

Chinese Personality Traits and Mental Health: Mediating Effect of Coping Style

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Abstract- The mediating effect of coping styles in relationship between personality traits and mental health is examined. A total of 371 college students completed SCL-90, the Four-Item Subjective Happiness Scale, the Delighted-Terrible Faces Scale, the Simplified Coping Style Questionnaire, and QZPS-SF. The structural equation model results indicate the mediating effect of coping strategies is significant for Chinese participates.

Keywords- Coping Style; Chinese Personality Scale (QZPS); Mental Health; Personality

I. INTRODUCTION

Numerous studies have examined the effect personality traits on mental health, especially both of Extraversion and Neuroticism (Diener & Lucas, 1999). These two basic personality dimensions respectively result in positive emotion and negative emotion (e.g., Costa & McCrae, 1980; Muris et al., 2005). In addition, some researches have shown that many other personality traits predict mental health significantly (e.g., DeNeve et al., 1998).

A coping style can be defined as a coherent set of behavioral and physiological stress responses which is consistent over time and which is characteristic to a certain group of individuals (Koolhaas et al., 1999). Although people employ many different coping strategies, investigators usually divide them into two categories, including active coping strategies, and passive/avoidance coping strategies (Folkman et al., 1985). Accordingly, coping styles include two categories: active coping style, and passive/avoidance coping style. Active coping is also associated with better illness related adjustment (Gil et al., 1991), avoidance is correlated with worse adjustment in children and adolescents with diabetes mellitus (Grey et al., 1991). Active strategies are almost always preferable to avoidance strategies, and they produce different health consequences (e.g. Gan et al., 2004).

Previous studies have shown that personality traits can directly facilitate or constrain certain coping strategies (Connor-Smith & Flachsbarth, 2007). For example, research has suggested that individuals who score high in measures of optimism use less avoidance and more approach coping (Carver et al., 1993). Highly neuroticism people prefer to adopt negative ways such as avoidance. In contrary, individual with high score on conscientiousness would choose problem-centered strategy (McCrae & Costa, 1986).

Despite considerable data supporting the importance of personality traits and coping styles, there is not much knowledge about the combined effects of these two variables in explaining mental health. Furthermore, previous studies on the relationship between personality traits and mental health focus on the subjects who came from western country, especially American, and the personality traits were measured by Big Five scale in these studies. The Big Five personality theory and its corresponding measures have been a major topic in personality research during recent times. Some have argued that human beings have similar personality structures (McCrae & Costa, 1997). However, others have argued that people in different cultures have different personality structures (Caprara et al., 2001).

Church (1987) proposed that personality structure was composed of two parts: the etic-component which can be the same in all cultures, and the emic-component which is unique and can be found only in one specific culture. The imposed-etic approach (Berry, 1989) is convenient, but it raises questions about the validity of the measures, that is to say, they may not reflect the true personalities of Chinese people (Zhang et al., 2007).

According to the lexical hypothesis, Wang, Cui, and Zhou found that the personality of Chinese people consists of seven factors; extraversion, kindness, behavior styles, talents, emotionality, human relations and ways of life (Wang, Cui, & Zhou, 2005). From this the Chinese Personality Scale (QZPS) has been developed (Wang & Cui, 2004), which differs from the five factors of the Western personality structure. In the present study we used the QZPS to examine the personality of Chinese people as well as to explore mediating effect of coping styles in relationship between personality traits and mental health.

II. METHOD

A. Participants

Participants were 371 undergraduate college students, including 173 males (46.6%) and 198 females (53.4%) who had a variety of majors (liberal arts, business, science and engineering). The mean age was 19.18 years old ($SD = 0.89$). Individuals participated on a voluntary basis and received a small reward.

B. Measurement

1) Personality:

We used QZPS-SF to assess their personality traits, which is the short form of QZPS (Wang, Cui, & Zhou, 2005, Zhang et al., 2007). QZPS-SF includes 82 items measuring seven factors of Chinese personality: Extraversion, Kindness, Behavior styles, Talents, Emotionality, Human relations and Ways of life. Internal consistency coefficients for each subscale range from 0.79 to 0.84. Each item was rated using a Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree).

2) Mental Health:

a) Symptom Checklist-90 (SCL-90)

This scale was developed by Derogatis and colleagues (1974), consisting of 90 items to measure 9 symptom dimensions on a 4-point scale ranging from 0 (absence of the symptom) to 4 (maximum disturbance). The nine scales: Somatic Symptoms, Obsessive-Compulsive Symptoms, Interpersonal Sensitivity, Depressive Symptoms, Anxiety Symptoms, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. A Global Severity Index may also be calculated and represents overall psychological distress. In current study, the Cronbach alpha value for the global scale is 0.98.

b) The Four-Item Subjective Happiness Scale (SHS, Lyubomirsky & Lepper, 1999)

The scale includes four items and each item is answered on a 7-point scale. Responses to the four items that the subjects made were combined and averaged to provide the relevant composite scores.

c) The Delighted-Terrible Faces Scale (DTFS)

This is a widely used single-item scale to measure life satisfaction, which was developed by Andrews and Withey in 1976. This scale eliminates some cultural specificity by presenting with pictures, even though single-item scale has its own defects. Therefore current study adopts its score as another instrument for happiness.

