



## Cultural differences in personal identity in post-traumatic stress disorder

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**Objectives.** This study investigated cultural differences in goals, self-defining memories, and self-cognitions in those with and without post-traumatic stress disorder (PTSD).

**Method.** Trauma survivors with and without PTSD, from independent and interdependent cultures ( $N = 106$ ) provided major personal goals, self-defining memories, and self-cognitions.

**Results.** Trauma survivors with PTSD from independent cultures reported more goals, self-defining memories, and self-cognitions that were trauma-related than non-PTSD trauma survivors from independent cultures. In contrast, for those from interdependent cultures, there was no difference between trauma survivors with and without PTSD in terms of trauma-centred goals, self-defining memories, and self-cognitions.

**Conclusions.** The results suggest cultural variability in the impact of trauma on memory and identity, and highlight the need for contemporary models of PTSD to more explicitly consider culture in their accounts of PTSD. Clinical implications of these findings, such as cultural considerations in assessment and treating trauma relevant self-schema in cognitive therapy for PTSD, are discussed.

A growing number of recent observations have suggested a significant connection between alteration in self-concept and personal identity following trauma and post-traumatic psychological adjustment. McNally, Lasko, Macklin, and Pitman (1995) noted that the self-presentations of some veterans with PTSD were intimately connected with memories of themselves as servicemen. Importantly, these veterans had difficulties in retrieving specific autobiographical memories of positive events and were more likely to recall personal memories of their service experience. Their identity and personal memories had become trauma-centred. Sutherland and Bryant (2006), using a self-defining memory task, found that PTSD participants reported themselves as being more strongly defined or identified by their trauma than those who do not develop PTSD. Further, they found that retrieval of trauma-related self-defining memories was strongly

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associated with reporting trauma-related personal goals. Byrne, Hyman, and Scott (2001) found, using a sample of female undergraduate students who reported having had a traumatic event, that the degree to which the trauma memory was rated as important for self-understanding was positively related to the severity of symptoms on a PTSD checklist. Berntsen and Rubin (2006, 2007) have repeatedly demonstrated a significant positive correlation between the traumatic memory forming a central component of personal identity and self-reported severity of PTSD symptoms.

Berntsen and Rubin (2006, 2007) posit that self-change occurs because memories of the trauma are highly accessible and easily evoked, and hence, the trauma event becomes perceived over time as 'a major causal agent' (in the life story or autobiographical self) and 'thus a highly salient turning point in the person's life' (2006, p. 221). Typically, turning points are culturally expected transitional events that provide self-definition or change in self-definition through role change (e.g. choice of career, marriage, birth of first child). The perception of the trauma event as a turning point together with the requirement for an '*internal consistency of the life story*' (2006, p. 221, italics added) results in the role of trauma victim or survivor, becoming salient and the important component of identity. Maintenance of this trauma-centred identity is thought to be the consequence of 'culturally sanctioned role transitions' and 'personal identification with the social roles that are culturally expected' (2007, p. 420). In a similar way, Conway's self-system model (Conway, 2005; Conway & Pleydell-Pearce, 2000) suggests that incongruence between the trauma event and the existing self-definition or identity (the conceptual self in Conway's model) motivates change. Conway describes examples where the self-system's response to trauma is to 'lower the accessibility of memories of the events' or 'even distort (the) memories' (Conway, 2005, p. 599). The model suggests, as well, that over time self-consistency may need to be maintained by alteration in the person's self-construct, leading to the development of a self-identity centred on being a victim of trauma or emphasizing self-change since the event. For Conway, any change in the conceptual self will be motivated by a drive for self-coherence and will be based on goals consistent with existing goals of the conceptual self. In other words, change in the conceptual self following trauma most likely occurs when goals activated by the trauma event match existing goals in the person's goal hierarchy.

In both of these accounts, self-change is motivated by a need for self-coherence and self-consistency. A number of cross-cultural researchers have argued (Suh, 2000, 2002) and shown (Kanagawa, Cross, & Markus, 2001), however, that self-consistency needs are culturally variable. Suh (2000) claims that an internally coherent self-identity is essential for mental health in independent cultures. Hence, a person need 'integrate the various components of the self and be consistent across situations', (p. 67). Information inconsistent with this congruent self must go through repair work to align such information with the self. This coincides well with independent cultures' emphasis on autonomy, as the individual rather than the situation is the anchor of behaviour, thoughts, and feelings, and the decontextualized self uses internal sources to guide behaviour and derive its meaning and purpose. Suh suggests that this is not the case in interdependent cultures where the focus is the social context rather than on the person. People from interdependent cultures are much more capable of flexibility between social roles and tolerant of differences in their self in these roles.

