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Abstract

Objectives The influence of cultural factors on mental health is not disputed in general - but elaborated research approaches are still lacking. We investigate cultural influences not only by nationality but also by value orientation (modern vs. traditional). A cross-cultural comparison with Chinese and German crime victims included an assessment of value orientation according to Schwartz’s theory (Schwartz, 1994) of personal values. Design Chinese and German adult crime victims were assessed. By means of structural equation multi-sample analysis, data of the two groups were compared. Method Traditional (conformity, benevolence, customs orientation) and modern values (achievement, hedonism, stimulation), traumatic exposure, posttraumatic stress (PTS), and two self-perceived interpersonal mediator processes (disclosure intentions, social acknowledgement as a victim) were assessed by self-report measures in 130 Chinese and 151 German crime victims. Results The two patterns of prediction for PTS differed between the countries: In the German sample both value types but in the Chinese sample only traditional values were directly or indirectly predictive of PTS. Traditional values inhibited social acknowledgement as a victim in China and Germany. In Germany, traditional values were related to increased PTS severity. Modern values predicted social acknowledgement as well as lower symptoms in Germany, but not in China. Conclusions The study shows cultural and interpersonal factors that may contribute to the development of PTSD that are under-researched in contemporary psychology and psychotherapy.
Traditional vs. modern values, self-perceived interpersonal factors, and posttraumatic stress in Chinese and German crime victims

Andreas Maercker¹, Changiz Mohiyeddini², Mario Müller³, Wei Xie⁴, Zhi Hui Yang⁴, Jiangping Wang⁴ and Julia Müller³

¹ University of Zurich, Dept. of Psychology, Switzerland
² University of Roehampton, Dept. of Psychology, UK
³ University of Zurich, Dept. of Psychiatry, Switzerland
⁴ Beijing Normal University, Dept. of Psychology, China

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*Requests for reprints should be addressed to Prof. Andreas Maercker, Division of Psychopathology & Clinical Intervention, Binzmuhlestr. 14/17, 8050 Zurich, Switzerland (e-mail: maercker@psychologie.uzh.ch).
Objectives: The influence of cultural factors on mental health is not disputed in general – but elaborated research approaches are still lacking. We investigate cultural influences not only by nationality but also by value orientation (modern vs. traditional). A cross-cultural comparison with Chinese and German crime victims included an assessment of value orientation according to Schwartz’s (1994) theory of personal values.

Design: Chinese and German adult crime victims were assessed. By means of structural equation multi-sample analysis, data of the two groups were compared.

Method: Traditional (conformity, benevolence, customs orientation) and modern values (achievement, hedonism, stimulation), traumatic exposure, posttraumatic stress (PTS), and two self-perceived interpersonal mediator processes (disclosure intentions, social acknowledgment as a victim) were assessed by self-report measures in 130 Chinese and 151 German crime victims.

Results: The two patterns of prediction for PTS differed between the countries: in the German sample both value types but in the Chinese sample only traditional values were directly or indirectly predictive of PTS. Traditional values inhibited social acknowledgment as a victim in China and Germany. In Germany, traditional values were related to increased PTS severity. Modern values predicted social acknowledgment as well as lower symptoms in Germany, but not in China.

Conclusions: The study shows cultural and interpersonal factors that may contribute to the development of PTSD that are under-researched in contemporary psychology and psychotherapy.
Introduction

Research on the etiology of posttraumatic stress disorder (PTSD) has identified several biological and psychosocial factors that contribute to its development and maintenance. Among the variables that have rarely been investigated in PTSD research are cultural factors like cultural differences and cultural or individual values. Although the World Health Organization and other organizations have promoted cross-cultural research on other mental disorders (e.g., schizophrenia, depression, addiction) their main focus lay on comparisons of assessment and epidemiology across countries (e.g., WHO, 2005). Recently, one particular culture-bound influence system came to the attention of social scientists: human value orientations (Hofstede, 2003). Values tell members of a culture how people and society should be. One can assume that they also have an important influence on which concept of disease or illness prevails. In the following, a study with data on cross-cultural influences and personal values for posttraumatic stress symptoms will be presented.

