Measuring Virtues in Chinese Culture: Development of a Chinese Moral Character Questionnaire

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Abstract

This paper describes the development and validation of the Chinese Moral Character Questionnaire (CMCQ), an instrument that measures seven key moral character attributes highlighted in Confucian culture. The CMCQ was developed based on both expert review and focus group interviews with 39 Chinese university students in mainland China and Hong Kong. Its psychometric properties were examined with a sample of 565 university students in Hong Kong. Exploratory factor analysis retained 46 items and seven factors and the seven-factor structure was further validated by confirmatory factor analysis. We found that CMCQ subscales had satisfactory internal consistency (α ranged from 0.78 to 0.85). Convergent validity of the CMCQ subscales was supported by their positive correlations with life satisfaction and positive affect, and their negative correlations with negative affect, depression, anxiety, and stress, respectively. All virtues had positive correlations with individual strengths. The findings indicate that the CMCQ is a promising tool for measuring the development of moral competence in Confucian culture, an important supplement to the character strength framework.

Keywords: Moral character,   Confucianism, Chinese virtue, Culture, Measurement tool

Introduction

Developing moral character has long been a central goal of education (Linkins et al. 2015). Recent years have seen the return of character education, which aims to help young people acquire positive character attributes and virtues that will to not only live well but also become productive and contributing members of their communities (Carr 2005; Quinlan et al. 2014). Several social and educational programs have been developed and implemented to promote youth character development across the world (Shek and Yu 2012; White and Waters 2014). To evaluate the effectiveness of different character education programs, there is a need to develop psychometrically sound instruments that can accurately assess character development within specific cultural settings.

Character development has been successfully indexed with self-report question- naires (Park and Peterson 2006). For instance, Peterson and Seligman (2004) concep-tualized character strengths as positive qualities reflected in ones' thoughts, feelings, and behaviors. They developed a Value in Action (VIA) Framework and the Value-in-Action Inventory of Strengths (VIA-IS) to measure 24 character strengths under six overarching virtues that are universally valued across cultures. The VIA-IS has been widely used to measure positive character attributes in different populations (e.g., McGrath 2015).

The VIA framework provides a consensual nomenclature for understanding core qualities in human being across cultures (Peterson and Seligman 2004). However, culture-specific character attributes were excluded from this model. Culture plays a pivotal role in the development of virtues and character (Narvaez 2014). Therefore, the VIA model and its measurement have limitations in research focused on culture- specific virtues/character strengths (e.g., see Bornstein 2017). Culture itself represents the collection of values, beliefs, conventions, behaviors, and attitudes, which define what qualities, are valued and should be promoted in a specific society (Fan 2000). Character attributes highly valued in one culture (e.g., filial piety in Chinese culture) may not be perceived as important in another culture. Culture also influences how a virtue should be properly enacted (Power et al. 1989). For example, although most people agree that being respectful is an important character attribute, how people would show respect properly to others may not be the same cross-culturally. Furthermore, cultural norms influence the process of moral judgment substantially (Graham et al. 2016). Children from collectivistic cultures and those from individualistic cultures have been found to have different moral reasoning processes when facing the same hypoth-esized moral dilemma (Haidt and Joseph 2007). For example, Chinese children chose lying to help a group but harm an individual, while Canadian children did the opposite (Fu et al. 2007). Obviously, to gain a more complete picture of character development, both universally valued character attributes and culture-specific virtues must be investigated. Therefore, there is a strong need to expand the current moral domain and character catalog by including culture-specific attributes and develop appropriate tools to measure them (Critcher and Dunning 2014).

China is considered as one of the "Great Three" most pervasively influential traditions of thought in human history (Smart 1999). Deeply influenced by Confucian-ism, Taoism and Buddhism, which represent the most significant Chinese philosophies, Chinese culture has a set of well-defined moral values that shape beliefs and attitudes and guide behaviors of more than one billion people in the world (Fan 2000). While a detailed description of how these philosophies shape the concept of moral values is beyond the scope of the present paper, we aimed to look at personal attributes that are emphasized under Confucianism, which is the main ideology of traditional moral education in Chinese history (Wang 2004). In particular, Confucian philosophy focuses on the cultivation and maintenance of virtues, ethics, character attributes that are socially essential and good, and behaviors properly demonstrate them (Yu 1998). There are some common virtues that are focused in both the VIA model and the Chinese virtue catalog (e.g., wisdom, humility). However, theoretical definitions of these virtues in the two systems are different. The VIA-IS items may not adequately capture the culture-specific meanings of virtues in Chinese culture. In fact, Duan et al. (2012) examined the function of original virtue structure under VIA model in Chinese and found that 144 out of 240 items measuring character strengths lacked cultural validity. The authors thus removed these 144 items and formed a 96-item Chinese Virtues Questionnaire (CVQ-96) with a unique 3-factor structure (i.e., interpersonal, vitality, and cautiousness). However, Duan et al.'s (2012) effort only leads to a measure including items fitting to Chinese culture, rather than a comprehensive tool covering all culturally important qualities in Chinese society. For example, filial piety was not considered in CVQ-96. We can argue that Chinese character attributes can serve as an important supplement to the model of moral character represented in the VIA system. Therefore, it is also necessary to develop a comprehensive measure to assess these important Chinese virtues with an indigenous sample of people embedded natively within Chinese culture.

