Psychometric Properties of the Short-form Version of the Cognitive Style Questionnaire

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【Abstract】   This study examined the reliability and validity of the Chinese version of the Short-Form version of the Cognitive Style Questionnaire(CCSQ-SF). 415 Chinese undergraduates(306 men, 109 women; mean age=19.2 years, SD=1.04) completed the CCSQ-SF along with the Hopelessness Depression Symptom Questionnaire(HDSQ) and Self-Compassion Scale(SCS). The internal consistency of the CCSQ-SF was high(Cronbach alpha=0.77), and the split-half coefficient and test-retest correlation after 4 weeks were satisfactory(r=0.67 and 0.85, respectively). Pearson correlations of the scores on the CCSQ-SF with the criterion measures(HDSQ and SCS) were in the expected directions. The CCSQ-SF is appropriate for measuring negative cognitive style among Chinese students.

【Key words】   Cognitive style; Hopelessness depression; Self-compassion

中文版认知方式问卷（短版）的信效度研究

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【摘要】   目的：检验中文版认知方式问卷（短版）的信效度。方法：用中文版认知方式问卷（短版）、无望抑郁问卷、自悯量表对415名大学生进行测量，对其中55名大学生四周后重测中文版认知方式问卷（短版）。结果：中文版认知方式问卷（短版）的Cronbach α系数为0.77，分半信度为0.67，四周的重测信度为0.85；探索性因素分析得一个特征根大于1的因子，解释总变异的40.32%；中文版认知方式问卷（短版）的得分与无望抑郁问卷的得分显著正相关，与自悯量表的得分显著负相关。结论：中文版认知方式问卷（短版）具有较好的信效度，可以用来测量我国大学生的认知方式。

【关键词】   认知方式；无望抑郁；自悯

1   Introduction

The hopelessness theory of depression(Abramson, Metalsky, & Alloy, 1989) proposes that a negative cognitive style increases the probability of depression developing after a negative life event. Chris, Orlando, Jordan, and Amy (2012) found that negative cognitive style was significant mediator(effect size=0.35) of the relationship between negative emotionality and depressive symptoms. In order to assess negative cognitive style, Alloy, Abramson, Hogan, Whitehouse, Rose,

Robinson, et al., (2000) developed the commonly used Cognitive Style Questionnaire(CSQ). The CSQ contains 24 hypothetical events(12 positive, 12 negative) involving successes and failures in academic achievement, employment, and interpersonal relationships. Before answering questions about the event, participants are told vividly to imagine themselves in that situation, and then to write down the one major cause of the event. Next, participants are asked to rate the extent to which the named cause was the result of (a) internal versus external factors, (b) specific versus global factors, (c) stable versus unstable factors. After answering these questions, participants are asked about the meaning of the event, rating whether the event (d) means that other

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negative/positive events will happen to them, (e) means that they are flawed/special in some way, and (f) matters to them.

The Chinese version of the CSQ (CCSQ) was shown to have satisfactory validity and reliability(Chen, Zhou, Yan, & Su, 2013), and its use can advance the empirical studies of the hopelessness theory of depression in China. Nevertheless, the CCSQ comprise 144 statements about 24 hypothetical events, and it often takes more than 30 minutes to complete the questionnaire. This reduces the potential clinical utility of the measure.

The aim of the present study was to examine the reliability and validity of a newly translated Chinese version of the CSQ-SF(CCSQ-SF).

2　Methods

2.1　Participants

A convenience sample of 415 freshmen undergraduate students(306 men, 109 women; mean age=19.2 years, SD= 1.04, range=16-23) completed the CCSQ-SF. Four weeks after the first testing, 55 of the original participants (41men, 14 women; mean age=19.1, SD= 1.02) completed the CCSQ-SF for a second time to investigate test-retest reliability.

