# Self-compassion and empathy across cultures: Comparison of young adults in China and the United States

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## *Abstract*

A cross-cultural study was conducted to examine differences in self-compassion and empathy among Chinese and American undergraduates. Forty Chinese and 41 American undergraduates completed the Self-Compassion Scale (SCS) and Interpersonal Reactivity Index (IRI). Groups did not significantly differ in overall Self-Compassion or Empathy. However, significant differences were found in the Self-Kindness, Common Humanity, Isolation, and Over-Identification SCS subscales and the Personal Distress IRI subscale (Chinese > American). American students reported significantly higher scores on the Fantasy and Empathic Concern IRI subscales. Gender differences were stable across groups. The results of this study have implications for understanding self- and other-directed pro-social attitudes, beliefs and behaviors across cultures.

*Keywords:* cultural differences; Self-Compassion Survey; Interpersonal Reactivity Index; undergraduates; empathy

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## 1. Introduction

Various definitions of culture have been suggested across a variety of disciplines. Taras, Rowney, and Steel (2009) conducted an analysis of "culture" definitions and identified three common elements; culture is a complex, multi-level construct, culture is shared among individuals belonging to a group or society, and culture is relatively stable (2009, p. 358). The authors summarized these elements into a comprehensive definition; "culture is a group's shared set of distinct basic assumptions, values, practices, and artifacts that are formed and retained over a long period of time" (Taras, Rowney, & Steel, 2009, p. 359).

Tracing the development of contemporary research on culture from the disciplines of anthropology and archeology, Taras, Rowney, and Steel (2009) suggest "cross-cultural issues have also become salient to … psychology" (p. 359). Psychological constructs of pro-social self- and other-directed thoughts, beliefs and behaviors are deserving of cross-cultural study, meeting Taras *et al's* (2009) criteria for an element of culture as being complex, relatively stable and shared among members of a group (Taras, Rowney, & Steel, 2009). Previous research has suggested that cross-cultural differences may exist in various aspects of self-directed and other-directed behavior, attitudes and beliefs, however the evidence remains equivocal.

Some research has suggested that aspects of pro-social behavior may be universal (Aknin *et al.*, 2013), consistent across collectivistic and individualistic cultures (Anderson *et al.*, 2010), or evolutionarily conserved (Goetz, Keltner, & Simon-Thomas, 2010). Other studies have suggested that pro-social behaviors and values vary among different cultures, particularly with respect to the degree to which cultures are "individual-oriented" (individualistic) or "social-oriented" (collectivistic) (Trommsdorff, Friedlmeier, & Mayer, 2007). Many researchers have used Hofstede's rankings of "collectivistic" and "individualistic" cultures to make comparisons across representative cultures. According to the Hofstede model, China is considered a "highly collectivist culture where people act in the interests of the group" (Hofstede, 2001, Hofstede, Hofstede, & Minkov, 2010). In comparison, the United States is considered a highly individualistic country characterized by a culture of "loosely-knit society in which the expectation is that people look after themselves and their immediate families" (Hofstede, 2001, Hofstede, Hofstede, & Minkov, 2010). These two cultures have been widely cited in the literature as representative of collectivistic and individualistic cultures; however some aspects of pro-social behavior remain to be investigated.

The present research seeks to examine the constructs of self-compassion and empathy within samples that are representative of collectivistic (Chinese) and individualistic (American) cultures. Both self-compassion and empathy are considered important psychological constructs that have implications for altruism, social relationships, psychological health and well-being. Self-compassion was selected for study because it represents a novel self-directed aspect of pro-social behavior. Empathy was selected because it is representative of other-directed pro-social behavior.

### 1.1 Self-compassion

Self-compassion represents an important aspect of psychological well-being. Self-compassion has been described as "an adaptive form of self-to-self relating . . . [that] involves being caring and compassionate towards oneself in the face of hardship or perceived inadequacy" (Neff, Kirkpatrick, & Rude, 2007, p. 139-140). Neff (2003a) suggests that "while the concept of self-compassion has existed in Eastern philosophical thought for centuries, it is a relatively new concept for Western psychology" (p. 86). Cross-cultural investigations of self-compassion are in their infancy with initial studies suggesting that although self-compassion is considered

an Eastern construct, self-compassion levels are governed by cultural practices that are more nuanced than a simple East-West dichotomy (Neff, Pisitsungkagarn, & Hsieh, 2008). To date, cross cultural studies of self-compassion have been limited to Thai, Taiwanese and American samples (Neff *et al.,* 2008).