Furthermore, Berntsen and Rubin's suggestion for a role for culture in the maintenance of trauma identity through the action of social sanctions or expectations on trauma-focused self-identity and Conway's argument for a matching of

trauma-specific goals to existing goals, predict stronger maintenance of a trauma-related self-concept in independent cultures. Typical attributes and associated goals linked with individualism are independence, autonomy, agency, self-reliance, uniqueness, and achievement orientation (Green, Deschamps, & Paez, 2005). In these cultures, promoting the self by means such as publicizing the individual's life story, personal identity, and uniqueness, mastery or lack of mastery are accepted, valued and culturally sanctioned (e.g. Wang, 2001). Summerfield (2004) posits that in such cultures the private self and individual emotion/vulnerability is emphasized following trauma. Therefore, the social role of trauma survivor/victim aligns with independent cultural expectations. However, interdependent culture is associated with a sense of duty towards one's group, interdependence with others, a desire for social harmony, conformity to social norms, and roles and status defined within the group (Green *et al.*, 2005; Sato, 2001). Discussing the individual's life story, personal identity, and uniqueness may be viewed as abnormal, immature, or arrogant, i.e. culturally inappropriate (Sato, 2001; Suh, 2000). These cultures downplay the independent self in favour of the communal self (Nelson & Fivush, 2004; Wang, 2001) and collective activities are valued over a unique life story (Wang, 2001). Therefore, the social role of trauma survivor/victim contradicts the interdependent cultural expectations of a communal self. On the other hand, an emphasis on the communal self may also result in less acknowledgement, tolerance, discussion and in turn assistance of trauma survivors of particular trauma types that disrupt the group and community, such as rape and domestic violence. Members of interdependent cultures may have reason to suppress trauma-related cognitions pertaining to such trauma types due to these cultural sanctions.

In our previous work (Jobson & O'Kearney, 2006), we found support for a culture distinction in self-change following trauma. Specifically, while we replicated earlier findings that stronger self-definition centred on trauma was positively related to the severity of post-traumatic symptoms it was found that this was the case for Australians (independent culture) but not for Asians (interdependent culture). There was no relationship between trauma-centred self-definition and post-traumatic symptomatology in the Asian group. However, the ecological validity and clinical implications that could be drawn from that study were limited. The participants were students with trauma exposure but few would have met the criteria for PTSD; as outlined in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* (American Psychiatric Association, 1994), we used only one measure of self-concept or identity (self-defining memory task) and based our cultural groupings solely on ethnicity without a validating measure of independence/interdependence.

The current study tests the prediction that self-concept dominated by the trauma event will differentiate PTSD sufferers and those without PTSD from an independent-orientated culture but will not differentiate PTSD and non-PTSD trauma survivors from interdependent-orientated cultures. We test these predictions by asking trauma survivors from independent and interdependent cultures with and without PTSD to provide personal goals, self-defining memories, and self-cognitions. We hypothesize that those from independent cultures with PTSD will have significantly more trauma-themed goals, self-defining memories, and self-cognitions than those from independent cultures without PTSD. However, those from interdependent cultures with PTSD will not describe a trauma-themed self-concept and hence will not differ from those from interdependent cultures without PTSD, regarding trauma-centred goals, self-definition, and self-cognition.

## Method

### Participants

All participants ( $N = 106$ ) were recruited from the general community by posters in public places, advertisements in local and ethnic newspapers, Adult Migrant English Programs and contacts with ethnic organizations and communities, and organizations that provide treatment for trauma survivors. The researchers promoted the study in places where people with a high probability of having a *DSM-IV* (1994) PTSD Criteria A trauma experience would be reached (i.e. refugee communities, victims of crime, etc.). Criteria A requires that an individual be exposed to a potentially traumatic event in which 'the person has experienced, witnessed, or been confronted with an event that involved actual or threatened death or serious injury . . . to oneself or others' and 'the person's response involved intense fear, helplessness, or horror' (*DSM-IV*, 1994, pp. 427–428). Notices called for those who had experienced a traumatic event and identified the study as researching trauma, memory, and culture. Participants received a \$20 supermarket voucher for their participation.

