The Multidimensional Loss Scale: Validating a Cross Cultural Instrument for Measuring Loss in Burmese Refugees

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Abstract

The Multidimensional Loss Scale: Initial Development and Psychometric Evaluation

The Multidimensional Loss Scale (MLS) represents the first instrument designed specifically to measure loss in refugee populations. Researchers developed initial items of the Multidimensional Loss Scale to assess Experience of Loss Events and Loss Distress in a culturally sensitive manner across multiple domains (social, material, intra-personal and cultural). A sample of 70 recently settled Burmese adult refugees completed a battery of questionnaires, including new scale items. Analyses explored the scale's factor structure, internal consistency, convergent validity and divergent validity. Principal Axis Factoring supported a five-factor model: Loss of Symbolic Self, Loss of Interdependence, Loss of Home, Interpersonal Loss, and Loss of Intrapersonal Integrity. Chronbach's Alphas indicated satisfactory internal consistency for Experience of Loss Events (.85) and Loss Distress (.92). Convergent and divergent validity of Loss Distress were supported by moderate correlations with interpersonal grief and trauma symptoms and weak correlations with depression and anxiety. The new scale was well received by people from refugee backgrounds and shows promise for application in future research and practice

Key words: loss, measurement, reliability, Burmese, refugee, multicultural assessment

The Multidimensional Loss Scale: Initial Development and Psychometric Evaluation

Loss and feelings of disconnection is at the very centre of the refugee experience, yet the focus of empirical research to date has been on trauma. While refugee resettlement is a widespread human phenomenon, with inexorable physical displacement, social disruption and inter-personal turmoil, we have a surprising dearth of research on people's experiences of loss and the nature or extent of their response to such loss.

The adverse experiences of people from refugee backgrounds have been conceptualized largely in terms of the commission of traumatic events and the psychological sequelae (e.g., Nickerson, Bryant, Silove & Steel, in press; Ringdal, Ringdal, & Simkus, 2008; Silove, Steele, Bauman, Chey, & McFarlane, 2007). Although variable, high rates of psychological pathology have often been documented across different refugee populations (see Steel, Chey, Silove, Marnane, Bryant, & van Ommeren, 2009). Some major theorists in this field have described the dose-response effects of traumatic events and outcomes including posttraumatic stress disorder (PTSD), depression and anxiety (e.g., Carlson & Rosser-Hogan, 1991). Consequently, responses of people from refugee backgrounds are often based on the assumption that people exposed to traumatic events invariably present with symptoms consistent with pathologies such as post-traumatic stress disorder, depression and anxiety.

Although frequently mentioned, researchers have seldom investigated the multiple losses of the refugee experience. Despite the use of multi-modal interventions, current responses to the distress of refugee people are often based on Western nosologies and a sometimes uncritical appreciation of the subtle and unique cultural filtering of the violence and dislocation experienced and the nuances of other psychic states are often overlooked. For example, If we acknowledge the broad inter-personal, material, social and cultural disconnections experienced, it follows that some people from refugee backgrounds may

respond by experiencing loss and grief. The cognitive, emotional and somatic symptoms of many refugees may reflect culturally appropriate expressions of emotional distress associated with the losses experienced and the struggle to find meaning in an unfamiliar culture. In these situations, psychiatric diagnoses and ensuing interventions that focus on re-exposure to traumatic experiences have the potential to constitute confusing and even destructive encounters. These may stigmatize and alienate the person in the community further.

Authors in the field generally acknowledge the many losses that people from refugee backgrounds experience; the terms *trauma* and *loss* are often used in the same sentence, perhaps reflecting implicit recognition that trauma and loss are reciprocally embedded. According to Herman (1997), loss is inevitably associated with trauma through the loss of "…internal psychological structures of a self securely attached to others", and in instances where individuals have been physically harmed, through the loss of "…their sense of bodily integrity". Loss requires adjustment and where the loss requires people to undertake a major revision of their assumptions of the world and are long lasting yet take place in short space of time the 'psychosocial transition' required can be immense (Parkes, 1988). There has been increasing literature on the debated notion of complicated grief, suggested to be a pathological response to loss; often emerging where death has been associated with a traumatic situation or violence (Shear & Smith-Caroff, 2002). Finklestein and Solomon (2009) examined the complicated grief reactions of Ethiopian refugees who lost relatives during their migration to Israel, reporting that: 38% demonstrated patterns of prolonged grief and lack of grief; 11% demonstrated delayed grief, and 12% expressed resolved grief. The term *loss*, however, needs to be distinguished from the term *grief*.