Different attempts have been made to measure these Chinese characters. However, many tools actually measured people's beliefs in the importance of these characters. For example, Park et al.

(2005) developed a Confucian Ethics Scale (CES) with reference to Confucian ethics governing the five basic relationships including father-son, sovereign- subject, husband-wife, old-young, and friends. Besides, Lin and Ho (2009) used a modified ethical climate scale to measure personal perceptions of ethical thoughts, which resembles Confucian characters such as Ren (benevolence), Li (propriety) and Zhong (loyalty). Regarding efforts devoted to developing scales mearing one's own situation of Chinese virtues, some focused on one specific virtue while some other stressed on multiple virtues. For example, the Filial Behaviour Scale (FBS) was developed to measure filial piety among Chinese people (Chen et al. 2007). Mu (2007) constructed a 90-item Virtue Adjectives Rating Scale assessing five virtues including honesty, diligence, resourcefulness, self-reliance, and serenity. Although these scales showed good psychometric properties in different studies (Mu and Gu 2010; Leung et al. 2017; Yang et al. 2015), they cannot provide a comprehensive evaluation about overall character development given that they still only covered limited key virtues. Moreover, item scaling in these measures was different, making comparison across multiple virtues difficult.

Against this background, the present study aimed to develop a new and compre- hensive measure covering a wide range of important Chinese virtues. To do this, the first step is to determine which virtues should be assessed. It is important to first identify core Chinese virtues that are both highlighted in the traditional Chinese philosophical literature and that, as well, have important relevance to contemporary Chinese people's lives. Among different virtues, Ren (benevolence), Yi (righteous- ness), Li (propriety), Zhi (wisdom), and Xin (trustworthiness), commonly referred to as the "Five Constant Virtues" of Confucianism, have been subsequently elaborated in Confucian classics and considered as central qualities for one to become a virtuous person (Junzi) (Fan 2000). Focusing on these five virtues, Shek and colleagues (Shek et al. 2013) reviewed classic texts associated with Confucian work and proposed cultural definitions of these virtues based on their original meanings in Confucianism. They conceptualized these virtues as the desirable character attributes in Chinese culture that people should aim to develop in today's society as well. Whereas the Shek et al.'s (2013) framework is useful for the study of moral characters that have been greatly influenced by a Confucius culture, assessments of these culture-specific char-acters have yet to be developed.

The first virtue Ren, or benevolence, kindness, or humanity, means "to love the people" and is considered by Confucius as the foundation and root of being a human (Lau 1992). Shek et al. (2013) defined Ren as a feeling of humanity towards others, a sense of the dignity of human life, and being human-hearted. The second virtue, Yi, or righteousness, has been defined as the attribute needed to keep one's action and intention righteous, or one's ability to know what is right and wrong and to do the right thing, even at the cost of personal benefit (Shek et al. 2013). Yi also implies "achieving an optimal appropriateness in one's relations" (Ames 2011, p. 201). Li, propriety or rite, is another virtue central to the Confucian vision of a virtuous life. Confucius clearly referred Li as to be civility and daily acts of respect, humility, care and kindness. Li refers to not only following the concrete rules of proper behaviors, or the general principle in interpersonal relationship, but also the acting out of Ren in one's daily life (Shek et al. 2013), which conveys "inter-human respect in the social sphere" to reach a state of harmony between people" (Peng 2003, p. 82). Therefore, Li is considered a primary method to achieve social harmony and peace in Confucius corpus. It was when both leaders and subjects behave with Li and conduct their relationship in conformity with social rules and without coercion, social harmony can be achieved (King and Bond 1985).

According to Confucian teaching, the virtues of Ren, Yi, and Li must be supported by Zhi, or wisdom and efforts to learn and acquire wisdom (Lin and Wang 2010). In Shek et al.'s (2013)

framework, Zhi involves life-long learning and reflection, and seeking knowledge from all people in all possible ways. This humble attitude in learning is further highlighted by Confucius in his saying "when three people are walking together, you can definitely find something to learn from at least one of them." The last of the five constant virtues is Xin, defined as trustworthiness, honesty, and making good on one's words (Shek et al. 2013). It requires both good intention and actual outcome. Simply being sincere in what one says is not enough to be deemed Xin; one must follow through and make good on what one proposes to do (Ames 2011). These five virtues are the most fundamental ones in guiding other virtues and are bonds of society (Yao 2000). Researchers reported that these virtues still have great influences on Chinese people's lives today and have important implications for family relationships (Cheung 2015), education (Gao 2015), tourism (Kwek and Lee 2010), business ethics (Ip 2009), interpersonal relationship (Hwang 1999), positive youth development (Shek et al. 2013), and mental health (Zhang and Liu 2012). While the mechanism underlying the respective functions of different virtues varies, it is likely that virtues exert positive impact on people's lives through enabling one to engage in virtuous activities (i.e., activities exercised in accordance with a virtue); to adopt positive coping strategies when facing problems or adversity; and, to experience positive emotions (Rossi and Tappolet 2016). For example, as one of the virtuous activities related to Ren, helping behavior (e.g., volunteering in the community, providing emotional support) has long been found to promote well-being (Martela and Ryan 2016). The virtue Zhi, constitute of attributes of openness and reflective learning, may dispose an individual to adopt active coping style (e.g., positive reinter-pretation), and reduces one's stress level effectively (Afshar et al. 2015).