### Measures

#### *Post-traumatic stress disorder status*

Post-traumatic stress disorder was diagnosed using the Post-traumatic Stress Diagnostic Scale (PDS; Foa, Riggs, Dancu, & Rothbaum, 1993). The PDS was developed to provide a brief self-report instrument to assist with the diagnosis of PTSD. The PDS has four parts. Parts I and II contain trauma screening questions which correspond to *DSM-IV* (1994) PTSD Criteria A. Part III contains 17 items each corresponding to the Criteria B through Criteria D. Participants are asked to rate these items, for the past month, on a 4-point scale ranging from 0 (*not at all*) to 3 (*almost always*). A symptom is considered to be present if it is scored 1 or higher. The ratings of the items are summed to calculate a total severity score. The PDS then ascertains duration of the symptoms (Criteria E) and impairment of functioning (Criteria F). To be considered a positive screen on the PDS, a participant must meet Criteria A, endorse a broad enough range of items to meet Criteria B (re-experiencing), C (avoidance), and D (increased arousal), have symptoms present for over 1 month, and indicate that the disturbances are causing significant impairment in functioning (i.e. a diagnosis of PTSD is only made if all the six *DSM-IV* criteria are endorsed. If one or more of the criteria is not met, a diagnosis of PTSD is not made). The PDS has adequate test-retest reliability, concurrent and convergent validity with other measures of psychopathology (including the Structured Clinical Interview; Spitzer, Williams, & Gibbon, 1987), and predictive validity (Foa *et al.*, 1993). The PDS has also been used in previous research with interdependent populations (e.g. Garcia, 2005).

#### *Trauma History Questionnaire*

To control for lifetime exposure to traumatic events, the Trauma History Questionnaire was used (THQ; Green, 1996). The THQ is designed to assess exposure to a wide range of potentially traumatic events (Green, 1996). A range of traumatic events in three areas is assessed: crime-related events, general disaster and trauma, and unwanted physical and sexual experiences (Green, 1996). The test-retest reliability of the THQ has been found to be moderate to high and the inter-rater reliability high (Mueser *et al.*, 2001). Furthermore, the THQ has also been used in interdependent cultures (e.g. Fiszman, Cabizuca, Lanfredi, & Figueira, 2005).

### *Depression*

Depression was measured using Part II of the Hopkins Symptom Checklist (HSCL-25; Derogatis, Lipman, Rickels, & Cori, 1974). The HSCL-25 Part II has 15 items that measure depression symptoms. Participants are required to indicate how much each symptom bothered or distressed them in the past week, including today from 1 (*not at all*) to 4 (*extremely*). The depression score is the average of the 15 depression items. The HSCL-25 depression score has been consistently shown in several populations to be correlated with major depression as defined by the *DSM-IV* (1994), has adequate psychometric properties (Derogatis *et al.*, 1974), and is regularly used in cross-cultural research (e.g. Mouanoutoua & Brown, 1995).

### *Demographics*

Participants were asked to disclose their age, gender, length of time in Australia, and ethnicity. Following this, they were asked to rate on a 10-point Likert-type scale from 1 (not at all) to 10 (extremely) how hard they found the study.

### *Self-concept measures*

*Goals.* Following other researchers' (e.g. Emmons, 1986; Sutherland & Bryant, 2006) measure of personal strivings, participants were instructed to 'Please complete the following in the space provided. Please provide 15 goals that you feel are important for you to achieve'.

*Self-defining memories.* Using Singer and Salovey's (1993) method, participants were informed that

A self-defining memory is a memory from your life that you remember very clearly, is important to you and leads to strong feelings, that may be either positive or negative, or both. It is the kind of memory that helps you to understand who you are and might be the memory you would tell someone else if you wanted that person to understand you in a more profound way. They are memories that you feel convey powerfully how you have come to be the person you currently are. Please briefly write down 5 self-defining memories.