Cultural differences and personal values

Cross-cultural comparisons traditionally consist of cross-country comparisons. In the area of PTSD, there are still only few empirical cross-country comparisons (for instance US – Mexico: e.g., Norris, Perilla, & Murphy, 2001, US – Cambodia: e.g. Kinzie, Duane, Riley, et al., 1998). Such studies usually conclude that the DSM-derived construct of PTSD was by and large replicable in the different countries investigated, indicating common underlying processes. If particular differences appear, it is difficult to incorporate them in a theoretical model.

The theory of human values (Schwartz, 1994) defines values as guiding principles to the functioning of people or society across different contexts. Schwartz and Bilsky (1990) proposed a nomenclature of ten value dimensions derived from universal requirements of the human condition and validated in cross-cultural research projects (Table 1). Each value dimension is defined in terms of its central goal (i.e., the desired end state to which it is directed). For purposes of the present study and to decrease complexity, it is possible to aggregate six of the ten values to higher-order traditional vs. modern values (Maercker, 2001, 2004). Traditional values stress collectivism, submissive self-restriction, preservation of traditional practices, protection, and stability. Modern values represent motivations to pursue one's own success and dominance over others or gratification for oneself.
How are these value orientations related to psychiatric symptoms, i.e. to posttraumatic stress (PTS) symptoms? As seminal research by Kleinman and Kleinman (1985) in Chinese society suggested, it can be predicted that traditionally oriented individuals will focus relatively less on the expression of emotion relating to aversive personal experiences. Modern values, by contrast, as expressions of individualism and personal gratification, may lead to extended presentations of individual suffering or impairment.

Due to the huge development of former developing countries such as China, it can no longer be presumed that only traditional values predominate in such countries. Similarly, it cannot be assumed that only modern values are present in developed countries; rather, there are different mixes of value orientations in all countries (Schwartz, 2007, Zhang, 2005). Therefore, we can expect that a comparison between countries, which was previously termed “cross-cultural”, is nowadays much more complex. Thus, in addition to the country comparison, the value dimension should also be included.

In addition to the reason that important findings were already available in terms of psychiatric theory building (cf. Kleinman & Kleinman, 1985), we chose China because it is undergoing a fast transition process, and it is only recently that Chinese society has begun to acknowledge psychological suffering after trauma or indeed the “official” diagnosis of PTSD. Colleagues in the Chinese medical system often report resistance or a lack of understanding toward trauma victims, in line with the traditional saying “Master your life with a smile or you don’t master it at all.” The perception of traumatic stress effects has started to change in China, however, as indicated by a number of recent publications on PTSD (Wu & Chan, 2003, Yuan & Maercker, 2007).

By contrast, in Germany, the introduction of the PTSD diagnosis in the 1990s occurred against a backdrop of supportive societal attitudes towards people suffering from mental problems. During the last few decades, the recognition that people who suffer from terrible experiences need people to listen to their story (cf. the saying “to get something off your chest if something bad happens”) has become widely accepted.

Mediators between cultural influences and PTS

PTSD can develop after victimization if a variety of vulnerabilities or resource losses are predominant. In addition to known biological and neuropsychological factors (e.g., cortical/subcortical stress circuits, impaired biographical memory), social or interpersonal factors can be seen as candidates for mediating between cultural variables and the extent of PTS symptoms. Social support has proved to be one of the strongest predictors of PTSD
(Brewin, Andrews, & Valentine, 2000, Ozer, Best, Lipsey, & Weiss, 2003), and is proposed to have an impact on PTS via various influences, e.g. the victim’s management of early symptoms or protection of the victim against subsequent difficulties.