*1.2 Empathy*

Studies of empathy are often plagued by the challenge of defining "empathy" and as one researcher noted, it is "a notoriously elusive psychological construct" (Geng, Xia, & Qin, 2012, p. 499). A commonly used definition of empathy is "understanding and sharing in another's emotional state or context" (Eisenberg & Strayer, 1987). It is not yet clear whether levels of empathy vary across cultures. A handful of cross-cultural comparison studies of empathy have revealed mixed results. Stankov (2010) suggests that individuals from Asian Confucian cultures are less forgiving of others than individuals from European cultures and Geng *et al.* (2012) posit that empathy may have different connotations and expressions among Chinese and British individuals. In contrast, Borke (1973) reported no difference in development or levels of empathy among Chinese and American children. Recent cross-cultural neuroscience research has revealed distinct patterns of cortical activation associated with cross-cultural empathy, suggesting Korean individuals experience "extraordinary empathy" toward those of a shared cultural identity (Cheon *et al.,* 2011). Given the equivocal nature of the existing research in this area and the paucity of previous studies, levels of self-compassion and empathy were examined in a sample of young adults from China and the United States.

## 2. Method

*2.1 Research Design*

This quantitative research was designed to compare the means of two groups on objective measures of self-compassion and empathy using statistical analysis. As is often used in the methodology of quantitative measurement in cross-cultural research, a convenience sample of students completed self-report questionnaires to compare levels of self-compassion and empathy in Chinese and American samples (Taras, Rowney & Steel, 2009). This design is consistent with the quantitative assumptions, purpose, approach and researcher role described by Firestone (1987). The independent variables were gender and culture. Dependent variables were self-compassion (assessed by the Self-Compassion Survey) and empathy (assessed by the Interpersonal Reactivity Index). All data were collected between May, 2012 and July, 2012. This research was reviewed and approved by the Institutional Review Board at Northern Arizona University.

*2.2 Participants and Procedures*

Chinese undergraduates (N=40, 37.5% female, 45% male, 17.5% no response, M age-20.94±1.74 years) at Southwest Jiaotong University and American undergraduates at Northern Arizona University (N=41, 63.4% female, 36.6% male, M age-21.42±2.66 years) volunteered to participate in this study. All participants completed paper copies of the Self-Compassion Scale (SCS, Neff, 2003) and the Interpersonal Reactivity Index (IRI, Davis, 1980, 1983). Chinese students completed a Chinese-translation of the SCS (Neff, 2012; personal communication) and IRI (IRI-C, Siu & Shek, 2005). All participants completed demographic items for age, gender, and years of higher education.

*2.3 Measures*

*Self-Compassion Survey*

The SCS is a standardized instrument consisting of 26 items arranged in three sets of two complementary subscales (e.g., Self-Kindness versus Self-Judgment). Items (e.g., "I try to be loving towards myself when I'm feeling emotional pain") are scored on a 5-point Likert scale ranging from 1 ("almost never") to 5 ("almost

always"). SCS scores and subscale scores were calculated as a mean (out of 5 points). The Self-Kindness subscale assesses the ability to experience tolerance, caring and kindness toward oneself. The Self-Judgment subscale (the complement to Self-Kindness) assesses the tendency to be intolerant, impatient or harshly judgmental of oneself. The Common Humanity subscale assesses the ability to view one's experiences as part of a larger human condition. The Isolation subscale (the complement to Common Humanity) assesses the tendency to view one's experiences as separate and isolated from others'. The Mindfulness subscale assesses the ability to observe thoughts and feelings in a non-judgmental way. The Over-Identification subscale (the complement to Mindfulness) assesses the tendency to exaggerate or become immersed in personal emotions and lose objective perspective on these reactions. Psychometric properties of satisfactory construct, content and convergent validity as well as test-retest reliability have been previously reported (Neff, 2003).

