127.25$, $p<.01$).

Mate Selection of College Students

Sequence of mating criteria.

- Thirteen criteria of mate selection. The non-parametric test shows college students list “friendly,” “easy-going,” and “healthy” as the top three important criteria. “Like children,” “good family background,” and “have faith” are listed as the last three. This result indicates that college students are primarily concerned about personality and health, while “family background” and “faith” are the last ones.
- Comparison between gender on thirteen criteria. Both male and female students ranked “kind,” “friendly,” “easy-going,” and “healthy” as the top three important characteristics. However, male students focus more on partners being a “good housekeeper”, $t(167) = -3.439, p < .001$; “attractive”, $t(167) = -6.335, p < 0.001$; and “like children”, $t(167) = -2.547, p < 0.05$. Female students emphasize partners as being “well-educated”, $t(167) = 2.474, p < 0.05$, and having “good earning capacity”, $t(167) = 6.990, p < 0.001$.

Relation of College Students’ Attachment on Parents and Mate Selection

Correlation. Correlation analysis was used among father/mother attachment dimensions and four mate selection factors. The result shows male avoidant attachment style toward the mother and positively correlates with “social resource,” $r(167) = 0.36, p < 0.05$; anxious attachment toward the father is correlated positively with “appearance,” $r(167) = 0.43, p < 0.05$. Female avoidant attachment toward the mother and father negatively correlate with “appearance,” respectively, $r(167) = -0.37, p < 0.05$; $r(167) = -0.34, p < 0.05$.

Table 1. Correlation between Attachment to Parents and Mate Selection Factors

		Mother Avoidance	Mother Anxious	Father Avoidance	Father Anxious
Male	Social Resource	0.36*	0.14	0.21	0.03
	Communication Ability	-0.08	0.05	-0.14	0.15
	Personality	0.15	0.30	0.20	0.23
	Appearance	0.13	0.17	0.23	0.43*
Female	Social Resource	0.10	0.02	0.06	0.09
	Communication Ability	-0.11	0.03	-0.02	-0.01
	Personality	-0.03	-0.12	0.03	-0.03
	Appearance	-0.37**	-0.13	-0.34**	-0.07
General	Social Resource	0.13	0.08	0.16	0.12
	Communication Ability	-0.10	0.05	-0.03	0.04
	Personality	0.02	-0.01	0.09	0.03
	Appearance	-0.18	-0.06	-0.10	0.03

Note: * $P < .05$; ** $P < .001$

Regression. To test whether college students’ attachment toward their parents had any predictive value on the four mate selection factors, a number of hierarchical linear regressions with stepwise were performed. In the first step, demographic data was included as a set of predictors; in the second step, dimensions of college students’ attachment toward both parents were entered. Results show that gender can positively predict “social resource” ($\beta = 0.55, p < 0.01$); gender and anxiousness toward the mother can negatively predict “appearance” ($\beta = -0.25, p < .01$; $\beta = -0.23, p < 0.01$).

To test whether the gender is a moderator in the relationship of attachment to the parents and mate selection, we tested the male and female data with hierarchical linear regression. Attachment toward parents entered as an independent variable and mate selection factors as dependent variables in different genders.

The results showed that, for males, grade can negatively predict “communication ability” ($\beta=-0.44, p<0.01$), and anxiousness toward father positively predicts “appearance” ($\beta=0.43, p<0.05$); for female students, age positively predicts “social resources” ($\beta=0.23, p<0.05$) and avoidance toward the mother negatively predicts “appearance” ($\beta=-0.39, p<0.01$). These results indicate attachment toward parents modulates mate selection.