*Self-cognitions.* The Twenty Statement Test (TST; Kuhn & McPartland, 1954) asks respondents to provide 20 statements in response to the question 'Who Am I?' Responses to the TST were used to quantify trauma-related self-cognitions and also as a measure of independent/interdependent orientation. Researchers have frequently used the TST to examine and control for cultural differences in the individual's sense of self (Bochner, 1994; Dhawan, Roseman, Naidu, Thapa, & Rettek, 1995; Ma & Schoeneman, 1997; Rhee, Uleman, Lee, & Roman, 1995; Verkuyten & Kwa, 1996; Wang, 2001; Watkins & Gerong, 1999). The 20 responses are coded into comparable categories of the independent-interdependent dichotomy. The TST has been found to have adequate inter-rater reliability, criterion validity, test-retest reliability (Kuhn & McPartland, 1954; Spitzer, Couch, & Stratton, 1973), content validity (Kuhn & McPartland, 1954), and concurrent validity (Spitzer *et al.*, 1973). Given the TST has been used to examine self-definition in previous research (e.g. Bigner, 1971), we have used the TST in this study to examine trauma-themed self-definition.

### **Scoring/coding system**

#### *Independence/interdependence*

The TST was coded for independence and interdependence. Each participant's self-cognitions were coded as referring to independent (private) or interdependent (collective or public) aspects of the self, in line with the definitions provided by Trafimow, Triandis, and Goto (1991) and Triandis (1989). Therefore, self-cognitions were coded as independent (private) if the responses referred to personal qualities, attitudes, beliefs, or behaviours that were not related to other people (e.g. 'I am kind', 'I am happy'). Self-cognitions were coded as interdependent if they were collective self-cognitions (responses concerning to particular groups or categories, e.g. 'I am Asian, woman, daughter') or cognitions pertaining to interdependence, friendship, and relationships or to the sensitivity of others (e.g. 'I am in love'). Each participant received an independent and interdependent score, which was the ratio of each type of self-cognition divided by the number of cognitions provided.

#### *Trauma*

Three independent trauma-themed ratios were developed – goals, self-defining memory, and self-cognitions. These ratios were formed by first coding each response as trauma-themed or not. To be coded as trauma-themed, the response had to be directly and clearly related to trauma or survival; for goals ('I want to survive', 'I want to get over the trauma', 'I never want to be abused again'), for self-defining memories (recalling a trauma event that is listed in Part 1 of the PDS' list of traumatic events; i.e. accident, natural disaster, non-sexual assault, sexual assault, military combat or war, child sexual abuse, imprisonment, torture or a life-threatening illness), and for self-cognitions ('victim', 'survivor', 'resilient', 'scared', 'damaged', 'a burns freak'). Secondly, the total number of trauma-themed responses was tallied for each participant. Then in order to control for possible differences in the number of responses provided on each measure, as not all participants provided the requested number of goals, memories, and self-cognitions, adopting Jobson and O'Kearney's (2006) previous approach, the total number of trauma-themed responses were divided by the total number of goals, self-defining memories, and self-cognitions retrieved, respectively, to provide a trauma-theme ratio for each measure.

### **Design and procedure**

Interested potential participants were sent a data package. The return rate was 42.4%. The data package contained a letter outlining the aims of the study, the instructions for participation and that if the participant decided to return the questionnaire they were giving their consent to having their questionnaire used in the study. The package also contained a reply paid self-addressed envelope so that the participants could return the questionnaire to the researcher and a voucher slip. The voucher slip required participants to enter their name and address and these slips were returned with the questionnaire in the reply paid envelope. However, once the voucher was sent to the participant, the slip was destroyed so the questionnaires were examined anonymously. Participants were informed of this in the letter. In the questionnaire, participants were asked to provide personal goals and self-defining memories in one sitting. They were then asked to complete the PDS, HSCL-25, THQ, TST, and demographics.

They were instructed that these tasks need not be done in one sitting and could be done at participants' own pace and time at home.

The participants were allocated to one of the two cultural groups based on their identified ethnicity. Participants' identified ethnicity was compared to Hofstede and Hofstede's (2004) categorization of cultures along the individualism/collectivism dimension (i.e. if the participant identified themselves as Australian they would be placed in the independent group whereas as a participant who identified themselves as Chinese would be placed in the interdependent group). Only cultures that could be clearly identified as individualistic or collectivistic were selected (i.e. cultures that are not distinctly individualistic or collectivistic were excluded). Two participants (both Spanish) were excluded based on this criterion. This allocation was then validated using the TST.