*Interpersonal Reactivity Index*

The IRI is a multidimensional, standardized instrument designed to quantify empathy and consists of 28 items that make up four, 7-item subscales. Items (*e.g.*, "I often have tender, concerned feelings for people less fortunate than me") are scored on a 5-point Likert scale ranging from 0 ("does not describe me well") to 4 ("describes me very well"). IRI scores and subscale scores were calculated as a mean (out of 4 points), with higher scores representing greater expression of that aspect of empathy. The Perspective-Taking subscale assesses the ability to take the perspective of another individual. The Fantasy subscale assesses the ability to imagine experiencing oneself as a character in a book, movie or play. The Empathic Concern subscale assesses feelings of sympathy or concern for others. The Personal Distress subscale assesses feelings of anxiety or unease in difficult interpersonal situations (Davis, 1983). Psychometric properties of the IRI include satisfactory internal reliability (.71 to .77; Davis, 1980) and significant correlation of subscales with established emotional and cognitive empathy measures (Davis, 1983). Although developed in the United States, this scale has shown cross-cultural validity in a Chinese context, however caution is urged in interpreting the subscale scores because two of the original subscales (Perspective Taking and Empathic Concern) may be confounded in cross-cultural application (Siu & Shek, 2005).

*2.4 Statistical Analysis*

Separate two-way (culture x gender) analyses of variance (ANOVAs; general linear method) were used to examine the effects of culture and gender on SCS and IRI scores. A significance level of $\alpha=.05$ was used for all analyses. Main effects and interaction effects were examined in each ANOVA.

## 3. Results

Independent samples *t*-tests were used to determine that there was no significant difference between Chinese and American groups of students with respect to gender composition, age or years of higher education. Self-compassion and empathy scores (including subscales) are presented in Table 1.

There was no significant difference in total Self-Compassion scores between Chinese and American students, however there was a main effect of gender, with females scoring significantly lower than males in both groups ($F$ [1, 68]=4.18, *p*=.045). There was no interaction between culture and gender in any of the SCS total or subscale scores. Among the subscale scores, there was a main effect of culture with Chinese students scoring higher on the Self-Kindness ($F$ [1, 70]=6.84, *p*=.011), Common Humanity ($F$ [1, 69]=5.33, *p*=.024), SCS-I ($F$ [1, 68]=5.213 *p*=.026) and Over-Identification ($F$ [1, 68]=9.067, *p*=.004) subscales. There was a main effect of gender, as males scored significantly higher than females on the Mindfulness ($F$ [1, 69]=7.21, *p*=.0091) subscale. Females scored higher than males on the Self-Judgment ($F$ [1, 68]=4.81, *p*=.032) and Over Identification ($F$ [1, 68]=5.636, *p*=.02) subscales.

**Table 1**

*Means and Standard Deviations for the Self-Compassion Scale and the Interpersonal Reactivity Inventory among undergraduates (including subscales)*