Table 2. Regression of Attachment to Parents and Mate Selection Factors in Different Genders

Male		β	Female		β
<i>IV</i>	<i>DV</i>		<i>IV</i>	<i>DV</i>	
Grade	Communication Ability	-.44**	Age	Social Resource	.23*
Anxious to father	Appearance	.43*	Anxious	Appearance	-.39**

Note: * $P < .05$; ** $: P < .001$

Discussion

Adult Attachment Style to Parents in Chinese College Students

In this research, college students’ attachments to mother distribute as security attachment (68.8%), avoidance attachment (22.2%), devoted attachment (3.0%), and fearful attachment (5.3%). For attachment to the father, the contribution is security attachment (57.5%), avoidance attachment (31.7%), devoted attachment (1.2%), and fearful attachment (9.6%). This indicates the majority students demonstrate security attachment to their parents, which is consistent with most of the research in China and the West (Brennan, Clark, & Shaver, 1998; Li, & Kato, 2006).

Gender Difference on Mate Selection

Mate selection strategies, which are based on evolutionary psychology theory, focus on gender differences when choosing a partner. Men and women place different weights on certain qualities. Males pay more attention to “appearance,” while females value “resource” factors. However, this conclusion hasn’t been proved by twin studies (Lykken & Tellegen, 1993); also, it is not consistent with what happened in real life (Hazen & Diamond, 2000). Hazen and Diamond (2000) reckon that, according to four traits of mate selection theory, it can be deduced that attachment in adulthood is pointed to partners, and individual ability-building attachment can be reflected in romantic relationships. Based on attachment theory, there should be no gender differences on mate selection. What makes people a “good attachment individual”—kind, warm, responsible and competitive-- does not differ due to gender. This research found students rate “personality” ahead of all. In 13 ordered items, both males and females list “kind and understanding,” “easygoing,” and “healthy” as the top three. This conclusion shows people tend to choose individuals with outstanding traits, and “good attachment” remains the same for males and females. Thus, this indicates students focus more on personal traits, which corresponds to previous studies (Wang Yan, 2009).

However, gender difference remains obvious, despite personality factors at work. We see males would like girls with “good housekeeper” and “physically attractive” features, but girls would prefer qualified boys who are “well-educated” and have “good earning capacity.” This is consistent with current research, which shows, nowadays, that college students are more influenced by economics in society.

Influence of Parental Attachment on Mate Selection

In this research, mate selection differences on gender is influenced by attachment relationship (especially with parents). Male avoidant attachment positively predicts “social status.” It can be explained that, in

Chinese society, mothers are mainly in charge of children's education. Students who score high in mother avoidance are more likely to use avoidant strategy when interacting with their mothers, which may result in reduced pocket money, thus leading them to focus on partners' materials – social resources. Further analysis suggests for male students that the higher their grades, the less they will focus on "communication ability". It is probably that lower-grade students tend to be "romantic" in relationships. Male anxiousness toward fathers can positively predict "appearance," which might indicate they want girls to be qualified in physical appearance to gain their father's approval. For girls, age can predict "social resource," suggesting that, nowadays, college girls become more realistic as age grows. Further, avoidance of the mother negatively predicts "appearance." This might mean that the avoidance toward the mother by female students has is more negative than other models. However, because of the inner need for a "secure" partner, they might not necessarily concentrate on "appearance."

For all, this research supported both attachment theory and sex selection theory. It is probably because there are some overlaps during the process of choosing a partner. Attachment theory might focus more on individuals, especially the similarity for both genders. Otherwise, sex selection theory might concentrate on different parts between genders. It is likely that the two theories apply to the mate selection process at the same time, but further studies need to be conducted to see the specific processes among them.