The term *loss* has evolved from the proto-Germanic term *lausa,* which refers to "loosen, divide, cut apart, untie, separate" and the old Frisian term *urliasa*, "to loose", meaning to be defeated or "to lose one's mind" or "to become insane". The term grief, in

contrast, comes from the old French term *grief*, which refers to hardship and suffering, mental pain and sorrow. Thus, while the term loss incorporates the existential potential for annihilation of self or disconnection from parts of self, grief refers the expression of one aspect of loss. Conceptualizing loss as disconnection from aspects of self has potential repercussions for addressing loss through connection and reconnection to intra-personal and inter-personal aspects of self.

There has been little research explicitly examining the loss experienced by people from refugee backgrounds. One notable exception is a study which explored the relative contribution of war experiences (violence and loss) and exile-related stressors (social isolation and daily activity levels) to levels of psychological distress in community and clinical groups of Bosnian refugees (Miller et al., 2002). Researchers operationalised the construct of loss as participants' response to eight items related to personal and material loss on the War Experiences Scale (WES: Weine, 1998, cited by Miller et al. 2002). Miller et al. reported that war-related violence predicted PTSD symptoms in both groups; social isolation being related to PTSD symptoms in the community group. Depressive symptoms were predicted primarily by exile-related stressors, although war-related loss predicted depressive symptoms in the clinical group. A second exception is a study of Mandean refugees (Nickerson, Bryant, Brooks, Steel, Silove, Chen, 2011) in which the impact of loss and trauma on mental health symptoms was examined at the individual and the family level. The methodology of the study involved analysing two loss related variables embedded in the Harvard Trauma Questionnaire (Mollica et al. 1992). While the assessment of loss was limited to two event related items, the results were significant in that both loss and trauma were shown to have a unique impact upon the psychological outcomes at both the individual and the family level. Both these studies point to the importance of developing a reliable and valid methodology for assessing loss in refugee populations. Growing literature on the role of

post-migration stressors on the psychological health of people from refugee backgrounds has emerged (Birman & Tran, 2008; Lindencrona, Ekblad, & Hauff, 2008; Porter & Haslam, 2005; Schweitzer, Melville, Steel, & Lacherez, 2006). A meta-analysis by Porter and Haslam (2005) reported that post-migration factors moderated mental health outcomes, concluding that psychological distress was not necessarily associated with trauma, but instead often reflected a range of post-migration contextual factors. As noted by Miller et al., however, empirical data on the psychological nature of the experience of exile is very limited and the relationship between exile-related variables and mental health status is still poorly understood.

Findings from the extant literature that examines the wellbeing of people from refugee backgrounds indicate the impact of post-migration losses on psychological wellbeing. For example, the meta-analytic finding by Porter and Haslam (2005) indicating that individuals with higher levels of pre-migration education and socioeconomic status were more likely to have poorer mental health outcomes highlight the distress associated with the loss of meaningful aspects of self. The impact of daily activity levels and social support in predicting higher levels of depression underscores the adverse psychological effects of losing ongoing employment and being without important inter-personal relationships (Miller et al., 2002). Loss of social capital is almost inevitable for refugee communities, which holds challenges at both the level of self as well as in terms of the many practical resources and support afforded by being a member of a stable interdependent social network. Almedon's (2005) meta-review of the linkages between social capital and mental health suggests that social capital is both complex and compound in its relationship with mental health, with the possibility of being both an asset and a liability. For many people from refugee backgrounds, the possibility of social alienation within new unwelcoming 'host' communities can multiply even further the significance of the loss of social capital (Manderson & Vasey, 2009).

There is a dearth of research explicitly examining the loss experienced by people from refugee backgrounds. An important exception is the qualitative research by Colic-Peisker and Walker (2003), which highlighted the loss of identity experienced by refugees and the difficulties that were associated with identity adaptation and identity reconstruction during acculturation processes. According to Colic-Peisker and Walker, refugees "…lose aspects of their identities that were embedded in their former communities, jobs, skills, language, and culture." Identity, however, is only one aspect of self.