2.2　Measures

2.21　Chinese version of the Short-Form Version of the Cognitive Style Questionnaire(CCSQ- SF)　The Short- Form CSQ(CSQ- SF) comprises 72 statements about 8 hypothetical negative events(Meins, McCarthy-Jones, Fernyhough, Lewis, Bentall, & Alloy, 2012). It assesses participants' causal attributions for 8 hypothetical negative events(scenarios) on the dimensions of internality, stability and globality. Responses are given on a 5- point scale from "strongly agree" (1) to "strongly disagree" (5). An example item is: Getting along badly with my parents is caused by other people or circumstances.. Scores can range from 1 to 5, and higher scores indicate internal attribution for negative events. In addition, participants rate the probable consequences of each event and the implications of each hypothetical event to one's self-worth. It takes only 10 minutes(approximately) to complete this short questionnaire. The CSQ-SF was found to have satisfactory

internal reliability(Cronbach alpha=0.85) and test-retest reliability(r=0.91). It also exhibited construct validity by demonstrating predicted correlations with measures of depression(r=0.39) and anxiety(r=0.28).

The English version of the Short-Form of the Cognitive Style Questionnaire(CSQ-SF) used in this study is available from the authors, free of charge, for research purposes only. The CCSQ-SF was translated following guidelines given by Brislin and colleagues(Brislin, 1970; Wallace & Brislin, 1973). The systematic approach to translation was selected for its assurance of construct equivalence rather than verbatim equivalence between the original and target languages. The instruments were translated into Chinese by fully bilingual native speakers. The version was then blindly back-translated into English by different bilingual individuals. The content of the final CCSQ-SF was further verified by back translation procedure until both translated and back-translated versions were considered interchangeable, both conceptually and linguistically.

2.2.2　Hopelessness Depression Symptom Questionnaire(HDSQ)　To test the criterion-related validity of the CCSQ- SF participants also completed the HDSQ (Metalsky & Joiner, 1997). It comprises 32 groups of statements. Participants read all of the statements in a given group. Then pick out the one statement in each group which describes them best for the past two weeks. An example item is: 0= I have not stopped trying to get what I want, 1= I have stopped trying to get what I want in some situations, 2= I have stopped trying to get what I want in most situations, 3= I have stopped trying to get what I want in all situations. Total scores on the HDSQ can range from 0 to 96, with higher scores indicating greater levels of hopelessness. The HDSQ has an internal consistency reliability of .93, its validity was demonstrated in previous research(Metalsky & Joiner, 1997). The Chinese version of the HDSQ was translated and validated by Yi and Feng(2008). It has an internal consistency reliability of 0.87, test-retest reliability of 0.83, and its validity was demonstrated in previous research(Yi & Feng, 2008).

2.2.3　Self- compassion Scale(SCS)　The SCS(Neff, 2003) is a 26-item questionnaire designed to measure compassion towards oneself. The instrument assesses

six different aspects of self-compassion: Self-kindness, Self-judgment, Mindfulness, Over-identification, Common humanity and Isolation. An example item is: I'm disapproving and judgmental about my own flaws and inadequacies. Items are rated on a 5-point scale anchored from 1(almost never) to 5(almost always). Total scores on the SCS can range from 26 to 130, with higher scores indicating greater self-compassion. The SCS internal consistency reliability is 0.92, test-retest reliability is 0.93, and its validity was demonstrated in previous research(Neff, 2003). The Chinese version of the SCS was translated and validated by Chen, Yan, and Zhou(2011). It has an internal consistency reliability of 0.84, test-retest reliability of 0.89, and its validity was demonstrated in previous research(Chen, Yan, & Zhou, 2011). In china, more and more articles focused on the mindfulness related to self-compassion(Wang, Zheng, Wu, & Liu, 2011).

2.3 Procedure

This research was conducted during the spring semester of the 2013 academic year. We chose participants from a pool of undergraduates in the Hunan Institute of Technology by convenience sampling. Students participated voluntarily in the research and no incentive was offered for participation. Completion of the questionnaires was anonymous and there was a guarantee of confidentiality. Prior to administration of the measures, all participants were told about the purposes of the study. The order of the three questionnaires was the CCSQ-SF, the HDSQ, and the CSC. The study and all protocols were approved by Hunan Institute of Technology Review Board.