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Perceived Trait Empathy on Altruistic Punishment: The Moderating Effect of Culture

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[Abstract] *Altruistic punishment plays an important role in the maintenance of social justice. In this research, 215 students did surveys about the application of trait empathy scale and social value orientation scale, obtaining the scores on altruistic punishment with the situational simulation exercise. We explored the relationship among altruistic punishment, trait empathy, and social value orientations. According to the results, trait empathy predicted altruistic punishment behaviors significantly when social value orientations functions played a moderating role. Individuals with high social value orientations are more likely to adopt stricter altruistic punishment behaviors in an unfair situation.*

[Keywords] *trait empathy; Altruistic Punishment; social value orientation; moderating effect*

Introduction

Altruistic punishment refers to the occasion when a certain team member, for the purpose of safeguarding the cooperation, fairness, and long-term benefits of the team, punishes the uncooperative behavior of his team by undertaking the cost by himself, even though the anticipated compensation can't be met (Fehr, & Gächter, 2002). In the process of perceiving the social fairness in an unfair environment, people will experience different emotions and make different judgments according to different explanatory styles and personality traits.

As shown by previous research, trait empathy is an significant variable that influences altruistic behaviors. As an ability to perceive others' opinions and understand others' feelings, it can facilitate the generation of pro-social behaviors and is a key factor to altruistic behaviors. It is also an important aspect of empathy, a relatively stable personality disposition that enables individuals to react to different situations in a generally consistent manner (Vreeke & Vandermark, 2003). Meanwhile, trait empathy is effectual in predicting helping behaviors. Individuals with high trait empathy tend to be more tolerant and less possible to run into aggression (Schimel, Wohl, & Williams, 2006). Implicit helping intention is closely related with trait empathy. According to Cheng and Yang, et al. (2009), individuals with high trait empathy have obvious implicit helping intentions, while it's not the case for those with low trait empathy. However, in some researchers' opinions, trait empathy is not a decisive factor in urging individuals to help but merely information telling them that someone is in need of help (Kenrick, Griskevicius, & Sundie, Li, & Neuberg, 2009).

According to Singer (2006), empathy, as an ability to understand emotions and mental states of others and to predict behaviors of others, is a significant mediator between self and pro-social behaviors (Davis, Kraus, & Ickes, 1997). In the third-party punishment experiment in which the third party's interests won't be influenced by the allocation plan of the two parties involved in the trust game, the third party, after observing the behaviors of the distributor and the recipient of the allocation plan, will have empathy towards

the victim unjustifiably treated and condemn or punish the allocator (Buckholtz, et al., 2008; Charness, et al., 2008). Closely related with the cerebral limbic system, empathy experience is, therefore, part of human nature showing a tendency of altruism. Since trait empathy is a significant factor generating empathy, the necessity of doing such research into the relationship between trait empathy and altruistic punishment, thus, prevails. Hereby, we assume that altruistic punishment behaviors can be effectually predicted by trait empathy.

The research of Li (2005, 2006) showed that cooperative decision-making in individualism cultures was bound to show certain differences from that in collectivist cultures. It's possible that the cooperative effects, the result of the interpersonal trusting level, which was also influenced by punishment, would vary with social value orientations of the subjects.

Some researchers of altruistic punishment argued that social value orientation was a significant factor that prompted people to adopt altruistic punishment. A test also showed that individuals of high social value orientation tended to be much more agitated than those of low, and after the implementation of altruistic punishment, the agitation would be softened. Hence, the essay assumes that social value orientation is the moderating variable within the process when trait empathy influences the altruistic punishment.

In this research, the independent variable is trait empathy, the moderating variable is the social value orientations, and the dependent variable is altruistic punishment (see Figure 1).

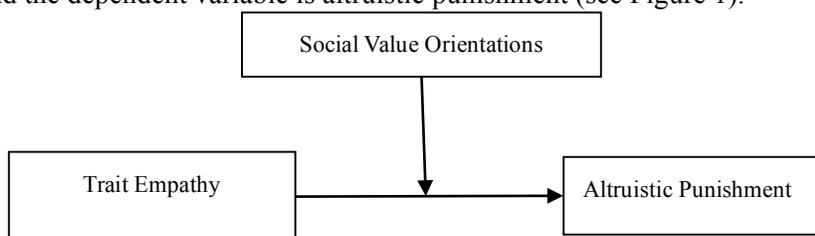


Figure 1. The Moderating Effect of Social Value Orientation

Research Method

Subjects

The surveyed subjects were students in psychological health education courses from two universities. They participated in the survey by gaining class credits. Two hundred and fifteen questionnaires were distributed and collected, from which 205 were valid after removing those with regular answers and with many questions not answered, achieving a valid rate of 95.3%. Of the subjects, the youngest was 17 years old, the oldest was 32 years old, and the average age was 21 years old. The time, on average, they spent on internet is 67.7 hours.