In addition to these five important virtues, another two virtues appeared most frequently in Ancient Chinese classic literature are Xiao (filial piety) and Zhong (loyalty) (Chen 2002a). Regarding Xiao, it is considered to be another bedrock virtue in Confucianism, which is the foundation of all other virtues (Wang 2004). Defined as the virtue of respecting one's parents and ancestors (Shek et al. 2013), Xiao is both the inspiration for and the consequences of Confucian learning. In the Classic of Xiao (Xiao Jing), the centrality of filial piety in cultivating oneself as a virtuous person is further established as "the foundation of all virtues and the fountainhead whence all moral teaching spring" (Hu 1996, p. 1).

Another virtue that Confucius takes as critical to moral development is Zhong (loyalty). Zhong means not only being loyal to one's superiors or peers, but also "doing one's utmost" or "a conscientiousness in one's deliberations and actions" (Lau 1992; Shek et al. 2013). Together with the five constant virtues, Xiao and Zhong have been greatly valued by the Chinese since ancient China (Chen 2002b), and these two virtues remain playing an important role in different aspects of Chinese people's lives nowa-days (e.g., Cheng and Chan 2006; Lu et al. 2010; Wong et al. 2010). Therefore, in addition to the "Five Constant Virtues", Xiao and Zhong were also focused in the present study.

The Present Study

In sum, the present study focused on the five constant virtues (Ren, Yi, Li, Zhi, Xin), Xiao (filial piety) and Zhong (loyalty). As reviewed above, conceptualization of these virtues was primarily based on Shek et al.'s (2013) framework. But we also incorpo-rated the criteria proposed in the Peterson and Seligman (2004) framework that conceptualizes virtues as qualities that are 1. fulfilling; 2. intrinsically valued; 3. have an ethical sense (or cannot be squandered); 4. not rivalrous; 5. not the opposite of a desirable attribute, and 6. nurtured by social norms and institutions. The content domains of the seven virtues are summarized in

Table 1. Guided by these frameworks, we attempted to first develop an instrument to measure these virtues and then to examine the psychometric properties of this instrument using samples of Chinese university students.

Specifically, to examine the reliability of the new instrument, we tested the internal consistency of each virtue scale to see whether the developed items measure a homogenous construct. As for validity, two types of validity would be examined. First, we examined the factorial validity of the instrument, i.e., the extent to which the data conform to the hypothesized model of the measure. Second, we tested the convergent validity of the measure by examining the correlations between virtues and a few related variables. We selected indicators of subject well-being and psychological distress as the external variables for two reasons. First, by definition, virtues are character traits that are essential to the optimal functioning of both individuals and societies, which help individuals and groups to live well (Peterson and Seligman 2004). Existing empirical literature based on the VIA framework of virtues also support that the development of character strengths or virtues is associated with greater well-being and less psychological distress (Park, Peterson and Seligman 2004; Sandage and Wiens 2001; Seligman and Csikszentmihalyi 2000; Worthington 1998). In the present study, it was hypothesized that participants' scores on different Chinese virtue scales would have positive relationships with indicators of subject well-being (i.e., life satisfaction, positive affect), while have negative relationships with negative affect and psychological distress (e.g., depression, anxiety, and stress). Moreover, the new instrument shall be correlated with measures that have previously been validated assessing presumably related constructs. As such, we assumed that the Chinese virtues should correlate well with an established brief strengths scale that measures character strengths in Chinese population.

Methods

Construction of the Chinese Moral Character Questionnaire (CMCQ)

To construct an item pool to measure the seven Chinese virtues, 92 items were drafted based on the definitions and content domains of the virtues (Table 1). Approximately equal number of items were developed that describe attitudes and perceptions, feelings, and behaviors that exemplify the related virtues, respectively. About half of the items were drafted by the research team, and other items were directly excerpted or adapted from existing instruments measuring similar constructs. All items were first drafted in English and later translated into Chinese as we aim to develop a questionnaire that can be used in different cultural settings wherein Chinese populations exist (e.g., China, Canada, and U.S.).

Each item was evaluated by one assistant professor in cross-cultural psychology and two post-doctoral researchers, one in psychology and one in education, with respect to clarity, representativeness, and relevance. All evaluators were proficient in Chinese and English. Both post-doctoral researchers have at least three years of doctoral or post- doctoral training in positive youth development research, and are currently involved in a local moral education project. Items rated as unclear, irrelevant, or unrepresentative by any of the three researchers were further reviewed and modified by the research team. As a result, eight items were revised to improve their clarity and fifteen were removed due to lack of sufficient relevance to or representativeness of the measured virtue. To make the questionnaire succinct, another fifteen items with duplicated or similar meanings to other items were also deleted. This process resulted in 62 items. A rating format on a six-point Likert Scale (1 = very much unlike me, 6

= very much like me) was used to obtain scores regarding the extent to which each item represents the character of the participant.