3) Coping Styles:

We used the Simplified Coping Style Questionnaire (SCSQ, Wang et al., 1999) to measure participants' coping styles. This scale contains 20 items which are divided into two dimensions, including active coping style (12 items, e.g. "I talked with people who have had similar experiences", "I discussed my feelings with others.") and passive coping style (8 items, e.g. "I tried to forget the problem"). The Cronbach alpha values for each subscale's internal consistency in current study are respectively 0.78 (active coping style) and 0.76 (passive coping style).

We also collected demographic information including age, gender and major information. All the scales used in current research were in Chinese language.

III. RESULTS

A. Reliability and Validity of the Chinese Version of the Four-Item Subjective Happiness Scale

In the pilot test, 205 undergraduates (99 male and 106 female, $M_{age}=19.27$, $SD_{age}=0.75$) completed the Four-Item Subjective Happiness Scale and the Delighted-Terrible Faces Scale. The exploratory factor analysis indicated that it was better appropriate to extracted one factor on the basis of the scree test and eigenvalues, which accounting for 63.64% of the total variance. The loading coefficients of the four items are respectively 0.89, 0.86, 0.76 and -0.66. Cronbach α coefficient was 0.79; the fourth item was reverse scored.

The results showed that these two scales used to measure Happiness (the four-Item Subjective Happiness Scale and the Delighted-Terrible Faces Scale) had high correlations ($r=0.58$, $p<0.01$), which showed that the Chinese Version of the SHS has concurrent validity and can be used to measure the happiness of Chinese undergraduates..

B. Correlation Analyses

Correlation analyses indicated a number of significant relationships (see Table I).

TABLE I CORRELATIONS BETWEEN THE CHINESE PERSONALITY TRAITS, MENTAL HEALTH AND COPING STYLES.

	M±SD	SCL-90	SHS	DTFS	Active coping	Passive coping
Extraversion	39.83±7.96	-.27**	.28**	.31**	.35**	-.12*
Kindness	47.43±5.39	-.22**	.26**	.18**	.17**	-.19**
Behavior Styles	40.06±6.84	-.11*	-0.05	-0.01	-0.02	-.13*
Talents	38.26±6.81	-.38**	.29**	.32**	.27**	-.34**
Emotionality	36.87±7.52	-0.05	0.02	0.03	0.07	-.11*
Human Relations	41.54±4.67	-.31**	.30**	.28**	.31**	-.26**
Ways of Life	48.60±6.63	-.23**	.25**	.28**	.43**	-.15**
SCL-90	60.97±48.08	1	-.45**	-.40**	-.22**	.43**
SHS	4.87±1.00	-.45**	1	.58**	.28**	-.14**
DTFS	4.30±0.90	-.40**	.58**	1	.29**	-.20**
Active coping	2.06±0.44	-.22**	.28**	.29**	1	0.08
Passive coping	1.21±0.47	.43**	-.14**	-.20**	0.08	1

C. The Analysis Results for the Mediating Effect of Coping Styles

We conducted structural equation model (SEM) to examine the mediating effect of coping styles in relationship between personality traits and mental health. Overall, the mediated model (see Figure 1) fit the data reasonably well ($X^2=53.05$, $df=18$, $p<0.001$, $X^2/df=2.95$; $IFI=0.94$, $NFI=0.91$, $CFI=0.94$, $RMSEA=0.08$).