Tools for Research

Trait empathy scale. A scale was first created by Mehrabian and Epstein (1972) and then revised by Han (2005). The test-retest reliability is 0.60, and the consistency reliability between each question and the whole scale is over 0.70.

The subjects' social value orientation. A triple-coincidence matrix is used, and the results will be divided into two groups: one is pro-social orientations and the other is individual orientations. Wang, and

Yan, et al., have applied this method several times to measure individuals' value orientations (Wang & Yan, 2000; Wang, & Yan, 2002; Wang, & Yan, 2003; Wang, & Chen, 2012).

Social value orientations. A triple-coincidence matrix is used to evaluate the types of the subjects' social value orientations, and the results will be divided into two groups: one is prosocial orientations, and the other is individual orientations. Wang and Yan have applied this method several times to measure individuals' value orientations (Wang, & Yan, 2000; Wang, & Yan, 2002; Wang, & Yan, 2003; Wang, & Chen, 2012).

To measure the result of altruistic punishment, a classical approach was used to study the altruistic punishment, which is called the third-party punishment, with the situation questionnaires designed as the tool. The questionnaire was adapted from the experimental questionnaires by Wang and Chen (2012).

Statistical Method

Descriptive statistics, hierarchical regression, and method analysis were used to analyze statistics. SPSS17.0 was applied to the analysis.

Results

Descriptive Statistics and Related Results

In light of trait empathy scale, the scores of the 205 subjects were achieved ($M=155.87$, $SD=13.7$, Range: 117 to 203). According to the standards of Dreu and McCusker (1997), subjects who made consistent decisions in at least seven decisions out of twelve should be deemed as individuals with relatively stable value orientation. In line with the research purpose of this experiment, the subjects of the personal type and competitive type should be sorted into the category of individual value orientation. In accordance with subjects' answers, we obtained the scores of their social value orientation ($M=7.37$, $SD=2.4$, Range: 0 to 10). According to their choices, we obtained the scores of altruistic punishment ($M=2.36$, $SD=1.68$, Range: 0 to 5).

With the application of SPSS17.0 to the three core variables, the results after the descriptive statistics and relative statistics are as follows in Table 1:

Table 1. Descriptive Statistics and Related Results (N=205)

Variable	Average Number	Standard Deviation	1	2
1. Trait Empathy	155.8049	13.70491	1.00	
2. Social Value Orientation	7.3659	2.40053	-.003	1.00
3. Altruistic Punishment	2.36	1.676	.170*	.319**

***. Correlation is significant at the 0.01 level (2-tailed).*

From the table above, we can see that there is an apparent relation between trait empathy and altruistic punishment ($r=0.170$, $p<0.05$), showing that the higher trait empathy one has, the more likely he or she is to adopt the altruistic punishment behaviors. Some research demonstrates that people with high trait empathy tend to have high empathy and emotion, which would lead them to take measures to ease their emotional reactions. Specifically, in this situation, the taken measure is altruistic punishment. Moreover, the remarkable relation between social value orientations and altruistic punishment show that people with high social value orientations ($r=0.319$, $p<0.05$) prefer to promote the fairness of the society through altruistic punishment.