Then we translated the 62 items into Chinese, following the process of translation and adaption of instruments recommended by the World Health Organization (n.d.). Specifically, the first author and a psychologist first translated the items into Chinese separately. The translated items were reviewed and modified based on discussion among the two authors and the independent psychologist. Then the revised Chinese version of the 62 items was back-translated into English by another translator with expertise in both Chinese and English. Lastly, the English version was reviewed by the two authors and the third psychologist to guarantee the conceptual equivalence. The Chinese version of the items were used in the present validation study.

Participants and Procedure

The project was approved by the Human Subjects Ethics Sub-committee (HSESC) (or its Delegate) of the authors' university. Participants were recruited from two Chinese universities, one in mainland China and one in Hong Kong. Twenty-five mainland China-born students (14 females and 11 males, mean age = 19.32, SD = 1.52) enrolled in a compulsory psychology course at a mainland China university, were recruited for focus group interviews about their understanding and interpretations of the items developed to measure the virtues. Considering the cultural difference between mainland China and Hong Kong, another 14 Hong Kong-born students (4 males and 10 females, mean age = 20.03, SD = 1.68) studying in a public university in Hong Kong were also recruited for the focus group interview. Written informed consents were sought from all participants before the study.

To examine the psychometric properties of the newly developed questionnaire, a third group of students were recruited from a general education course available for all undergraduates at the university in Hong Kong. They were asked to complete an online survey, which took approximately 30 min. A total of 565 students aged between 18 and 25 years old (306 females and 251 males; 8 students didn't indicate their gender; mean age = 19.12, SD = 1.44) participated in the survey.

We conducted focus group interviews to improve item quality as recommended by Mallinckrodt and colleagues (Mallinckrodt et al. 2016). The aforementioned 25 students participated in focus group interviews. They were provided with a list of virtues and their definitions and were asked to share their opinions on the items intended to measure these virtues, focusing on their understanding of these items in relation to virtues and the response options. Responses from these focus group interviews were then used to further modify or remove some items. As a result, a revised 52-item Chinese Moral Character Questionnaire (CMCQ) with seven subscales was construct- ed: Ren (benevolence; 6 items), Yi (righteousness; 9 items), Li (propriety; 10 items), Zhi (wisdom; 9 items), Xin (trustworthiness; 6 items), Zhong (loyalty; 6 items), and Xiao (filial piety; 6 items). The whole questionnaire was then distributed to participants again for their further comments and all participants expressed that they had no problem with the revised questionnaire. The 52 items were further reviewed by the 14 university students in Hong Kong in other two focus group interviews and none of them had any difficulty in understanding the item content and response instruction.

Other Instruments

The questionnaires used in the project included multiple measures. In addition to the CMCQ, four additional instruments were administered in English through an online survey.

Satisfaction with Life Scale (SWLS)
The 5-item SWLS developed by Diener et al. (1985) was used to measure participants' subjective evaluation of life. Several studies have established good reliability and validity of the SWLS (e.g., Ye et al. 2012). The Cronbach's alpha of SWLS was .88 in this study.

Positive and Negative Affect Schedule (PANAS)
The 20-item PANAS (Watson et al. 1988) was used to measure positive affect and negative affect. Respondents reported the extent to which they experienced the de- scribed mood or emotion in each item during the past week. The psychometric properties of the PANAS have been examined extensively and found robust across different cultures (Crawford and Henry 2004). The Cronbach's alpha coefficients for positive affect and negative affect subscales were both .88 based on the present sample.

Depression, Anxiety, and Stress Scale (DASS)
The 21-item self-reported DASS (Lovibond and Lovibond 1995) was used to measure three related negative emotional states of depression, anxiety, and stress. The scale has been validated in Chinese populations and good psychometric properties have been widely reported (Wong et al. 2006). The internal consistency of each subscale was good in the present study (Cronbach's α = .90 for Depression, .85 for Anxiety, and .88 for Stress).

Brief Strengths Scale (BSS)
The 12-item BSS was developed to measure interpersonal, intellectual, and temperance strengths (Ho et al. 2016). Previous studies have shown that BSS has good reliability and validity in both clinical and non-clinical populations (Duan and Ho 2017). In the present study, Cronbach's alpha coefficients for the three BSS subscales ranged from .80 (Intellectual strength) to .85 (Temperance strength).

Data Analysis Plan

First, to further refine the newly constructed CMCQ, exploratory factor analysis (EFA) was employed based on Subsample 1 to identify and remove items with factor loadings less than .40. As the virtues were expected to be correlated, Principal Axis Factoring (PAF) with Promax Rotation would be conducted. Items with factor loadings less than
.40 would be removed from the questionnaire (Costello and Osborne 2005). Second, data collected from Subsample 2 on the refined CMCQ were then subjected to confirmatory factor analysis to test the seven-factor structure of the questionnaire. Third, to examine the convergent validity of the CMCQ, correlations between scale scores of the seven virtues and indicators of well-being (i.e., life satisfaction, positive and negative affect), negative emotion (depression, anxiety, and stress), and strengths (intellectual, interpersonal, and temperance) were calculated based on Subsample 2.