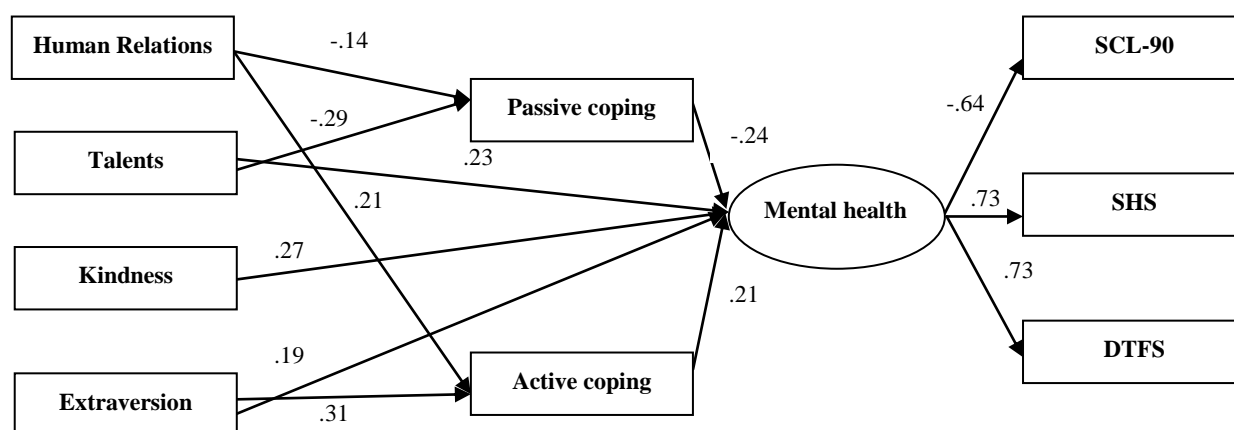


Figure 1 Coping styles as mediators between personality traits and mental health

The present study examines the role that coping styles play in between personality traits and mental health for Chinese people. The results indicate the mediating effect of coping strategies is significant, which basically confirms our hypothesis.

Firstly, coping style is closely related to mental health, the mental health positive correlates with active coping significantly and inversely with passive coping. This conclusion is extremely parallel with previous studies (e.g. Gil et al., 1991; Gan et al., 2004). The contribution of the present study is that it tested the coping style-mental health relationship in a Chinese sample of participants. There are three different explanations about the relation between coping style and mental health (Benzur, 2009). The present study prefers to support the third opinion, namely a variety of same personality traits and demographics can affect coping style and mental health, but both mental health and coping can also be affected by personality constructs (e.g., McCrae & Costa, 1986). For example, in the present study, Extraversion in the “Big Seven” personality traits influences the positive coping and the mental health at the same time, and Talent’s effects on both of negative coping and mental health are also very significant.

Secondly, the present results indicate that the personality traits can predict mental health significantly, including Extraversion, Kindness, Talent and Human Relation. Extraversion reflects activity, initiative, positivity, mild characteristics in socialization, easygoing nature, and ease in communication, as well as a happy and positive mood (Wang et al., 2005). So the result in our study is very predictable. Kindness reflects the “good person” in Chinese culture, showing honest, forgiving, caring, trustworthy, righteous and affectionate characteristics (Wang et al., 2005). Previous studies on the relationship between forgiveness and mental health have indicated that the resolution of the negative emotions associated with unforgiveness, such as anger, hostility, and hatred (Worthington et al., 2001). People with high scores are not afraid of difficulties, and are persistent, involved, and not afraid to undertake difficult assignments; people with high scores are friendly and mild, altruistic and easy to communicate (Wang et al., 2005). These characteristics could facilitate mental health.

Wang and colleagues (Wang & Cui, 2008) believed that in the seven Chinese personality traits, six of them are related with mental health significantly except for the Human Relation. According to Wang and colleagues (Wang & Cui, 2008), the

relationship between personality traits and mental health suggests three different patterns, “promoters” for mental health, including Extraversion, Kindness and Ways of Life, which positive predict the mental health; but the present study only demonstrated the effect of the Extraversion and Kindness. “Inhibitors” for mental health, including Behavior Styles and Emotion, which negative predict the mental health significantly, but the present study indicates both of them couldn’t predict mental health significantly. Behavior Styles are only significantly negative related with SCL-90. Previous studies indicated that Behavior Styles were not simple “promoter” or “inhibitor” for mental health and their relationship may be more complicated. “Promoting-Inhibitor” for mental health, including Talent, but the current study didn’t find the negative “inhibited” effect of Talent on mental health.

Because there are very few researches using the Chinese Personality Scale (QZPS) (Wang & Cui, 2004) to study the relationship between Chinese people’s personality traits and mental health, it’s hardly to avoid the discordance among the results with different samples in different studies. Recruiting participants from a variety of settings and replicating the study in a variety of regions in China, will be useful.