The Influence Trait Empathy Has upon Altruistic Punishment

With the variable of demographics being controlled, the influence trait empathy has upon altruistic punishment was studied by hierarchical regression. According to the research results, the variable of demographics is responsible for the 2% of the total variation. After the addition of trait empathy, the independent variable, 4.8% of the total variation can be explained with all the variables. Compared with Model One, the explainable data underwent a distinctive change, $\Delta R^2=0.029$, $\Delta F=5.90$, $p=0.016$. Besides, trait empathy's, the regression coefficient to altruistic punishment is also remarkable, $\beta=0.175$, $t=2.428$, $p<0.05$, proving that trait empathy is effectual in predicting altruistic punishment behaviors.

The Moderating Effect of Social Value Orientation in the Influence Trait Empathy Has upon Altruistic Punishment

In previous documents, people were divided into two categories in accordance with the scores in social value orientation, which were high social value orientations ($j \geq 7$) and low social value orientations ($j < 7$) (Wang, & Chen, 2012). Moreover, the top 27% and the last 27% of trait empathy were sorted into high trait empathy and low trait empathy (Han Liying, 2005). In light with the previous research, the researcher also regrouped the data in accordance with high trait empathy ($t \geq 163$) and low trait empathy ($t \leq 148$) by diminishing subjects choosing not to punish. Consequently, 113 subjects were screened out, as shown in Table 2.

Table 2. The Number of Subjects Screened Out

Variable	Low	High	Totality
Trait Empathy	57	56	113
Social Value Orientation	32	81	113

Taking altruistic punishment as the dependent variable, trait empathy and social value orientation as independent variables, we conducted factor analysis on these data. As shown by the results, the interactions of both is part-significant, $F=2.981$, $p=0.087$. The main effect of trait empathy is remarkable: $F=47.614$, $p<.001$. The main effect of social value orientation is remarkable: $F=164.838$, $p<.001$. In furthering the analysis on simple effect, we found that under the condition of high trait empathy, the altruistic punishment tendency ($M=4.381$, $SD=0.120$) of people with high social value orientation is remarkably higher than that ($M=2.571$, $SD=0.207$) of people with low social value orientation ($F=117.86$, $p<.001$). Meanwhile, under the condition of low trait empathy, the altruistic punishment intention ($M=3.538$, $SD=0.124$) of people with high social value orientation is remarkably higher than that ($M=1.167$, $SD=0.183$) of people with low social value orientation ($F=86.6$, $p<.001$). Thus, we can conclude that trait empathy is remarkably effectual in predicting altruistic punishment while social value orientation plays the role of regulation. People with higher social value orientation are more likely to adopt more severe altruistic punishment behaviors in an unfair environment so as to promote the justice and fairness of the whole society. This finding is similar to the research finding of previous researchers (Yan, & Wang, 2002; Feinberg, & Willer, et al., 2012; Wang & Chen, 2012) and is in coherence with the assumption of the research.

Discussion

Empathy, as an ability to perceive others' opinions and understand others' feelings, can facilitate the generation of prosocial behaviors (Eisenberg, Fehes, & Spinrad, 2006) and is a key factor to altruistic behaviors (Batson, 1987). Being a subclass of empathy, trait empathy is a stable personality disposition enabling individuals to have generally consistent responses to different situations (Vreeke, & Vander Mark,

2003). It has a remarkable effect in predicting helping behaviors of individuals (Vitaglione, & Barnett, 2003). Individuals with high trait empathy tend to be more tolerant, less prone to arise aggression (Smallbone, Wheaton, & Hourigan, 2003) and are inclined to prosocial behaviors (Schimel, Wohl, & Williams, 2006). Implicit helping intention, the “real” altruistic behaviors, namely, is closely related to the trait empathy ability. Individuals with high trait empathy have the implicit helping intention, while it’s not the case for those with low (Cheng, & Yang, 2009).

Some researchers have illustrated that individuals with high trait empathy will have high empathy, namely high empathy and emotional reactions, stimulating a series of measures to ease intense emotions. This research argues that people with high trait empathy will have stirred emotion reactions and adopt strict measures of altruistic punishment for the purpose of promoting fairness. Consequently, probing into the features of altruistic punishment from the perspective of personal traits is of great significance to the safeguarding of justice.