Results

Exploratory Factor Analysis

The participants (N = 565) were randomly split into two sub-samples for explorato- ry factor analysis and confirmatory factor analysis. Principal Axis Factoring (PAF) with Promax Rotation was first performed on Subsample 1 (N = 304). The KMO value (0.941) of sampling adequacy and Bartlett's Test of Sphericity (p = .001) were found significant (Kaiser, 1970), suggesting that the sample was highly factorable. The results yielded seven factors with eigenvalues greater than 1.0, which accounted for a total of 51.21% of variance. The respective eigenvalue and per- centage of variance explained by each factor were, respectively, 15.10 and 29.04% (Factor 1), 2.58 and 4.95% (Factor 2), 2.25 and 4.33% (Factor 3), 1.90 and 3.64% (Factor 4), 1.81 and 3.47% (Factor 5), 1.66 and 3.18% (Factor 6), and 1.35 and 2.59% (Factor 7).

Components loadings on CMCQ items after the Promax Rotation are presented in Table 2. Six items with factor loadings less than .40 were removed from the question- naire. Based on the item grouping, the seven factors were labelled as Yi (righteousness, Factor 1), Zhi (wisdom, Factor 2), Zhong Xin (loyalty and trustworthiness, Factor 3), Ren (benevolence, Factor 4), Xiao (filial piety, Factor 5), Li (propriety, Factor 6), and Qian (humility, Factor 7). Although most of the factor loadings were consistent with the CMCQ original item assignment to factors, there were two exceptions. First, items of two virtues, Zhong and Xin, were found to load on the same factor (Factor 3). This finding may be due to the fact that both virtues are related to one's honesty, being responsible and reliable, and a sense of commitment. Therefore, the items were combined to construct a new subscale named as Zhong Xin (Loyalty and Trustworthiness).

Second, items that were designed to measure Li, loaded on two factors (Factors 6 and 7) instead of one. Factor 6 remained to be Li (propriety), and Factor 7 reflected characteristics of having a humble character or humility ("Qian" in Chinese). Although being humble in one's interpersonal communication ("Qian") has been theoretically considered as part of Li (propriety), the present data suggested it as a different virtue. In addition, one item originally designed to measure Zhi (wisdom), "I learn from different people modestly", had higher loading on Factor 7 Qian (0.47) than on Factor 2 Zhi (0.34). In fact, this item directly assesses one's humble attitude in learning, and was thus combined with the other three items to construct a new subscale of Qian (humility).

Based on the results of PAF, a refined 46-item CMCQ consists of seven subscales: Ren (6 items), Yi (9 items), Li (5 items), Zhi (8 items), Zhong Xin (8 items), Xiao (6 items), and Qian (4 items). Table 3 summarizes the Cronbach's alpha, mean inter-item correlation coefficient for each subscale, and correlation coefficients among the seven Chinese virtues. The results showed that each subscale has good internal consistency (0.78–0.85) and all virtues were moderately correlated with each other (rs = 0.26–0.62, ps < .001).

Confirmatory Factor Analysis

To validate the factor structure of the CMCQ, we conducted a confirmatory factor analysis based on Subsample 2 (N = 261). To reduce the number of parameters to be estimated and simplify the analysis, aggregate procedures were adopted (Kenny 2016). Individual items pertaining to their respective factors were aggregated into two parcels per factor in order to generate a more reliable estimation of the parameter and to reduce error in observed indicators when the sample size is not large and when there are more than five items for each factor (Little et al. 2002). Following the procedure suggested by Kenny (2016), items of each subscale were randomly assigned into two parcels. The composite scores of the two parcels then serve as the

two observed indicators for the subscale. Two alternative models were tested. Consistent with the questionnaire design, the first model was specified as a seven-factor structure: each factor has two observed variables based on parcelling procedures, and was allowed to be correlated with each other. The second model was a uni-dimensional model in which 14 observed variables (parcels) loaded on one latent variable named as general Chinese moral character. For both models, no correlations among observed indicators were specified. Table 4 summarizes the goodness-of-fit indexes for the two models. As shown, the seven-factor model represents a good fit to the data (Hu and Bentler 1999) and the findings provided evidence for the internal structure of the CMCQ.

Convergent Validity

As shown in Table 5, all virtue scores except Qian (humility) were found to be positively correlated with life satisfaction and positive affect, and negatively correlated with negative affect, depression, anxiety, and distress. The highest correlation was between Xiao (filial piety) and life satisfaction (r = .40, p < .01), followed by the correlation between Ren (benevolence) and life satisfaction (r = .33, p < .01). Moreover, three virtues (Ren, Zhi, Zhong Xin) had significant correlations with all well-being and negative emotion indicators. However, Qian (humility) was not correlated with well- being or with emotional distress. Moreover, significant correlation coefficients were also found between the seven Chinese virtues and three subscales of the Brief Strengths Scale. Among them, Zhong Xin had the highest correlations with all three types of individual strengths (r = .54, .51, and .39, for interpersonal, intellectual strength, and temperance strengths, respectively). The correlations of Qian and Li with individual strengths were relatively low (r from .16 to .29). Overall, these findings provided preliminary evidence for the concurrent validity of the CMCQ.