Participants who met *DSM-IV* (1994) PTSD Criteria A on the PDS were allocated to either the PTSD or no PTSD group based on their completion of the remaining sections of the PDS. Eight participants (five interdependent cultures) were excluded as they did not meet Criteria A. Following PDS scoring, if participants endorsed items that were consistent with a *DSM-IV* diagnosis of PTSD (i.e. all six criteria are met), they were allocated to the PTSD group.

### **Reliability**

A second independent rater who was Chinese coded 20% of responses. Raters were blind to the cultural group and PTSD status of participants. Discrepancies between raters were resolved through discussion. The mean Kappa coefficient of reliability for each condition was .89 for the TST independence/interdependence, .89 for trauma-themed goals, .81 for trauma-themed self-defining memories, and .94 for trauma-themed self-cognitions.

## **Results**

### **Group characteristics**

Group and participant characteristics are outlined in Table 1.

#### *Independence/interdependence*

The independent group provided significantly more independent and less interdependent statements on the TST than the interdependent group,  $t(104) = 3.89$ ,  $p < .01$ ,  $CI_{95} = .10, .31$ .

#### *PTSD severity and trauma exposure*

There were no cultural differences in terms of the PTSD symptom score on the PDS,  $F(1, 102) = 1.71$ ,  $p = .20$ . Those with PTSD scored significantly higher than those without PTSD,  $F(1, 102) = 204.91$ ,  $p < .01$ . The interaction was not significant,  $F(1, 102) = 3.16$ ,  $p = .08$ .

The independent group (11 accident, 6 natural disaster, 14 non-sexual assault, 8 sexual assault, 2 imprisonment/torture, 10 life-threatening illness, 6 other) did not differ from the interdependent group (6 accident, 4 natural disaster, 11 non-sexual assault, 4 sexual assault, 12 war/imprisonment/torture, 10 life-threatening illness, 2 other) in

**Table 1.** Means and standard deviations of group and participant characteristics

	Independent culture		Interdependent culture	
	PTSD (N = 26)	No PTSD (N = 31)	PTSD (N = 24)	No PTSD (N = 25)
Age – years	41.15 (12.30)	40.16 (14.12)	34.25 (14.18)	33.24 (12.91)
Gender	6 males	6 males	9 males	11 males
Length of time in Australia – years	36.78 (14.48)	34.94 (15.49)	5.49 (8.95)	7.22 (8.88)
Ethnic distribution (N)	Australian (17), Western European (7), American (1), New Zealand (1)	Australian (26), Western European (4), American (1)	S.E. Asian (5), African (5), Asian (5), Middle Eastern (5), Eastern European (4)	Asian (9), S.E. Asian (7), African (3), Middle Eastern (3), Eastern European (2), South American (1)
Self-reported task difficulty	5.05 (2.83)	4.81 (2.73)	5.92 (2.93)	4.49 (2.39)
TST				
Independent	0.75 (0.27)	0.64 (0.25)	0.52 (0.27)	0.45 (0.27)
Interdependent	0.25 (0.27)	0.36 (0.25)	0.48 (0.27)	0.55 (0.27)
PDS total score	26.80 (8.63)	3.06 (4.52)	22.25 (11.11)	3.76 (4.60)
THQ				
Crime-related	1.83 (1.75)	1.13 (1.26)	1.17 (2.14)	1.92 (2.69)
General disaster	4.40 (2.09)	3.26 (2.74)	3.83 (2.60)	3.72 (2.79)
Physical/sexual	1.53 (1.48)	0.68 (1.11)	0.83 (1.74)	0.64 (1.35)
HSCL-25 Depression	2.36 (0.59)	1.35 (0.45)	2.18 (0.51)	1.46 (0.39)

Note. Numbers in brackets denote standard deviation unless otherwise specified.



terms of the trauma distribution as indicated on the PDS,  $\chi^2(10, N = 106) = 14.85$ ,  $p = .14$ . The independent and interdependent groups were equivalent in terms of trauma history (THQ); crime-related event,  $t(104) = .27$ ,  $p = .79$ , general disaster,  $t(104) = 0.00$ ,  $p > .99$ , and unwanted physical and sexual experiences,  $t(104) = 1.19$ ,  $p = .24$ .