What Tenbrunsel and Messick are concerned about is the influence punishment has upon the motivations of the parties in games (1999). What this research has focused on is the specific kind of social value orientations that cause individuals to punish others. Punishment, here, is positive, as it’s effectual in promoting social fairness. The effect of punishment varies in light of the different social value orientations of subjects. One potential reason for this is that the information punishment delivers to subjects of prosocial behaviors is different from the anticipated. To be more specific, though starting with a pretty high original interpersonal trust, subjects will deduct the trust or even establish distrust by taking the punishment as the clue. Fehr’s research (2002) remarked that the public always thinks that human beings are selfish and are ignorant of the fact that altruism is one important reason for cooperation. Here, in this research, we draw the conclusion that trait empathy is remarkably effectual in predicting altruistic punishment while social value orientation functions is a moderator. People with higher social value orientation are more likely to adopt more severe altruistic punishment behaviors in the unfair environment so as to promote the justice and fairness of the whole society. This finding is similar to the research finding of previous researchers (Yan, & Wang, 2002; Feinberg, & Willer, et al., 2012; Wang, & Chen, 2012) and is in coherence with the assumption of the research.

Here within the essay, the research was conducted from the perspective of personal traits of altruistic punishment givers for the purpose of the formation of altruistic punishment, which is of significance in safeguarding social fairness. The focal point will be furthered in the generation system of altruistic punishment from the aspect of the social environment.

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Experimental Study on the Emotional Conflict of College Students in Different Voices

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[Abstract] Emotional conflict is defined as the ongoing interference on current cognitive tasks imposed by irrelevant emotional stimuli. In conditions of different musical styles and different volume auditory environments, this research studies the behavior of college students on the emotional conflict task. The conclusions are as follows: (1) It takes more time for participants in emotional words and faces experiments of inconsistent reaction than the consistent reaction. (2) College students' response time in the context of rock music is longer than in the context of lyrical music, but the difference does not reach a significant level. (3) The volume takes effect in the reaction of college students' judgments to emotional faces. Moreover, the reaction time of the high volume is longer than the low volume and reaches a significant difference. On the basis of this study, we find that the change of auditory environments does not make any effect or interfere with college students' emotional conflict task completion. That is to say, they appear to have a consistent emotional effect no matter what the listening environment is.

[Keywords] emotional conflict; interference; word-face stroop; auditory environment

Introduction

Emotion is a hot issue in psychology research and researchers are making a great effort to study types of emotion, influence factors, neural mechanisms, and emotion control. They have also gained a large amount of valuable results. Cognitive conflict is when a current task is related to conflict; it occurs as different processes or characterization appear at the same time and interfere mutually, as well. Emotion conflict is similar to cognitive conflict: it is defined as a current cognitive mission interfered with by irrelevant emotion stimulation (Hu, 2008).

There are four research methods of emotion conflict: (1) Emotional Stroop Paradigm: This requires subjects to ignore emotional information and response to non-emotional information. It is used in dysthymic disorder subjects mostly. (2) Word-face Stroop Paradigm: This requires subjects to judge the emotional valence of emotional words or faces as they are shown at the same time. This method can analyze how emotional information is interfered with by a current task and can be used in normal subjects. (3) Effective Priming Paradigm: This requires subjects to judge the emotional valence of target stimulus while they see a priming stimulus and a target stimulus. It can inspect the relationship between SOA and emotion conflict. (4) Emotional Flanker Paradigm: Target stimuli are shown in the middle of the screen; affected stimuli are presented on both sides; subjects should ignore the affected stimulus and judge the emotional valence of the target stimuli. This method can inspect the emotional conflict in special relations (Dong, 2008).