Discussion

In the present study, we developed and examined the psychometric properties of the Chinese Moral Character Questionnaire (CMCQ) in order to measure the seven virtues highlighted in Confucius culture. The results provided evidence of reliability and validity of the CMCQ. All subscales had an adequate level of internal consistency. Confirmatory factor analysis supported the seven-dimension structure of the CMCQ. There was also evidence for convergent validity. That is, moderate correlations were found between the seven virtues and three individual strengths provided evidence for convergent validity. The virtues were also significantly correlated with subjective well- being (positively) and emotional symptoms (negatively). These findings support the usefulness of this initial effort to identify and assess culture-specific moral character attributes. The findings also have important implica-tions for expanding the existing classification of virtues to a broader conceptualizationand measurement of virtues that are important to optimal development of individuals of different societies.

To elucidate these implications, it is useful to discuss some specific findings of the results of the factor analysis. First, the two conceptually separate virtues, *Zhong* (loyalty) and *Xin* (trustworthiness) appeared to be one, which may indicate that virtuesof being loyal and truthful to both oneself and other people, doing one's duty, and being trustworthy are more closely related. Indeed, the acts or practices of the two virtues indaily lives are almost inseparable. For example, a person who never neglects his/herduty is also likely to win trust from others and viewed as credible. The PCA (PrincipleComponent Analysis) result on this subscale yielded a one-factor structure, indicatingthat the two virtues are similar at the measurement level.

Second, *Qian* (humility), emerged as a new construct representing the character of being humble, modest, and unpretentious. In classic Confucian works, the importance of being humble has been mentioned several times, although it was not listed as a distinct virtue. In the Analects (Lau 1992), Confucius said, "If your words are not humble, it will be difficult to put them into action" [14:20], and "the noble man is humble in his speech but superb in his actions" [14:27]. Previous studies yielded inconsistent findings regarding whether the humility/modesty facet of personality represents an independent dimension (e.g., Ashton et al. 2014; McCrae and Costa Jr. 2008). Our study tends to support the perspective that being humble is a unique virtue related to specific personality variation.

Research on relationship between humility and adaptive psychological outcomes has also yielded mixed findings. Finding no significant relationship between Qian (humility) and well-being or emotional distress, our study echoes previous reports of lack of desirable consequences of this virtue (Harvey and Pauwels 2004). Nevertheless, recent studies found humility has positive implications for interpersonal relationship (Hook et al. 2015; Labouff et al. 2012). More research is needed on such a relationship. The close association between the other six virtues and higher levels of life satisfaction and positive affect indicates that traditional Chinese virtues remain to play an important role in the quality of life of Chinese people in a modern society (Yu and Winter 2011). Among these virtues, filial piety had the highest correlation with life satisfaction. This finding is consistent with previous findings that reciprocal filial attitudes and beliefs were significant predictors of positive psychological outcomes for Chinese participants (Chen 2014). Our study further suggests that filial piety is not only a culture-specific value, but also a virtue that positively contributes to one's quality of life. It would be interesting to examine how such relationships may be moderated by cultural factors such as orientation to family interdependence and communal relationships.

In line with previous character strengths studies (Huta and Hawley 2010), we found Chinese virtues were negatively correlated with negative emotions. It may be that practicing these Chinese virtues may help individuals cope with emotional disturbance. For example, practicing Zhong Xin (loyalty and trustworthiness) may help develop social relationships with a quality that serves as an important social support resources for one to deal with distress (Grav et al. 2012). Developing a habit of reflection (Zhi, wisdom) could help reduce anxiety and stress (Sharif et al. 2013). Therefore, our study may provide important implications for ideas about possible culture-specific psycho- logical interventions for emotional distress. Strategies focusing on nurturing Chinese virtues might be incorporated into prevention and intervention programs targeting emotional problems. On the other hand, the possibility of a reverse causal relationship between virtues and negative emotions cannot be excluded, due to the cross-sectional design of the present study. One may argue that people who are emotionally healthier would be more likely to internalize the virtues (e.g., Ren). Longitudinal studies are needed to address this issue in the future.

Several limitations of the present study must be acknowledged. First, only student samples from two universities were used to validate the questionnaire, which limits the generalization of the findings. It is possible that the psychometric properties of the measurement may vary across Chinese samples with different educational level, occupation, age, and marital status. Obviously, the newly developed CMCQ needs to be further tested with a more representative sample of Chinese people.

Second, although the convergent validity of the CMCQ was examined through correlations between the CMCQ subscale scores and other theoretically-related con- structs. Thus,

discriminant validity of CMCQ was not established, which needs to be further investigated. It would be also important to determine how the CMCQ Chinese virtues may be related to the character strengths identified in the VIA classification framework, and the five-factor or six-factor model of personality (Ashton et al. 2014; John and Srivastava 1999).

Third, all data collected in the present study were self-report, which may contain several potential sources of bias, especially social desirability bias. Other types of measures (e.g., behavioural measures) and data from different informants could be used to further validate the instrument.

Fourth, the present study is cross-sectional in nature and only included a relatively small number of outcome measures for construct validity. Future studies need to use a longitudinal design with a wider range of outcome measures, such as academic achievement, social competence, to examine the predictive validity of different CMCQ virtues. Despite the limitations, CMCQ appears to be a valuable addition to the existing literature on the assessment of virtues and character strengths. We believe that the CMCQ can serve as an important tool for research on the culture-specific virtues highlighted in Confucian cultures. We hope other researchers continue to study these virtues with respect to antecedents (e.g., family factors) and developmental process of these Chinese virtues, as well as in regard to possible protective effects of these virtues in Chinese youth development, especially those from underprivileged settings (e.g., youth living in poverty or migrant children).