The PTSD group (4 accident, 4 natural disaster, 12 non-sexual assault, 5 sexual assault, 9 imprisonment/torture, 11 life-threatening illness, 5 other) did not differ from the no PTSD group (13 accident, 6 natural disaster, 13 non-sexual assault, 7 sexual assault, 5 war/imprisonment/torture, 9 life-threatening illness, 3 other) in terms of trauma distribution as indicated on the PDS,  $\chi^2(10, N = 106) = 12.07$ ,  $p = .28$ . The PTSD and no PTSD groups were equivalent in terms of trauma history (THQ): crime-related event,  $t(104) = 0.07$ ,  $p = .94$ , general disaster,  $t(104) = 1.33$ ,  $p = .19$ , and unwanted physical and sexual experiences,  $t(104) = 1.94$ ,  $p = .06$ .

### **Participant characteristics**

The four groups did not differ in terms of gender distribution,  $\chi^2(3, N = 104) = 5.97$ ,  $p = .11$ . Those from independent cultures were significantly older than those from interdependent cultures,  $F(1, 102) = 6.96$ ,  $p = .01$ . However, those with and without PTSD did not differ regarding age,  $F(1, 102) = 0.15$ ,  $p = .70$ , and the interaction was not significant,  $F(1, 102) = 0.00$ ,  $p > .99$ . Those from interdependent cultures had lived in Australia for significantly less time than those from independent cultures,  $F(1, 102) = 144.04$ ,  $p < .01$ . However, there was no significant difference between those with and without PTSD,  $F(1, 102) = 0.00$ ,  $p = .98$ , and the interaction was not significant,  $F(1, 102) = 0.53$ ,  $p = .47$ . There were no cultural differences in self-reported study difficulty,  $F(1, 102) = 0.26$ ,  $p = .61$ , nor between those with and without PTSD,  $F(1, 102) = 2.45$ ,  $p = .12$ , and the interaction was not significant,  $F(1, 102) = 1.25$ ,  $p = .27$ .

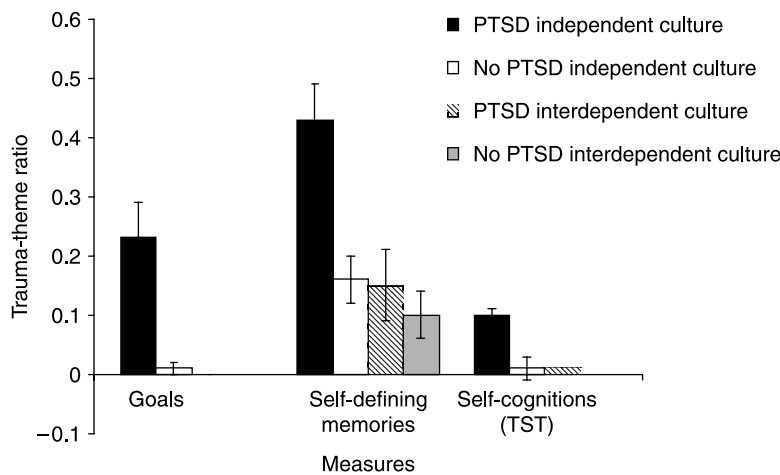
The independent culture group did not differ from the interdependent culture group in terms of depression,  $F(1, 102) = 0.10$ ,  $p = .75$ . However, those with PTSD were significantly more depressed than those without PTSD,  $F(1, 102) = 81.35$ ,  $p < .01$ . The interaction was not significant,  $F(1, 102) = 2.41$ ,  $p = .12$ .

### **Self-concept measures**

The means of the self-concept measures are presented in Figure 1.

Three independent  $2$  (culture: independent vs. interdependent)  $\times 2$  (post-traumatic stress disorder status: PTSD vs. no PTSD) ANCOVAs of self-concept (i.e. goals, self-defining memories, self-cognitions) that controlled for depression and age indicated significant Culture  $\times$  Post-traumatic stress disorder status interaction effects for goals,  $F(1, 100) = 11.33$ ,  $p < .01$ , self-defining memories  $F(1, 100) = 4.04$ ,  $p < .05$ , and self-cognitions  $F(1, 100) = 15.84$ ,  $p < .01$ .