In summary, most emotional conflict research in China and abroad is focused on studying with or without emotional conflict effects, the condition, dynamic change, and the corresponding neural mechanisms of conflict (Xiang, 2011), etc. However, there is little research on the external environmental

impact of emotional conflict, so this paper uses the word-face stroop paradigm in experimental research and creates auditory environments of different music styles and volumes to discuss their impact on emotional conflicts.

Current Research

Participants

In this study, the random sampling method was used to recruit participants: a total of 90 participants (34 males, 56 females), aged from 18 to 23, took part in the experiment. All participants were Chinese university students, healthy in body, have binaural hearing, are sighted, and have never attended such an experiment before.

Experimental Materials and Design

Music materials. In order to make sure that the subjects were not affected by lyrics during the experiment, English songs were selected for the background music: (1) Lyrical music: Tamas Wells – Valder Fields; (2) Rock and roll music: Flo Rida – Right Round (DJ). All background music songs were intercepted into similar wave forms by Gold wave; their durations were about 12 minutes and we made sure the tests were ongoing without any pause. There were two different volumes for the songs: the low volume was set according to the standard that the subject felt he/she was in a quiet environment; the high volume was similar to the songs people hear in a noisy shopping mall. The two volumes were about 30 db different.

Picture materials. In this experiment, 60 emotional face pictures were selected from an emotional picture system of Chinese faces; 30 pictures were positive faces that express happiness, and the rest were negative faces that express fear with low merriness and high arousal. The male to female ratio of faces was 1:1. All pictures were the same standard by PS software. There were happy or fearful words that were written on the nose in red song typefaces. It lead to two results: whether the emotional words were consistent with the emotional faces or not. The latter produced the emotional conflict.

Experimental design. This was a mixed experiment. There were three independent variables: lyric or rock music, high or low volume, and emotional valence that was consistent or not. Music style and volume were between subject variables, and emotional valence was consistently within the subjects' variables.

Procedure

Practice stage. Before the formal test, subjects were required to do 16 trials with feedback so they could become familiar with the computer operation and experiment procedures and get ready for the next stage.

Formal test. Experimental instruction were shown to subjects in the middle of their computer screens; the test would not start until the subjects understood the instructions and know how to operate the system. In the processing, the background color of the computer screens was black. When the test started, different styles and volumes of background music were played on the computer. At the same time, a red fixation point “+” appeared in the middle of the screen for 800ms first, and then subjects saw a random word-face picture. They were asked to judge the emotion of the face as soon as possible and press the keyboard: if it was a positive face, they pressed the “J” button, and if it was a negative face, they pressed the “F” key. There was a blank screen for 800ms after the subjects responded to the picture, and then it went to the next trial. When all of the subjects finished the test, the background music stopped. This program included 120 trials – 60 for emotional valence consistence and the rest for non-consistence.

Data Processing

All data from the experiment were counted and analyzed by software SPSS17.0. The response average error rate of test was 17.36%. The study screened subjects according to their error rates; participants whose errors were are lower than 50% were selected for further statistical study. At last, there were 88 subjects left.

Results

Descriptive Statistics

This research is a three-factor, mixed experiment. Participants' average reaction times of the right response in different auditory environments are presented in Table 1.

Table 1. Descriptive Statistics on Reaction Time (ms)

Background Music	Valency Consistency	Mean	SD
Lyric – small	Consistency	762.436	156.495
	Non-consistency	816.552	189.329
Lyric – big	Consistency	891.266	172.086
	Non-consistency	925.569	202.857
Rock – small	Consistency	781.756	183.032
	Non-consistency	849.670	246.949
Rock – big	Consistency	944.793	244.453
	Non-consistency	957.289	256.987

This shows that, in the case of word-face emotional valency consistency, the participants' reaction times are the minimum. The lyrical background music's RTs are smaller than rock music's. Low-volume music's RTs are smaller than high-volume music's.