In recent research, we investigated particular processes of self-perceived social support in PTS or PTSD: social acknowledgment as a victim and victims’ disclosure intentions with respect to the traumatic experiences (Maercker & Mehr, 2006, Maercker & Müller, 2004, Müller, Mörgeli & Maercker, 2008). Both processes involve the societal reactions that influence the victims’ emotional adjustment following traumatic events. Social acknowledgment is a victim’s experience of positive reactions from society that show recognition of the victim’s unique state and acknowledge their current difficult situation (Maercker & Müller, 2004). Disclosure of traumatic experiences has long been regarded in general as a phenomenon that leads to recovery (Pennebaker & Seagal, 1999). However, in severely traumatized persons in the real world, this simplistic assumption has failed to produce any evidence (Batten, Folette, Rasmussen-Hall, & Palm, 2002, Brown & Heimberg, 2001, Gidron, Peri, Conolly, & Shalev, 1996, Zech & Rime, 2005), leading to further conceptual differentiations of the disclosure phenomenon. For example, we found that the degree of an intention to disclose (or inner pressure to disclose) traumatic experiences is related to higher levels of PTSD (Müller et al., 2008), and indeed also assume this effect to correlate with the disorder in the current study.

In the statistical model of this study, we include the following variables in a comparative analysis of the two national samples: (a) value attitudes (traditional vs. modern); (b) trauma exposure or trauma dose, a commonly used basic predictor of posttraumatic reactions (King et al., 2000); (c) the interpersonal variables social acknowledgment and disclosure intentions, and (d) posttraumatic stress symptoms.

Our study investigates the following research questions:

- Do the two countries show different patterns of predictor variables for PTS symptoms? If so, what are the main differences between predictive patterns in China and Germany?
- Are traditional values related to higher posttraumatic stress, either directly or indirectly (i.e., predicting lower social acknowledgment as a victim or higher disclosure intentions)?
- We assume modern values to be specifically related to higher social acknowledgment as a victim. Furthermore, we ask if this effect is especially pronounced in the German sample?

**Methods**

**Participants**
We chose crime victims because they are more conveniently assessable than other trauma victims in the two countries. Inclusion criteria for the study were: (i) experience of a robbery and/or physical attack regarded as a criminal offence; (ii) the incident took place between 3 and 14 months before the beginning of the study; (iii) participants were older than 18 and younger than 65 years.

**German Sample**: 175 crime victims were randomly selected from 600 eligible cases of a large German legal aid organization for crime victims (“Weisser Ring”) from all over Germany. Self-report questionnaires were administered to these 175 individuals. In total, 151 (86.3%) usable questionnaires were returned. The mean age was 44.2 years (SD = 17.6, range 16-90 years), and 40% of the respondents were male. 22% were married, 10% were widowed, and 68% were single or divorced. 42% had completed eight or fewer years of schooling, 35% had completed ten years of schooling, 13% had graduated from the academic-track Gymnasium, and 10% had a university degree.

A total of 53% of the participants had experienced bodily injury inflicted by strangers, 29% armed robbery with or without bodily injury, and 18% physical violence in relationships. Weapons were used in 58% of cases. On average, the assessment took place 5.30 months (SD = 1.67, range 2–14 months) after the traumatic event.

**Chinese Sample**: Names and contact information of crime victims were taken from patient records in hospital emergency wards or from the records of women’s aid institutions and the police headquarters in two Chinese cities (the capital Beijing and Ürümqi in Xinjiang province). A minority of respondents were recruited through advertisements on the Beijing Normal University’s website. Self-report questionnaires were administered to around 400 eligible persons. 144 (approx. 36%) questionnaires were returned, of which 130 were usable. The mean age in this sample was 31.7 years (SD = 10.2, range 17-68 years), and 56% of the respondents were male. 52% were married, 2% were widowed, and 46% were separated or divorced. 22% had completed primary school education or less, 30% had completed secondary school education, and 48% had graduated from so-called upper secondary education or had a college degree.

A total of 39% of participants had experienced bodily injury inflicted by strangers, 23% armed robbery with or without bodily injury, and 30% physical violence in relationships (data on the crime category were missing for 8% of respondents). On average, the assessment took place 3.42 months (SD = 2.91, range 2–14 months) after the traumatic event.