2.4 Analysis

Pearson correlations were used to test criterion-related validity. Exploratory factor analysis was used to test construct validity. Cronbach alpha was used to test internal consistency. Cochran-Cox t-test was used to test the difference of the mean scores between the Chinese and English versions. All statistics were tested at an alpha level of 0.05 using SPSS/PC version 13.0.

3 Results

Scores on the Chinese version(M=202.42, SD= 18.40) were slightly higher than the scores on the Eng-

lish version(M=199.09, SD=28.8) reported by Meins, et al. (2012). Consistent with previous findings(Meins, et al., 2012) there was no significant difference(t_{412}=−0.46, P=0.64) in the CCSQ-SF scores between men(M= 202.17, SD=18.08) and women(M=203.13, SD=19.34).

Correlation coefficients between the scales and the Cronbach alpha are shown in Table 1. As expected, the CCSQ-SF was positively associated with the HDSQ, and negatively associated with the SCS. That is, people with higher scores on cognitive style vulnerability have higher scores on depressive symptoms, and lower scores on self-compassion.

Table 1   Mean Scores(and SD) of All Scales with
Pearson Correlations between the Scales(N=415)

Scale	M	SD	Cronbach alpha	CCSQ-SF	SCS
CCSQ-SF	202.42	18.40	0.77		−0.29**
SCS	85.13	11.15	0.81	−0.29**	
HDSQ	17.80	10.40	0.88	0.27**	−0.42**

Note: **P<0.01; CCSQ-SF, Chinese version of the Cognitive Style Questionnaire-Short Form; SCS, Self-compassion Scale; HDSQ, Hopelessness Depression Symptom Questionnaire.

Reliability across the eight scenarios of the CCSQ-SF was(r=0.77), only slightly lower than what was reported for the English version(r=0.81), and comfortably between the recommended boundaries of 0.7 and 0.9. The split-half coefficient was 0.67, lower than the English version(0.78). Test-retest reliability, over a period of 4 weeks, on the sub-sample of 55 of the 415 original participants, showed a correlation of 0.85, slightly lower than the English version(0.91).

For the exploratory factor analysis on the scores of the eight scenarios, Kaiser's(1960) rule and Scree-plot analysis suggested the extraction of a single factor. This factor(with an Eigenvalue of 3.23) accounted for 40.32% of the observed variance. All eight scenarios loaded onto this factor(with loadings ranging from 0.35 to 0.78), suggesting that all scenarios similarly assess cognitive style. This is consistent with the results of the English version of the CSQ-SF.

4 Discussion

The present article describes the validation of a Chinese version of the Short-Form Version of the Cognitive Style Questionnaire(CCSQ-SF). The test-retest reliability of the CCSQ-SF is good, but slightly lower

than the English version. The test-retest reliability of the Chinese Version of Self-compassion Scale and the Chinese version of the Cognitive Style Questionnaire are lower than the English version. Future research should focus on the issues. The CCSQ-SF also showed good internal reliability, and its split-half reliability was also satisfactory. Factor analysis indicated that the CCSQ-SF was unidimensional, with responses for all eight scenarios loading onto one factor. The CCSQ-SF scores were also related in expected ways with depression and self-compassion. The CCSQ-SF thus appears to have good construct validity.

There was no significant difference in the CCSQ-SF scores between men and women. This is consistent with the results of the English version of the CSQ-SF. The absence of gender effect on the CCSQ-SF may be due to the fact that the omitted items are those that are more likely to distinguish between genders. Future research should further investigate how gender relates to cognitive style as a function of the scenario content.

Limitations of the study include the fact that the sample was homogenous; participants were all freshmen university students. Future research should examine the validity and reliability of the CCSQ-SF in a more diverse sample that represents all sectors of Chinese society. A second limitation is that the research only used the HDSQ and the SCS as the validity criterions. Finally, our research did not establish the predictive validity of the CCSQ-SF.

To summarize, we have shown that the newly translated Chinese version of the Cognitive Style Questionnaire-Short Form(CCSQ-SF) is a reliable and valid measure for assessing negative cognitive style among Chinese students.

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