Main Effect Difference

Table 2. Difference of Valency consistency, Music Style, and Volume

Sources of Variation	df	MS	F	Sig.
Valency Consistency	1	75449.320	17.569	0.000***
Music Style	1	50179.770	0.567	0.453
Volume	1	684464.608	7.736	0.007**

Note: **is statistically significant at the 0.01 level; ***is statistically significant at the 0.001 level.

The result shows that main effect of word-face emotional valence is significant, $F=17.568$, $df=1$, $p<0.001$; the main effect of music style is not significant, $F=0.567$, $df=1$, $p>0.01$; the main effect of volume is significant, $F=7.736$, $df=1$, $p<0.01$.

Interaction Among Valency Consistency, Music Style, and Volume

Table 3. Significant Test in Interaction

Sources of Variation	df	MS	F	Sig.
Valency Consistency*Music Style	1	169.847	0.040	0.843
Valency Consistency*Volume	1	14981.412	3.488	0.065
Music Style*Volume	1	2849.419	0.032	0.858
Valency Consistency*Music Style*Volume	1	3355.742	0.781	0.379

The result shows that there is no significant difference in interaction, which means interaction does not have any effect on the participants' reactions.

General Discussion

Word-Face Stroop Effect

In this study, word-face emotional valence consistency's main effect is significant; it tests and verifies the assumption that word-face Stroop effect will appear no matter what the auditory environment is. This phenomenon can be explained by collision detection theory proposed by Botvinick (Etkin, 2006). The collision detection system in the brain will assess current collision levels first and then send messages to the central brain where it is in charge of controlling them. As a trigger, the central brain will adjust the influence level that the collision causes. Moreover, Botvinick thinks the part of the brain that takes charge of controlling the influence levels is located in the anterior cingulate cortex. There is much evidence that shows that the anterior cingulate cortex becomes much more activated than other areas when in conflict situations (Zhao, 2009). So, participants' reaction times in non-consistency are longer than the others.

Music Style Influence on Emotional Conflict Effect

The main effect of music style is not significant, $p > 0.01$, as is the interaction between word-face emotional valence consistency and music style, $p > 0.01$. All in all, this illustrates that music style makes no influence on emotional conflict. However, some previous studies have found that different music types would affect human emotion, and influence behavior indirectly. As Kiger's finding in 1989 showed, soft, slow, and less informational lyrical music would lead to moderate levels of arousal (Li, 2006). As a result, appropriate lyrical music is helpful for mission completion; strong rock music will interfere with the brain's functioning. This study does not find any significant difference in diverse music style background situations. This may be because of inappropriate choices in music songs; there is not any assessment of music presentment and arousal, so the discrimination of independent factors is not high enough. They do not make enough interference on the dependent factor, and the difference of reaction times is not significant.

Volume Influence on Emotional Conflict Effect

The main effect of volume is significant, $p = 0.007 < 0.01$, and this means that the volume level will affect human behaviors, and participants will act faster in low-volume background music environments. That may be because it needs more cognitive and attention resources of the participants when they behave in high-volume music backgrounds. In this situation, they tend to be distracted and show delayed reactions (Liao, 2011). On the one hand, participants are in a relaxed and comfortable status in low-volume background music; their arousal levels are just right for mission completion, so they can concentrate easily and do the

work quickly; on the other hand, when participants have high-volume background music, the strong auditory environment stimulates or disturbs their auditory brain systems, some cognitive resources have to separate and process the auditory stimulus, and therefore, there are fewer brain resources left to deal with the word-face emotional conflict mission. As a result, RTs will increase. This is why participant actions have significant differences in distinct volume.

Conclusion

This study employed experimental research methods to manipulate the auditory environment with different music styles and volumes to analyze how participants behave in emotional conflicts. It found that: (1) Reaction times for emotional word, and face, conformity are longer than uniformity. (2) Reaction times for high-volume background music are longer than for low-volume music. (3) There is no significant difference in reaction times between lyrical music and rock music.

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