Planned follow-up comparisons using the adjusted means indicated that independent culture with PTSD, when compared with independent culture without PTSD, had significantly more trauma-themed personal goals  $t(55) = 2.93$ ,  $p = .01$ ,  $CI_{.95} = .11, .34$ , self-defining memories,  $t(55) = 3.16$ ,  $p < .01$ ,  $CI_{.95} = .12, .40$ , and self-cognitions,  $t(55) = 3.85$ ,  $p < .01$ ,  $CI_{.95} = .05, .14$ . However, interdependent culture with and without PTSD did not differ in terms of trauma-themed goals



Note. The PTSD interdependent and no PTSD interdependent groups had trauma-theme ratio means of 0.00 ( $SD = 0.01, 0.00$ , respectively) for the goals measure and the no PTSD interdependent group had a trauma ratio mean of 0.00 ( $SD = 0.02$ ) for the self-cognitions measure. Error bars not shown were too small to depict.

**Figure 1.** Adjusted means for the trauma ratios for goals, self-defining memories, and self-cognitions using depression and age as covariates. Error bars indicate  $\pm 1SE$  of the mean.

$t(47) = 1.39, p = .17, CI_{.95} = -.00, .01$ , self-defining memories  $t(47) = .61, p = .54, CI_{.95} = -.10, .20$ , and self-cognitions  $t(47) = .57, p = .57, CI_{.95} = -.01, .01$ .

## Discussion

This study is the first to show that trauma’s impact on change in self-definition and personal identity is culturally specified. While the findings are consistent with those of other studies that show trauma memory can become salient in self-conception and thus an important component of personal identity and self-definition in PTSD (Byrne *et al.*, 2001; Sutherland & Bryant, 2006), they also show that this alteration in self-concept and identity is not the case for those from interdependent cultures. Trauma-exposed participants from independent cultures with PTSD clearly displayed a more trauma-defined personal identity than those without PTSD. For those from interdependent cultures, however, there were no differences in trauma-centred identity between the PTSD and the no PTSD groups. This was found using three different personal identity measures – a goals measure, a self-defining memory measure, and a self-cognition measure.

This finding is important firstly for theoretical reasons. Berntsen and Rubin (2006, 2007) and Conway (2005) suggest that the need for self-consistency and self-coherence is instrumental in the move towards trauma-centred self-definition. Our findings may be due to a cultural variability in self-consistency needs, that is self-consistency is paramount in independent but not interdependent cultures (Suh, 2000). In addition, our results accord that the view that the social role of trauma victim/survivor may be a culturally sanctioned role in independent cultures given that it aligns with cultural expectations of the self, personal identity, and the individual life story. However, in

interdependent cultures, the social role of trauma survivor/victim may be viewed as abnormal and culturally inappropriate, as it contradicts cultural expectations of a communal self. Overall, the findings point to important cultural considerations both in the aetiology of trauma-centred personal identity in PTSD and in its maintenance, which are not part of current psychological models of PTSD. The results here challenge these models to articulate how the cultural self aligns with their accounts. This reflection may result in alterations in structural aspects of PTSD models (such as the impact of the cultural self on processes thought to account for the development of PTSD i.e. pre-trauma schema, autobiographical memory) and in aspects/processes thought to be implicated in the maintenance of PTSD symptoms (such as the impact of the cultural self on appraisals, secondary emotions). It is our view, confirmed by the current finding, that PTSD models need to be more explicit regarding the impact of the cultural self on the processes involved in development and maintenance of PTSD.

We also believe that the findings are important for clinical reasons. Our findings suggest that while a clinical awareness of the impact of trauma on identity and self-definition is important, awareness needs also consider cultural factors which moderate any impact. Currently, the clinical awareness remains exceptionally individualistically focused (Bracken, 2002). The impact of trauma on identity and self-definition is explored at assessment and addressed in self-schema work in an aim to address trauma-caused 'vulnerable identities' such as 'the self as powerless . . . inferior . . . nonexistent . . . futureless' (Brewin, 2003, p.73), integrate current views of the self (e.g. I am a victim, I am damaged, I have no control) into existing self-knowledge and the life story, and make sense of the trauma in respect to existing aspects of their self-concept and goals (Hembree & Foa, 2004), to achieve self-consistency.