The conceptual underpinnings of the proposed loss scale is based upon a sense of self as being fundamental in understanding psychological wellbeing (e.g., Herman, 2006). Persons intuitively acknowledge the importance of self to psychological distress, and refer to loss. A refugee from East Africa, resettled in Australia, revealed, "…but here I feel I am a bird without wings-all my people who were supporting me in Africa are not here." In research examining transnational ties among Sudanese refugee families resettling in the United States (Lim, 2009), one participant observed that without connections to family and community, they would be "dead" or "truly lost" (p, 1039). Karen speaking refugees interviewed on several occasions have described the notion of mental illness in terms of "they don't know their self"; that is, they have lost an aspect of themselves (personal communication, 2009). Similarly the Xhosa-speaking people in southern Africa describe one form of mental illness as *phambana,* which literally translates as "to lose one's senses".

William James' (1890) conceptualisation of self may assist our understanding of the psychic distress of loss experienced by refugee people. James outlined notions of a plural and duplex self (distinguishing the subjective *I* and the objective *me*), which have influenced theorists from many disciplines and provided foundations for post-modern conceptualizations. James conceived of the *I* as the knower that reflects on the *me,* the knowable material, social and spiritual aspects of self, which can be thought of as

incorporating identity. While Colic-Peisker and Walker combined social identity theory, and acculturation theory and the theory of the migration of human capital to inform their research, conceptualising loss within a framework that acknowledges the disconnections inherent to the refugee experience and the resultant assaults on the whole self has the potential to provide a richer understanding of the multi-faceted nature of post-migration loss experienced by people from refugee backgrounds.

According to James (1890), "…a man has as many social selves as there are individuals who recognize him and carry an image of him in their mind" (p. 294). The contextual and inter-dependent nature of self as perceived by many collectivist societies is consistent with James' (1890) conception of the social self as a plurality of selves.

Relational perspectives of self highlight the importance of social connectedness, particularly in collectivist societies. The inter-dependent self exists in a tapestry of inter-relationships with others. Embedded in cultural norms, relational connections unite and give form and strength to the social structures of the community. People lose confidence in their own knowledge and resources, and shared meaning is harder to find (Eisenbruch, 1984). Unable to address difficulties in traditional ways by means of usual social connections, even small difficulties can assume major proportions, with consequent effects on feelings of powerlessness and hopelessness.

Inter-personal losses are not the only losses experienced by people from a refugee background. Refugees were once securely connected to their country, land, homes, animals, food and possessions. While social psychologists have framed such disconnections as stressors, these may be better construed as loss of aspects of self. James (1890) regarded the line between *me* and *mine* as difficult to distinguish. Diverging from the modernist conception of self as internally contained, James' *me* extended outwards to the environment, incorporating "…the sum total of all he can call his…" (p. 291).

Recognition of the reciprocal embeddedness of culture and self highlights the significance of cultural loss or change to identity and meaning making. While acknowledging that culture is dynamic and societies usually comprise diverse sub-cultures that evolve and change over time, refugees may suddenly find themselves in an unfamiliar world characterized by experience of massive change in daily existence. Disconnection from culture can be seen as disconnection from aspects of self that give meaning to experience. James (1890) described the spiritual self as the enduring and intimate aspects of self, the thoughts and feelings of the "…inner and subjective being…" (p. 296). It is possible that such cultural transition may be associated with the experience of loss.

Although there have been many attempts to quantify the intensity and breadth of trauma and other pathologies, no attention has been paid to the development of a culturally sensitive questionnaire that can be specifically used to assess the experience of loss as a multidimensional variable. A questionnaire to assess refugees' experiences of loss would contribute to our capacity to better conceptualise the impact of the refugee experience upon well-being and would allow workers in the field to appropriately target interventions.

The first aim of the current research was to develop a contextually and culturally relevant measure of loss applicable to people from refugee backgrounds. The second aim was to conduct an initial investigation into the psychometric properties of the new scale.

Method

Development of the MLS

The MLS was developed as part of an Australian Research Council funded study of refugee well-being conducted over three years. Its purpose was to provide a reliable and valid measure of loss to complement other culturally valid instruments used to assess people from refugee backgrounds.

Item generation

Traditional guidelines in scale development (De Vellis, 1991) were followed. Drawing from theories of self and the literature into the experience of people from refugee backgrounds described above, an initial item pool was generated, reflecting losses across multiple domains (including personal, social, material, intra-personal and cultural) that emerged as meaningful to a sense of self.