The two samples did not differ in their distribution of crime categories ($\chi^2=4.62$; df=2; $p<.09$). They did differ in terms of mean age ($F=50.33$; df=1; $p<.001$) with lower mean age in
the Chinese sample, gender ($\chi^2=6.95; \text{df}=1; p<.01$) with more men in China, and education ($\chi^2=49.89; \text{df}=2; p<.001$) with more college-educated Chinese participants.

Procedure

The 12-page questionnaire booklet devised and piloted in the present study began by informing respondents that participation in the survey was entirely voluntary. After a first section assessing demographic information, traumatic event exposure was measured using a procedure developed and tested in previous research (Maercker, Beauducel, & Schützwohl, 2000). Respondents’ scores on the 4 items “degree of physical violence,” “use of weapons,” “severity of injury,” and “subsequent need for medical assistance” were added up and divided by four; the resulting trauma exposure scale showed a sufficient consistency (Cronbach’s alpha = .77). Posttraumatic stress symptoms were measured by the Intrusion, Avoidance, and Hyperarousal subscales of the Impact of Event-Scale—Revised (IES-R) (Weiss & Marmar, 1997; German version: Maercker & Schützwohl, 1998; Chinese version: Wu & Chan, 2003). The validity of the IES-R has been established in previous research (Maercker & Schützwohl, 1998, Wu & Chan, 2003).

Social acknowledgment as a victim or survivor was measured by the SAQ (Maercker & Müller, 2004; the Chinese translation was carried out by Jiangping Wang in collaboration with Andreas Maercker and Julia Müller using the back-translation procedure). This instrument assesses the degree to which affected persons feel validated and supported by their social network following a traumatic event. The 16 items of the measure are clustered into the three subscales of Recognition, General Disapproval, and Family Disapproval. Previous research has shown the SAQ to have good psychometric properties (Cronbach’s alpha = .86) in German samples (Maercker & Müller, 2004). The Cronbach’s alpha of the Chinese translation was .76.

The Disclosure of Trauma Questionnaire (DTQ, Müller et al., 2008; the Chinese translation was produced in the same way as the SAQ) measures a person’s subjective intentions and desire to tell others about the traumatic events, and the perceived repercussions of doing so. The 34-item self-report questionnaire comprises the three subscales Urge to Talk, Emotional Reactions during Disclosure, and Reluctance to Talk. Previous research has shown the measure to have good reliability and validity (Cronbach’s alpha = .88) in German samples (Müller et al., 2000). The Chinese translation had a Cronbach’s alpha of .86.

Value attitudes were assessed on the basis of Schwartz’s value theory (Schwartz & Bilsky, 1990), which has been widely adopted in social psychology. The Portrait Values
Questionnaire (PVQ: Schwartz et al., 2001; German Version: Hinz et al., 2005; Chinese translation by Jiangping Wang in collaboration with Shalom Schwartz using the back-translation procedure) comprises 40 items grouped into 10 scales. Each item describes a person in two sentences (“portrait”). Respondents are asked to assess how similar to the portrait person they are. Answers range from “very similar” to “very dissimilar”, coded from 1 to 6. The 10-value orientation scales are arranged in a circumplex model validated by multidimensional scaling (Schwartz et al., 2001). The traditional values sum score was obtained by summing the PVQ scales of conformity (restraint of actions that may harm others), tradition (respect for and commitment to cultural customs and ideas), and benevolence (enhancing the welfare of people to whom one is close), which are directly adjacent on the circumplex. The modern values sum score was obtained by summing the adjacent PVQ scales of stimulation (excitement, challenge, and novelty), hedonism (pleasure or sensual gratification), and achievement (personal success according to social standards). The traditional values sum score had Cronbach’s alphas of .74 in the German sample and .70 in the Chinese sample. The modern values sum score had Cronbach’s alphas of .77 in the German sample and .71 in the Chinese sample.

**Statistical analysis**

To test two different predictive patterns across and within countries, we used multi-sample analysis (MSA, Schumacker & Lomax, 1996). This procedure makes it possible to test whether or not a proposed pattern of relationships is invariant across samples in a common analysis (statistical packages Lisrel 8.54, Prelis 2.30, Jöreskog & Sörbom, 1996).