Our findings strongly suggest that the list of vulnerable 'identities', which mostly comprised private components of the self, needs to be extended to include public and collective components of the self, such as social roles, the impact of trauma on such social roles, and the value of role complexity and diversity. Additionally, it needs to be considered that identity may not always be 'vulnerable'. This is particularly relevant in interdependent cultures. These suggestions align with our clinical observations. While some trauma survivors from interdependent cultures stated that they were no longer the same following trauma, our attempts to explore and compare pre- and post-trauma self-views in an effort to highlight possible similarities that would demonstrate self-consistency, failed. These clients' focus and distress seemed unrelated to changes in private aspects of self but rather due to social role changes such as 'I am a dependent refugee', 'I am no longer protector of my family', 'I am no longer working', and 'I am a receiver of government benefits'. Furthermore, we have witnessed clients from interdependent cultures major concern being centred round a dissatisfaction in the current social role distribution such as 'being too much a son and not enough a husband, friend and father' and wanting to regain a balance in such social roles. In addition, it must be considered in assessment and therapy that in interdependent cultures discussing issues pertaining to the private self may be not only unhelpful but also viewed as immature and inappropriate.

However, our findings do not dismiss the usefulness of cognitive behavioural therapy in interdependent cultures. Effective components such as imaginal exposure may not be as influenced by cultural factors, techniques such as goal-setting in life-roles using behavioural activation models, such as those used for depression (e.g. Lejuez, Hopko, & Hopko, 2001), seem appropriate and cognitive therapy remains useful in addressing aspects of the trauma experience and appraisals that are not culturally sanctioned.

Furthermore, there is a growing support (e.g. Schwartz, 2005; Tarrrier & Humphreys, 2003) for the use of interventions that target social support as adjuncts to cognitive behaviour therapy in the treatment of PTSD. Practically, this suggests an inclusion of a client's interpersonal and social context in case formulation (Tarrrier, 2006), an acknowledgement of the impact of the beliefs held by significant others on the development and maintenance of PTSD (Tarrrier & Humphreys, 2003), and the consideration of treatment options that are designed to facilitate and improve social support (Harvey, Bryant, & Tarrrier, 2003), such as family therapy, re-engagement with social networks, modification of perceptions about the intentions and reactions of others, and a focus on reciprocity and social exchange (Tarrrier & Humphrey, 2003). Therapy sessions may involve the inclusion of family members, significant others (Glynn *et al.*, 1999), and community members.

We acknowledge the shortcomings of this study. First, a major limitation of this study was in the method of PTSD diagnosis. The study would be improved if the self-report questionnaire (PDS) used for diagnostic purposes was followed up with a structured interview. Second, we cannot be certain to what extent we measured accurate variations in self-concept as opposed to what people were willing to disclose about self-concept. Extending this, the self-concept measures may have been culturally biased and self-completion at home may have biased results such as participants discussing responses with others producing possible culturally desirable responses. Third, as in any study exploring the impact of culture on certain variables, language and task understanding must be considered. The finding of no cultural differences in the self-report of task difficulty was taken to suggest that there were no major cultural differences in task understanding and responding. However, retrieving memories and self-cognitions in English may impact on how identity is presented. Furthermore, this study was conducted in Australia, an independent cultural environment. This may result in an intra-cultural context for the interdependent groups but an intercultural context for the independent groups. We aimed to minimize this by allowing all participants to complete the study at home and including migrants in both groups. Fifth, there is an acknowledgement of possible demographic differences (e.g. education, economic sufficiency, etc.) between groups which may have confounded our cultural independent variable. While there is little evidence that such factors would affect the trauma-centred identity, it may be helpful for groups to be more closely matched in further research. Finally, it is acknowledged that the independent/interdependent construct is only one cultural dimension and the cultures comprising these groups in this study vary on other cultural dimensions.

Despite these limitations, we believe that this study is an important and timely one that demonstrated a key cultural difference in the impact of trauma on personal identity. Those from independent cultures with PTSD had significantly greater trauma-centred personal identity when compared with those from independent cultures without PTSD, whilst, there being no relationship between trauma-centred personal identity and psychological adjustment in the interdependent group. This finding suggests that our current PTSD models and their theoretical assumptions need to consider cultural factors in the nature of the self in any theoretical reformulation. If these findings are robust, the clinical implications are significant. In particular, they would question the relevance of the focus on self-referential thinking, which is an integral part of assessment and treatment in some cognitive therapies for PTSD. For example, it would suggest a lesser role for cognitive reframing of self-schema for those from interdependent cultures and a greater emphasis on the impact of trauma on the public/collective aspects of self. A key

focus for future research given that interdependent cultures do suffer from PTSD is for models and research to further explore processes other than trauma's impact on self-definition that may be maintaining PTSD in such populations.

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