| | Chinese Undergraduate Students | | | | | |
|---|---|---|---|---|---|---|
| | Male (*n*=18) | | Female (*n*=15) | | All (*n*=40)[b] | |
| | *M* | *SD* | *M* | *SD* | *M* | *SD* |
| Self-Compassion (max. 5 points) | 3.32[a] | 0.51 | 3.06 | 0.48 | 3.20 | 0.51 |
| Self-Kindness subscale | 3.51 | 0.54 | 3.33 | 0.70 | 3.43* | 0.62 |
| Self-Judgment subscale | 2.90 | 0.57 | 3.21[a] | 0.40 | 3.04 | 0.52 |
| Common Humanity subscale | 3.74 | 0.62 | 3.45 | 0.57 | 3.61* | 0.60 |
| Isolation subscale | 3.00 | 0.87 | 3.32 | 0.86 | 3.14* | 0.87 |
| Mindfulness subscale | 3.78[a] | 0.74 | 3.53 | 0.63 | 3.67 | 0.69 |
| Over-Identification subscale | 3.18 | 0.71 | 3.42 | 0.61 | 3.29* | 0.67 |
| Empathy (max. 4 points) | 2.29 | 0.34 | 2.42[a] | 0.22 | 2.35 | 0.30 |
| Perspective Taking subscale | 2.65 | 0.57 | 2.52 | 0.61 | 2.60 | 0.58 |
| Fantasy subscale | 1.89 | 0.99 | 1.63 | 1.12 | 1.77 | 1.04 |
| Empathic Concern subscale | 2.31 | 0.76 | 2.64 | 0.54 | 2.44 | 0.69 |
| Personal Distress subscale | 1.95 | 0.70 | 2.31[a] | 0.67 | 2.10* | 0.70 |
| | American Undergraduate Students | | | | | |
| | Male (*n*=15) | | Female (*n*=26) | | All (*n*=41) | |
| | *M* | *SD* | *M* | *SD* | *M* | *SD* |
| Self-Compassion (max. 5 points) | 3.36[a] | 0.72 | 3.02 | 0.65 | 3.13 | 0.68 |
| Self-Kindness subscale | 3.04 | 0.94 | 2.82 | 0.85 | 2.90 | 0.88 |
| Self-Judgment subscale | 2.67 | 0.97 | 3.14[a] | 0.82 | 2.98 | 0.89 |
| Common Humanity subscale | 3.23 | 0.63 | 3.19 | 0.83 | 3.21 | 0.75 |
| Isolation subscale | 2.52 | 1.04 | 2.81 | 0.81 | 2.71 | 0.90 |
| Mindfulness subscale | 3.90[a] | 0.83 | 3.19 | 0.75 | 3.46 | 0.85 |
| Over-Identification subscale | 2.48 | 0.78 | 3.07 | 0.75 | 2.86 | 0.80 |
| Empathy (max. 4 points) | 2.22 | 0.42 | 2.55[a] | 0.39 | 2.44 | 0.43 |
| Perspective Taking subscale | 2.60 | 0.78 | 2.71 | 0.59 | 2.68 | 0.66 |
| Fantasy subscale | 2.33 | 1.03 | 2.89 | 0.81 | 2.68* | 0.92 |
| Empathic Concern subscale | 2.70 | 0.71 | 2.98 | 0.70 | 2.88* | 0.71 |
| Personal Distress subscale | 1.09 | 0.65 | 1.63[a] | 0.54 | 1.44 | 0.63 |

*Note.* * Represents a significant main effect of culture. From two-way ANOVA, *p*<.05
[a] Represents a significant main effect of gender. From two-way ANOVA, *p*<.05
[b] Seven students did not disclose gender

There was no significant difference in empathy scores between Chinese and American students, however there was a main effect of gender with females scoring significantly higher than males in both groups ($F$ [1, 63]=6.20, *p*=.0155). There was no interaction between culture and gender in any of the IRI total or subscale

scores. There was a main effect of culture with Chinese students scoring lower on Empathic Concern ($F$ [1, 65]=4.28, $p$=.0425) and Fantasy ($F$ [1, 70]=13.64, $p$=.0004) subscales and higher on the Personal Distress ($F$ [1, 63]=23.19, $p$<.0001) subscales. There was a main effect of gender with females scoring significantly higher than males on the Personal Distress subscale ($F$ [1, 63]=7.92, $p$=.0065). The ranges of total scores and subscale scores were consistent with those reported for similar samples (IRI among Chinese adults: Siu & Shek, 2005; Wu, Li, & Su, 2012. SCS and IRI among American college students, corrected for 4-point scale: Neff & Pommier, 2012).