Acknowledgements

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Table 1

Simplified Definitions for Seven Chinese Virtues and Example Items of CMCQ

Virtues	English Translation	Definitions
Ren	Benevolence	1. A sense of dignity of human life 2. Loving people 3. Treating others with sympathy and care 4. A sense of forgiveness
Yi	Righteousness	1. Doing the right thing 2. Acting morally without regard for personally beneficial or harmful consequences of the relevant action 3. Upholding oneself to consistent moral standards 4. Rectitude 5. A sense of selflessness
Li	Propriety	1. Observance of rules of proper action 2. Respect people and social norms 3. Behaving properly in one's relationship 4. Being modest in interpersonal interaction
Zhi	Wisdom	1. Love of learning 2. Learn from reflection, experience, and imitation 3. Being self-aware 4. Having a humble attitude in learning
Xin	Trustworthiness	1. Acting sincerely 2. Being reliable and dependable 3. One's action follows his/her words of promise 4. Being deserving of trust and confidence
Zhong	Loyalty	1. Being faithful to people, group, organization 2. Being devoted to a cause 3. Doing one's utmost 4. A conscientiousness in one's deliberations and actions
Xiao	Filial piety	1. A sense of obligation and respect towards one's parents and ancestors 2. Being good to one's parents 3. Caring about one's parents 4. Engage in good conduct so as to bring a good name to one's family

Table 2

Orthogonally Rotated Component Loadings for CMCQ Items (Subsample 1; N = 304)

Scale	Item	Factor 1	2	3	4	5	6	7	Comm.
Ren (Benevolence)	I try to support people around me as possible as I can	0.22	0.23	0.29	0.45	0.22	0.03	0.14	0.46
	I try to see what is good in people	0.21	0.16	0.12	0.68	0.12	0.12	0.04	0.58
	When other people have troubles, I am always willing to show care and concern	0.28	0.21	0.22	0.55	0.20	0.05	0.14	0.53
	I can forgive others for past mistakes	0.24	0.03	0.01	0.61	0.05	0.07	0.11	0.45
	Having harmonious interpersonal relationship is very important to me	0.02	0.22	0.25	0.53	0.19	0.22	0.07	0.48
	I would not return evil for evil	0.23	-0.01	0.15	0.57	0.00	0.15	0.22	0.47
Yi (Righteousness)	When I see injustice, I defend the weak against the strong	0.63	0.13	0.00	0.13	0.01	0.04	0.03	0.43
	I believe in any circumstance people should do the right thing	0.63	0.05	-0.02	0.20	0.01	0.17	0.03	0.46
	My behaviors are guided by sound principles	0.49	0.15	0.34	0.04	0.12	0.16	0.12	0.43
	I do not shrink from threat	0.68	0.17	0.10	0.12	0.09	-0.02	0.04	0.52
	I speak up for what is right even if there is opposition	0.71	0.17	0.15	0.17	0.08	-0.07	-0.04	0.60
	I have a firm standard for moral decisions	0.53	0.16	0.33	0.17	0.15	0.16	0.23	0.55
	I treat people fairly no matter whether I can gain anything or not	0.50	0.07	0.15	0.33	0.13	0.11	0.20	0.46
	My words and actions are consistent	0.56	0.17	0.28	0.09	0.11	0.14	0.13	0.53
	I make ethical decisions even when there are personal costs	0.48	0.17	0.25	0.22	0.17	0.12	0.25	0.47
Li (Propriety)	I follow rules of propriety, even when no one is watching	0.23	0.14	0.26	0.07	0.26	0.61	0.12	0.60
	I am always polite to other people	0.02	0.21	0.35	0.25	0.16	0.59	0.18	0.64
	I behave properly in any occasion	0.08	0.14	0.21	0.21	0.07	0.65	0.20	0.58
	I respect for traditions	0.06	0.24	-0.01	0.19	0.31	0.61	-0.04	0.56
	I believe that a person's character cannot be established without learning the rules of propriety	0.23	0.23	0.02	0.05	0.33	0.55	0.12	0.53
	I keep a low key in my interpersonal relationship	0.10	0.17	0.06	0.05	0.09	0.11	0.78	0.67
	Most people would consider me a humble person	0.14	0.10	0.17	0.20	0.13	0.16	0.72	0.65
	I would not boast to others about myself	0.13	0.16	0.09	0.22	0.05	0.09	0.76	0.68
Zhi (Wisdom)	I learn from different people modestly	0.06	0.34	0.14	0.18	0.18	0.11	0.47	0.57
	I try different ways to solve problems	0.17	0.67	0.17	0.05	0.09	0.05	0.02	0.51
	I can always learn from experience, no matter whether it is successful or failed	0.18	0.69	0.27	0.10	0.02	0.15	-0.01	0.61
	I love to learn novel skills/topics/knowledge	0.15	0.67	0.12	0.03	0.13	-0.03	0.07	0.50
	Even when I disagree with people, I try to understand them and make sense of their ideas	0.12	0.64	0.07	0.29	0.11	0.20	0.05	0.56
	I reflect on myself frequently	0.11	0.67	0.13	0.10	0.04	0.14	0.08	0.52
	I think things through and examine them from all aspects	0.21	0.63	0.13	0.03	0.07	0.23	0.21	0.56
	I believe that "there is always someone to learn from"	0.02	0.45	0.16	0.34	0.02	0.12	0.29	0.45
	I know my strengths and weaknesses	0.18	0.47	0.18	0.02	0.02	0.22	0.23	0.40
Xin (Trustworthiness)	I always have truthful communication with my friends	0.17	0.29	0.50	0.38	0.00	0.14	0.03	0.52
	I strive to be an honest person	0.28	0.14	0.49	0.34	0.03	0.27	0.12	0.54