In a first step, a recursive path model was derived from the previously specified theoretical model and then tested in both samples separately (Byrne, 1998). In preparation for the first step, the covariance structure was simplified, assuming the observed and latent variables to be identical (Anderson & Gerbing, 1988) (see variance and covariance matrix in Appendix). Next, variables were normalized using the PRELIS algorithm (Jöreskog & Sörbom, 1996), because the assumption of multivariate normality was found to be violated in the sense that skewness and kurtosis in the univariate analysis already contradicted normality. Further examination of the data showed that the variances of the value or exposure variables and were substantially larger than those of the interpersonal or symptom variables. Therefore, a linear transformation of the former variables was performed by dividing the raw scores by 10.
In step 2, intercultural differences were tested using MSA with nested models. We tested the following statistical hypotheses in a stepwise manner with the respective models:

H1: There are sample differences with respect to all relations.
H2: There are sample differences with respect to the relations within the value and trauma exposure variables and the directed effects of the two interpersonal and PTS variables, while all other parameters are invariant.
H3: There are sample differences with respect to the relations within the value and trauma exposure variables and their directed effects towards the two interpersonal and PTS variables, while all other parameters are invariant.
H4: There are sample differences with respect to the relations within the value and trauma exposure variables, while all other parameters are invariant.

The base model (H1) assumes only equal variable relations; therefore, all parameters are estimated without any constraints. In order to find the model which best represents the common path structure for both countries, several paths were restricted subsequently (H2, H3, and H4). These models are nested in model M1 and presume invariance of directed effects. All these models have a chi-square distribution. Chi-square difference tests were conducted to decide which model best represented the common structure for both ethnic subgroups. When the chi-square difference between two nested models is significant, it means a significant deterioration of that model by a more restrictive hypothesis. In such a case, the model with the lowest number of degrees of freedom is used (Jöreskog & Sörbom, 1996). We used the following indicators of fit: a chi-square/degrees of freedom ratio less than 3, a Root Mean Square Error of Approximation (RMSEA) less than .08, comparative fit index (CFI), and nonnormed fit index (NNFI) values greater than .90.

Results

Variable means and comparisons across countries for the aggregated value categories and PTS symptoms are given in Table 2. Distributive values of trauma exposure, social acknowledgment, and disclosure intentions in the two samples are reported elsewhere (Müller, Orth & Maercker, submitted) because they are not of substantial importance for answering the outlined current research questions.

To address the question of whether the two countries show different patterns of prediction of PTS, we tested hypotheses H1 to H4 successively. The fit statistics of H1 were already very sufficient, meaning that this model can be accepted (table 3--first line). Subsequent
testing of H2 to H4 provided support for retaining the H1 model (table 3--second to fourth lines).

Please insert table 3 about here

None of the alternative models could be accepted, and therefore had to be rejected, meaning that there were no unequal relations between any of these variables.

Results of the significant loadings (p <0.05) of the MSA for two countries are shown in Figure 1. If one takes only these significant loadings or predictive relationships into account, four relationships are similar: traditional values negatively predict social acknowledgment; trauma exposure positively predicts disclosure intentions; social acknowledgment negatively predicts disclosure intentions; and disclosure intentions positively predict PTS—with the latter prediction stronger in the German (γ = .60) than the Chinese sample (γ = .47).

The two country samples differ, with the modern and traditional values being significantly interrelated in China (φ = .30) and not in Germany (φ = .15, n.s.). Furthermore, in the German sample, traditional values directly positively predict PTS symptoms and modern values positively predict social acknowledgment. Additionally, in the Chinese sample, trauma exposure directly positively predicts PTS.

Please insert Figure 1 about here

**Discussion**

The leading question “How are traditional vs. modern value attitudes, self-perceived interpersonal factors and posttraumatic stress reactions are related?” will be addressed following the discussion of the three research questions. For the following statements we speculated on directionality of relationships between variables as justified by our use of structural equation modeling. However, the cross-sectional design leaves the way in which the variables interact open.