## 4. Discussion

This study represents the first research effort to examine self-compassion and empathy across samples of undergraduates at Chinese and American universities. Altogether, Chinese and American students did not differ in total scores of Self-Compassion or Empathy, however several significant differences were found among the subscales. Gender differences in these measures were stable across cultures. With respect to differences in subscales of self-compassion, the main finding of this research is that Chinese students experienced both positive (*i.e.,* the ability to view one's experiences as part of a larger human condition and experience tolerance, express caring and kindness toward oneself) and negative (*i.e.,* viewing one's experiences as separate and isolated from others' and a tendency to exaggerate or become immersed in personal emotions and lose objective perspective) aspects of self-compassion to a significantly greater degree than American students, although the groups did not differ in SCS total scores. This is an interesting result because although the two samples did not differ in overall composite scores of Self-Compassion, it suggests that Chinese students strongly experience aspects of Self-Compassion in both the positive and negative directions. This relationship is more complex than simply experiencing increased beliefs or practices in the positive aspects of Self-Compassion (Self-Kindness, Common Humanity, Mindfulness) or reductions in the negative aspects (Self-Judgment, Isolation, Over-Identification) contributing to greater overall self-compassion.

Self-Compassion scores from both Chinese and American students in the present study are consistent with previously reported scores for a similar sample of American undergraduates in a cross-cultural study including Thai and Taiwanese students (Neff *et al.,* 2008). In their report, Neff *et al.* (2008) describe their Thai sample as representative of an Eastern Buddhist-influenced culture that encourages "a compassionate and accepting view of oneself and one's shortcomings" and their Taiwanese sample as representative of an Eastern Confucian culture that emphasizes "shame, judgment, and threatened isolation as a means of self-improvement" (p. 270). The results of the present study suggest that Self Compassion varies among Eastern cultures. Chinese students represent a unique sample, with levels of Self Compassion more similar to American rather than previously reported Thai or Taiwanese samples (Neff *et al.,* 2008). This may be due to differences across Eastern cultures, where self-compassion varies based on the degree of influence of beliefs and philosophies such as Buddhism and Confucianism.   Further supporting the unique nature of cross cultural differences, scores of Chinese students on SCS subscales fell between those of Thai students (higher in self-compassion on each subscale) and Taiwanese students (lower in self-compassion on each subscale), with the exceptions of Common Humanity and Mindfulness, in which Chinese students from the present study scored highest. Unfortunately the religious beliefs or affiliations of the students in the present sample are unknown. Future research investigating the role of Buddhist or Confucian influence will be valuable.

The present study revealed significant gender differences in which males scored higher than females in total Self-Compassion and the Mindfulness subscale (of the SCS), regardless of culture. Females scored significantly higher than males in the complementary SCS subscale of Self-Judgment, regardless of culture. These results are consistent with previous research demonstrating greater self-compassion among male undergraduates and greater self-judgment among female undergraduates (Neff, 2003) and may reflect patterns of beliefs or behaviors that are similar across Chinese and American cultures.

There was no difference between Chinese and American students in Empathy (IRI total score), however American students scored significantly higher on subscale measures of Empathic Concern and Fantasy.

Chinese students scored significantly higher on the Personal Distress subscale, consistent with the findings of De Greck *et al.* (2012). The results of the present study suggest that American students may experience more intense feelings of sympathy and concern, and increased ability to imagine experiencing oneself as a character in a work of fiction (*e.g.,* in a book, movie, or play) along with lesser feelings of anxiety or unease in tense interpersonal situations. A cautious interpretation of this result is warranted however, as Siu and Shek, (2005) found that Empathic Concern was confounded with Perspective Taking in a Chinese sample.

Gender plays a role in empathy results in the current study, with females reporting greater Personal Distress and overall empathy (IRI total score) than males. This finding is in contrast to Davis's (1983) report that females tend to score higher than males on each of the subscales of the IRI; however it is consistent with the selective gender difference in empathy reported by Neff and Pommier (2012).