REFERENCES

- [1] Andrews, F. M., & Withey, S. B. (1976). Social indicators of well-being: Americans’ perceptions of life quality. New York: Plenum.
- [2] Ben-Zur, H. (2009). Coping styles and affect. *International Journal of Stress Management*, 16(2): 87–101.
- [3] Berry, J. W. (1989). Imposed etics-emics-derived etics: The operationalization of a compelling idea. *International Journal of Psychology*, 6, 721-735.
- [4] Caprara, G. V., Barbaranelli, C., Bermudez, J., Maslach, C., & Ruch, W. (2000). Multivariate methods for the comparison of factor structures in cross-cultural research: An illustration with the Big Five questionnaire. *Journal of Cross-Cultural Psychology*, 31, 437-464.
- [5] Carver, C., Pozo, C., Harris, S., Noriega, V., & Scheier, M., Clark, K.C. (1993). How coping mediates the effect of optimism on distress: A study of women with early stage breast cancer. *Journal of Personality and Social Psychology*, 65, 375- 390.
- [6] Church, A. (1987). Personality in a non-Western culture: The Philippines. *Psychological Bulletin*, 102 (1), 272- 292.
- [7] Connor-Smith, J.K., & Flachsbart, C. (2007). Relations between personality and coping: A meta-analysis. *Journal of Personality and Social Psychology*, 93, 1080- 1107.
- [8] Costa P. T, & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: happy and unhappy people. *Social Psychology*, 38 (4): 668-678.
- [9] DeNeve K.M., Cooper H. (1998). The Happy Personality: A Meta-analysis of 137 personality traits and subjective well-being. *Psychology bulletin*. 124:197-229.
- [10] Derogatis LR, Lipman RS, Rickels K. (1974). The Hopkins Symptom Checklist (HSCL)-a self report symptom inventory. *Behavior Science*, 19: 1-16.
- [11] Diener E, Lucas RE. (1999). Personality and subjective well-being. See Kahneman et al. *Well-being: The foundations of hedonic psychology*, (pp.213-229). New York, NY, US: Russell Sage Foundation, xii, 593.
- [12] Folkman, S. & Lazarus, R. S. (1985). If it changes, it must be a process: A study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 48, 150-170.
- [13] Gan Y., Liu Y, & Zhang Y. (2004). Flexible Coping Responses to Severe Acute Respiratory Syndrome-related and Daily life Stressful Events. *Asian Journal of Social Psychology*, 7: 55-66.
- [14] Gil, K. M., Williams, D. A., Thompson, R. J., & Kinney, T. R. (1991). Sickle cell disease in children and adolescents: The relation of child and parent pain coping strategies to adjustment. *Journal of Pediatric Psychology*, 16, 643-663.
- [15] Grey, M., M.E. Cameron and F.W. Thurber, (1991). Coping and adaptation in children with diabetes. *Nursing Research*, 40(3): pp. 144-149.
- [16] Kobasa S C. (1979). Stressful life events, personality, and health: an inquiry into hardiness. *Journal of Personality and Social Psychology*, 37: 1-11
- [17] Koolhaas, J.M., et al., (1999). Coping styles in animals: current status in behavior and stress-physiology. *Neuroscience & Biobehavioral Reviews*, 23(7): 925-935.
- [18] Lyubomirsky, S. and H.S. Lepper: 1999, A Measure of Subjective Happiness: Preliminary Reliability and Construct Validation, *Social Indicators Research* 46, pp. 137-155.
- [19] McCrae R R, Costa P T. (1986).Personality, coping, and coping effectiveness in an adult sample, *Journal of Personality*, 54: 385-405.
- [20] McCrae, R. R., & Costa, P. T. (1997). Personality trait structure as a human universal. *American Psychologist*, 52, 509-516.
- [21] Muris, P., Roelofs, J., Rassin, E., Franken, I., & Mavet, B. (2005). Mediating effects of rumination and worry on the links between neuroticism, anxiety and depression. *Personality and Individual Differences*, 39: 1105-1111.
- [22] Wang, D., & Cui, H. (2004). Reliabilities and validities of the Chinese Personality Scale. *Acta Psychologica Sinica*, 36(3), 347-358 (in Chinese).
- [23] Wang, D., & Cui, H. (2008). A Predictive Research on Psychosomatic Symptoms with Personality Dimensions, Self-Experience Inconsistency, and Behavior Inhibition. *Acta Psychologica Sinica*, 39(5): 861-973 (in Chinese).
- [24] Wang, D., Cui, H., & Zhou, F. (2005). Measuring the personality of Chinese: QZPS versus NEO PI-R. *Asian Journal of Social Psychology*, 8, 97-122.
- [25] Wang, X.D., Wang, X.L., & Ma, H. (1999). The handbook of Psychological Scale (pp. 122-124). Beijing: Chinese Mental Health Journal Press.

- [26] Worthington, E. L., Jr., Berry, J. W., & Parrott, L., III. (2001). Unforgiveness, forgiveness, religion, and health. In T. G. Plante & A. C. Sherman (Eds.), *Faith and health: Psychological perspectives* (pp. 107-138). New York, NY: Guilford Press.
- [27] Zhang, D.H., Wang, D.F., Yang, Y., & Teng, F. Do personality traits predict work values of Chinese college students? *Social Behavior and Personality: An International Journal*. 2007, 35 (9), 1281-1294.

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