Firstly, we found that the patterns of relationship differ significantly between the victim samples in the two countries. While in the German sample, both value groups (traditional and modern) have an influence on the subsequent prediction cascade, in the Chinese sample primarily only the extent of traditional values has a significant influence. For instance, in the German sample, a higher degree of the values conformity, tradition and benevolence (in sum: traditional values) is associated with increased PTS symptoms and low social acknowledgement as a victim, while in the Chinese sample, these values only lead to a diminished acknowledgement as a victim. In the Chinese sample, a significant predictive share of the PTS symptoms comes from the trauma exposure, while this is not the case in the
German victims. In terms of the first question, it can be concluded from these findings that the culture or country to which a victim belongs makes a difference in terms of the presence of PTS symptoms. Together with the finding of lower PTS symptoms in the Chinese sample, this indicates that people who have experienced the same degree of criminal victimization show a different extent of PTS symptoms in the two countries as well as a different composition of predictive factors for posttraumatic stress. Accordingly, a person who has experienced an armed robbery (approx. ¼ in both samples) would show a differing degree of PTS depending on which country they are from, which in turn can be explained by a differing degree of feeling acknowledged as a trauma victim and a differing inner pressure to disclose.

Secondly, as expected, we found traditional values to be predictive for PTS symptoms. In both countries, an indirect path towards higher PTS was prominent: higher traditional values were related to lower social acknowledgment as a victim (e.g. “people who believe more in an obligation toward others will themselves not feel singled out as weak victims”). This low feeling of social acknowledgement was accompanied by a higher inner pressure to tell others about the trauma, and this resulted in higher PTS. Moreover, in Germany, where even the mean values for traditional values were higher than in China, it was apparent that these traditional values were directly associated with higher PTS symptoms. The general finding of effects of traditional values is in line with previous research showing that trauma victims are more likely to feel socially excluded, and even blamed for their fate, in traditional groups (Bennett-Herbert & Dunkel-Schetter, 1992).

One conclusion to be drawn from this is that traditional value orientations – whether in Eastern countries like China or Western countries like Germany – are related to mental disorders. This is counterintuitive, as the widespread popular assumption is that traditionally oriented people have better mental health (cf. Kleinman & Kleinman, 1985).

Thirdly, as expected, the influence of modern values does appear to have a positive effect on the self-perception of being socially acknowledged as a victim. However, this only applies to the German sample. Modern values and believing that the acknowledgement of trauma exposure is socially acceptable, is related in a German sample but not in a Chinese sample. In other words, a high degree of the values of achievement, hedonism and stimulation are linked to people believing that other people acknowledge them as trauma survivors.

A possible illustration of this is the case of an achievement-oriented young woman who is traumatized by an attack, can no longer continue with her career, and can therefore successfully claim victim status. Modern values, which frequently serve purposes of individualism, are often seen critically in public discourse. However, they might also be
discussed as a product of “rational enlightenment”, and their association with feeling accepted as a victim can be seen in positive terms (cf. Ricoeur, 2005). Modern value orientations therefore seem not bad for mental health.

Finally, the more general question “How are personal values (...) and posttraumatic stress reactions are related?” is to be answered. The indirect paths from traditional values to PTS in both samples suggest, that there may be a stronger influence of traditional than modern values in an increasingly modernizing Chinese society, than in a more modern German society. The direct path from traditional values to PTS severity in only the German sub-group, suggests that in a more modern society, traditional values may predispose trauma victims to experience greater distress. On the other hand the direct relationship of trauma severity to PTS severity (only in the Chinese sample) suggests that the typical dose-response finding (increasing trauma severity associated with increased PTS severity) may be more likely in a society in which acknowledgement is still lagging. This may be less the case in a society where acknowledgement is more normative. These findings are noteworthy but nonetheless require further research to be confirmed. A key implication of the research is that no universal effect of a single "culture" or "nationality" was found with regard to trauma survivor responses. Rather their society's recognition of trauma and their individual personality characteristics may contribute to the "co-constructing" (Baltes, Reuter-Lorenz, & Rössler, 2006) of the individual's traumatic stress symptoms.