Some researchers have suggested that empathy levels may change over time within a given group. From this perspective, the present results may be representative of a shift in patterns of empathy over time. Konrath, O'Brien, and Hsing (2010) reported significant declines in Empathic Concern and Perspective Taking among American college students from 1979 to 2009. Although their meta-analysis concluded with data collected using the IRI in 2009, the present study is generally consistent with the results of studies conducted in the 2000s, but may suggest a slight attenuation or reversal in the steepest decline in scores from 1990-2009. The mean Empathic Concern score of American college students was approximately 2.50±0.10 in 2009 (values corrected from Konrath, O'Brien, and Hsing (2010) to reflect the 0-4 scale used in the present study) compared to a mean score of 2.88±0.71 in the American sample in this study and 2.44±0.69 in the Chinese sample. The mean Perspective Taking score among American college students was approximately 2.30±0.01 in 2009, compared with 2.68±0.66 in this study (2012). There was no difference in Perspective Taking scores between American and Chinese students in the present study. Konrath *et al.* (2010) suggested several possible explanations for the decline in empathy over time that they observed, including increased narcissism (negatively correlated with empathy), increased aggression and bullying, increased use of personal media and technology that facilitate online interactions rather than face-to-face interactions, desensitization following exposure to violent media, prioritization of personal success, changing parenting styles, and smaller families with fewer siblings. Based on measurements made at a single time point, it is not clear whether these cross-cultural patterns are stable or whether they may converge or diverge over time. Additional cross-sectional and longitudinal research is needed to assess the static versus dynamic nature of empathy levels over time.

Limitations of the present research include a convenience sample of limited age range from two representative populations, using self-report surveys of two representative constructs. Previous research has found significant cross-cultural differences among young adults in affect, health and self-esteem among members of individualistic and collectivistic cultures, suggesting that the choice of a young adult sample in the present study was appropriate for assessing cross-cultural similarities or differences (Adrianson, Ancok, Ramdhani, & Archer, 2013). In addition, the universities that the present samples were drawn from differed considerably. The Chinese university specialized in transportation technology and required specialized admissions testing, while the American university was a non-specialized public institution. It is interesting to note that few of the Chinese participants studied or aligned themselves with the transportation identity of their institution. This may have implications for perspective-taking and empathy as they relate to potential identity as an outgroup (Mashuri, Hasanah, & Rahmawati, 2012). To more fully understand the similarities and differences of pro social constructs, this area of research needs to be expanded to include a broader sample of cultures and more exhaustive battery of pro-social constructs. As a final caveat, the limitations of self-report should also be acknowledged. Self-report responses may be biased by retrospective recall or social desirability.

As an alternative to the present quantitative study, qualitative research may reveal additional dimensions or other important constructs of self- and other-directed pro social behaviors and attitudes that elude quantification by the SCS or IRI. Single measures of self-compassion and empathy are unlikely to fully represent the complex nature of cross-cultural differences and the ability of self-report questionnaires to produce appropriate validity

has been questioned (Taras, Rowney, & Steel, 2009). In contrast, Pauley and McPherson (2010) describe an interpretative phenomenological analysis paradigm of research consisting of semi-structured interviews to reveal several additional themes of pro-social behavior. Furthermore, the majority of research in this area has almost exclusively generated data and conclusions from healthy, non-clinical samples, limiting generalizations to clinical populations (Pauley & McPherson, 2010). Additional qualitative research is likely to contribute substantially to this area of study.

Implications of the present research include improving understanding of cross-cultural similarities and differences in empathy and self-compassion. In an applied context, understanding these differences can help to inform more effective or refined practices in counseling and education. Therapeutic practices such as mindfulness based stress reduction, mindfulness based cognitive therapy, acceptance and commitment therapy, compassion meditation, and compassion-focused therapy incorporate elements of self-compassion and empathy to produce positive health outcomes (Pace *et al.*, 2009; Pauley & McPherson, 2010). Although these practices are already associated with significant health benefits, additional research could help to optimize treatment design and strategy. Despite many cross-cultural similarities, as health services and education expand globally to serve individuals from a variety of cultures, it will remain important to place psychological constructs such as self-compassion and empathy within appropriate cultural contexts. Furthermore, longitudinal research will be a valuable addition to understanding potential changes in self-compassion and empathy across time or generations.

## 5. Conclusions

While suggesting that self-compassion and empathy may tentatively be considered general, universal constructs, the results of this research reveal significant cross-cultural differences in individual components of these constructs (Self-Kindness, Common Humanity, Isolation, Over-Identification, Fantasy, and Empathic Concern). Gender differences in the present study are consistent across cultures, with both Chinese and American samples sharing the same patterns of gender differences across self-compassion and empathy. The results of this study contribute to the growing body of knowledge about similarities and differences among collectivistic and individualistic cultures with respect to pro-social values and behaviors.

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