									Comm.
	People can count on me to do as I promised	0.34	0.25	0.55	0.13	0.02	0.27	0.10	0.58
Zhong (Loyalty)	I am loyal to my friends	0.03	0.23	0.61	0.32	0.11	-0.01	0.00	0.53
	I never neglect my duties	0.16	0.14	0.60	-0.03	0.23	0.11	0.16	0.49
	I am proud of being a loyal person	0.19	0.10	0.65	0.34	0.12	0.08	0.06	0.60
	I consider myself a very conscientious person	0.09	0.16	0.60	-0.02	0.21	0.17	0.11	0.47
	I devote myself to people close to me	0.06	0.29	0.52	0.28	0.21	-0.08	-0.04	0.48
Xiao (Filial Piety)	I always show respect to my parents	0.07	0.06	0.29	0.16	0.51	0.21	0.06	0.42
	I won't do things that would get my parents worried	0.03	0.01	0.07	0.12	0.60	0.17	0.12	0.42
	I feel obliged to provide financial support to my parents even they are economically self-sufficient	0.06	0.18	0.15	0.03	0.69	0.07	-0.02	0.54
	I believe people who are unfilial to their parents are shameful	0.08	0.08	0.10	0.08	0.68	0.18	-0.03	0.52
	My parents' suggestions play an important role when I choose my vocation/major	0.07	-0.07	0.00	0.07	0.64	0.00	0.10	0.44
	When I am far away from home, I always concerned about the health of my parents	0.10	0.15	0.20	0.04	0.73	0.05	0.09	0.61

Note: Comm. = Communalities.

Table 3

Reliability of the CMCQ and Correlations among CMCQ Virtue Subscales (Subsample 1; N = 304)

CMCQ virtues		No of items	Mean Inter-item correlation	Cronbach's α	Ren	Yi	Li	Zhi	Zhong Xin	Xiao
Ren	Benevolence	6	.40	.79	1.00	-	-	-	-	-
Yi	Righteousness	9	.39	.85	.60**	1.00	-	-	-	-
Li	Propriety	5	.46	.81	.51**	.44**	1.00	-	-	-
Zhi	Wisdom	8	.41	.84	.51**	.51**	.55**	1.00	-	-
Zhong Xin	Loyalty and Trustworthiness	8	.42	.85	.62**	.59**	.57**	.59**	1.00	-
Xiao	Filial Piety	6	.38	.78	.30**	.27**	.45**	.26**	.41**	1.00
Qian	Humility	4	.50	.80	.51**	.38**	.50**	.46**	.41**	.27**

Table 4

CMCQ Confirmatory Factor Analyses Model Fit Indexes (Subsample 2; N = 261)

	x^2	df	x^2/df	NFI	TLI	CFI	RMSEA	90% CI	AIC
Seven-factor model	87.73	56	1.57	.96	.97	.98	.047	[.026, .065]	213.73
One-factor model	629.78	77	8.18	.71	.63	.73	.166	[.154, .178]	713.78

Table 5

Correlations with Well-Being, Negative Emotions, and Brief Strengths Scores (N = 220)

CMCQ virtues		LS	PA	NA	DE	AN	ST	IPS	ILS	TS
Ren	Benevolence	.33**	.30**	-.15*	-.20**	-.13*	-.14*	.41**	.32**	.15*
Yi	Righteousness	.25**	.24**	-.12	-.17**	-.12	-.13*	.33**	.29**	.38**
Li	Propriety	.27**	.17**	-.03	-.11	-.09	-.09	.26**	.17*	.29**
Zhi	Wisdom	.25**	.26**	-.16*	-.24**	-.22**	-.28**	.37**	.44**	.26**
Zhong Xin	Loyalty and Trustworthiness	.30**	.30**	-.20**	-.30**	-.31**	-.29**	.54**	.51**	.38**
Xiao	Filial piety	.40**	.31**	-.06	-.27**	-.04	-.13*	.28**	.24**	.28**
Qian	Humility	.10	.02	-.05	-.05	-.10	-.08	.27**	.16*	.23**

Note: * p < .05; ** p < .01

LS = life satisfaction; PA = positive affect; NA = negative affect; DE = depression; AN = anxiety; ST =stress; IPS = BSS-interpersonal strengths; ILS = BSS-intellectual strengths; TS = BSS-temperance strengths