The influence of value orientations on clinical problems has only rarely been examined up until now (Boehnke, Stromberg, Regmi et al., 1998, Maercker, 2001). In a previous study using a secondary data analysis of two independent data sets by the WHO and value researchers in eleven countries, it was shown that up to 50% of the variance of different prevalences of ICD-10 diagnoses (depression, generalized anxiety disorder, alcohol dependency) could be explained by cultural values (Maercker, 2001, 2004). This previous study suggested that particular value patterns are specific to psychiatric disorders. A clinical implication of studies on personal values and disorders needs to incorporate culturally sensitive approaches to interventions (prevention, psychotherapy or rehabilitation) as has been exemplarily proposed for PTSD (e.g., Bryant & Njenga, 2006). The promotion of value research within clinical psychology is worthwhile. Further research is needed to explore how personal values and personality styles are intertwined, e.g., traditional “values” may involve greater introversion and constriction, while modern “values” may involve more openness and extraversion, among other possibilities.
There are several important limitations to the present study. First—as already mentioned—given the cross-sectional nature of the data, conclusions on real causality cannot be drawn. Although our path models fit the data, only experimental or longitudinal studies can provide firm confirmation of causal or conditional relationships. Second, the two samples differ on demographic features, with the Chinese sample being somewhat younger, including a higher proportion of males, and probably better educated (the latter may be somewhat compensated by different educational systems in the two countries). However, control analyses appropriate to extend the elaborate multi sample analysis (MSA, a recent development of path analysis) we conducted are not available (Tabachnick and Fidell, 2007). Unfortunately, MSA which is the only reliable mean to test path analytic differences across samples does not allow controlling for variables not specified in the model (e.g., gender or age). Further analyses should use revised multivariate statistics to control for probable confounds. Consequently, findings of the current analyses could be (co-)determined by the demographic sample differences. Furthermore, rural participants were included in the German convenience sample through the help of the Weisser Ring legal aid organization but were not included the Chinese sample. Third, the data were obtained exclusively by self-report. This method has certain advantages for cross-cultural research (e.g., the measures are economical and easy to administer). However, self-report measures may fail to capture posttraumatic stress disorder and interpersonal processes in their full complexity. Forth, the different subgroups of trauma-victims (i.e., domestic violence, other violence) were taken together in the analyses mainly due to power problems. Lastly, other traumatic exposure in the biographies of participants have not been assessed (neither prior to or since the index crime victimization) – although this should be considered as it may shape individuals personal values and interpersonal attitudes.

In conclusion, the present study tries to contribute to a more culturally oriented research agenda by incorporating personal value assessments associated with the development and persistence of mental disorders like PTSD.
References


Table 1. Definition of value dimensions from basic human values theory (Schwartz et al., 2001)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universalism</td>
<td>Understanding, appreciation, tolerance, and protection for the welfare of other people</td>
</tr>
<tr>
<td>Benevolence</td>
<td>Perservation and enhancement of the welfare of people with whom one is in frequent personal contact</td>
</tr>
<tr>
<td>Conformity</td>
<td>Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms</td>
</tr>
<tr>
<td>Customs orientation*</td>
<td>Respect, commitment, and acceptance of customs and ideas that traditional cultures or religion provide</td>
</tr>
<tr>
<td>Security</td>
<td>Safety, harmony, and stability of society, relationships, and the self</td>
</tr>
<tr>
<td>Power</td>
<td>Social status and prestige, control or dominance over people and resources</td>
</tr>
<tr>
<td>Achievement</td>
<td>Personal success through demonstrating competence according to social standards</td>
</tr>
<tr>
<td>Hedonism</td>
<td>Pleasure and sensuous gratification for oneself</td>
</tr>
<tr>
<td>Stimulation</td>
<td>Excitement, novelty, and challenge in life</td>
</tr>
<tr>
<td>Self-direction</td>
<td>Independent thought and action-choosing, creating, exploring</td>
</tr>
</tbody>
</table>
Table 2. Means and standard deviations of personal values and PTSD symptoms in the German and Chinese samples

<table>
<thead>
<tr>
<th></th>
<th>German sample (N = 151)</th>
<th>Chinese sample (N = 130)</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Traditional values</td>
<td>4.11</td>
<td>0.83</td>
<td>2.97</td>
</tr>
<tr>
<td>Modern values</td>
<td>3.63</td>
<td>0.99</td>
<td>3.16</td>
</tr>
<tr>
<td>PTSD severity</td>
<td>24.05</td>
<td>7.38</td>
<td>10.76</td>
</tr>
</tbody>
</table>

*** p < .001

Note: Means and standard deviations of other variables, see: Müller et al. (submitted)
Table 3. Test values of four separate mult-sample analyses (description of models H1 to H4, see text)

<table>
<thead>
<tr>
<th></th>
<th>$\chi^2$(df)</th>
<th>p</th>
<th>$\chi^2$diff(df)diff</th>
<th>RMSEA</th>
<th>NNFI</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>2.47 (2)</td>
<td>0.29</td>
<td>---</td>
<td>0.04</td>
<td>.97</td>
<td>1.00</td>
</tr>
<tr>
<td>H2</td>
<td>29.24 (14)</td>
<td>0.001</td>
<td>-26.77**</td>
<td>0.09</td>
<td>.83</td>
<td>.92</td>
</tr>
<tr>
<td>H3</td>
<td>22.54 (7)</td>
<td>0.002</td>
<td>-20.07**</td>
<td>0.13</td>
<td>.67</td>
<td>.92</td>
</tr>
<tr>
<td>H4</td>
<td>32.03 (16)</td>
<td>0.012</td>
<td>-29.56**</td>
<td>0.084</td>
<td>.85</td>
<td>.92</td>
</tr>
</tbody>
</table>
Fig. 1 Significant predictions of variables of the final MSA for the two samples

Germany

China

Modern values

Traditional values

Trauma exposure

Social Acknowledgment

Disclosure intentions

PTSD
Appendix. Variance and covariance matrix (above the diagonal) and correlation matrix (below the diagonal) obtained in the German (N = 151; value on the left) and the Chinese sample (N = 130; value on the right)

<table>
<thead>
<tr>
<th></th>
<th>Mod. Values</th>
<th>Trad. Values</th>
<th>Trauma Exp.</th>
<th>Soc. Acknowl.</th>
<th>Disclos. Intent.</th>
<th>PTSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mod. Values</td>
<td>.98 / .61</td>
<td>.11 / .19</td>
<td>.06 / -.04</td>
<td>3.04 / -.96</td>
<td>-.46 / -.04</td>
<td>-1.46 / -.45</td>
</tr>
<tr>
<td>Trad. Values</td>
<td>.13 / .36**</td>
<td>.69 / .45</td>
<td>-.11 / -.01</td>
<td>-3.41 / -2.04</td>
<td>1.67 / .17</td>
<td>.73 / .16</td>
</tr>
<tr>
<td>Trauma Exp.</td>
<td>.07 / -.05</td>
<td>-.14 / -.02</td>
<td>.90 / .71</td>
<td>.22 / .95</td>
<td>1.33 / 1.66</td>
<td>1.56 / 1.71</td>
</tr>
<tr>
<td>Soc. Acknowl.</td>
<td>.20 / -.12</td>
<td>-.26*/ -.30**</td>
<td>.02 / .11</td>
<td>212.48/111.36</td>
<td>-50.46/-13.11</td>
<td>-48.48 / -3.77</td>
</tr>
<tr>
<td>Disclos. Intent.</td>
<td>-.07 / -.01</td>
<td>.28** / .04</td>
<td>.19* / .28**</td>
<td>-.48** / -.18*</td>
<td>56.93 / 49.22</td>
<td>33.81 / 28.01</td>
</tr>
<tr>
<td>PTSD</td>
<td>.20* / -.08</td>
<td>.12 / .03</td>
<td>.19* / .27**</td>
<td>-.45** / -.05</td>
<td>.61** / .53**</td>
<td>54.49 / 57.58</td>
</tr>
</tbody>
</table>

** p < 0.01; * p < 0.05