Two psychologists and a researcher who were working in the field of refugee mental health reviewed the initial RLS items to provide expert input on the face validity of the items to the construct of loss as conceptualised in this research. The scale was reduced and modified according to expert input on the face validity of items, as well as their input on item clarity, ambiguity, redundancy and response format. The resultant scale was then given to a group of counsellors, who were working with newly arrived refugees, for comment and change to further refine the scale.

The MLS is a 24 item self report scale and comprises two major components: (a) loss events and (b) loss distress. To assess participants' experience of loss events, respondents indicate specified loss events have occurred by ticking the *Yes* column. Each *No* response is rated as 0. Each *Yes* response is rated as 1. The total score is calculated by summing the points for each affirmative response, potentially ranging between 0 and 24, with higher scores indicating experience of a greater number of loss events. To assess extent of loss distress, for those items that were ticked *yes*, participants were asked how much the experience is "…upsetting you or causing you difficulties in any way…" by responding on a four-point scale: *not at all* (0); *a little* (1); *quite a bit* (2), and; *extremely* (3). Where the event has not been experienced, loss distress from that event is rated as 0. Total scale scores can be calculated by summing item scores, potentially ranging from 0 to 72, with higher scores indicating greater personal experience of loss distress.

Participants

Participants were 70 individuals (40 females; 57.1%), with a mean age of 34.13 years (*SD* = 13.88; range = 18-80years) from Burmese refugee backgrounds, who: (a) had recently arrived in Australia as part of the Australian offshore humanitarian program with a mean time in Australia of 3.61 months (*SD* = 2.36 months; range 2 – 16 months); (b) were aged over 18 years old, and; (c) had provided informed consent to participate in the research. The sample was recruited through the assistance of a non-government agency, funded by a Government Department to assist refugee settlement.

Participants came to Australia on Refugee (90%) or Women at Risk visas (10%) from different Burmese ethnic backgrounds, including Karen (60%), Chin (21%), Karenni, (7%), Mon (6%) and Kachin (1%). Self-identified language groups included Karen (59%), Chin (19%), Burmese (11%), Mon (6%), Arakanese (3%), Kachin (1%), and Eastern Kayah (1%). Participants identified themselves as Christians (80%) or Buddhists (20%). The majority identified themselves as married (53%), single (36%) or widowed (9%). While most had secondary (47%) or primary education (37%), a significant proportion had no education (13%).

A substantial proportion of the participants reported psychological distress in the symptomatic ranges including: post traumatic stress disorder (9%), anxiety (20%), depression (36%) and somatisation (37%) (Schweitzer, et al. 2011).

Materials

Demographic Characteristics.

Participants gave permission for the researchers to use the demographic information already available through the service agency. Information accessed included: name; gender; age; visa type; marital status; current family constellation; highest education level; previous

occupation; country of origin; ethnic group; language; date of arrival in Australia; and health problems.

The Harvard Trauma Questionnaire.

The HTQ (Mollica, McDonald, Massagli, Silove, 2004) is a measure of trauma experience and symptoms. It was specifically designed for use with refugee populations and has been used widely in refugee research, including studies examining the mental health of Burmese refugees (Allden et al., 1996; Lopes Cardozo, 2004). Part 1 comprised 17 items measuring participant's experiencing and witnessing of 17 common forms of human rights violations. In the current research, there was also enquiry into the family's experiencing and witnessing. Part 2 comprised 16 items enquiring into the extent that participants experienced 16 widely accepted symptoms of PTSD. Items were scored on a four-point ordinal severity scale from "not at all" (1) to "extremely" (4) with higher scores indicating higher distress. In the current study the HTQ symptom scale had good internal reliability, with Cronbach's alpha of .89.

The Hopkins Symptom Checklist-37.

The HSCL-37 is a self-report inventory which measures symptoms along three subscales: anxiety (10 items), depression (15 items) and somatisation (12 items). The HSCL-37 extends the HSCL-25 (Mollica, Wyshak, de Marneffe, Khuon, & Lavelle, 1987) to include somatisation. Items are scored on a four-point ordinal severity scale from "not at all" (1) to "extremely" (4), with higher scores indicating higher distress. The HSCL is a valid and reliable index across diverse refugee populations (Hollifield et al., 2002), and has been used previously to examine the mental health of refugees from Burma (Allden et al., 1996; Lopes Cardozo, 2004). Research by Schweitzer et al. (2006) examining the psychological adjustment of Sudanese refugees in Australia found good internal reliability for the HSCL-37 anxiety (0.83), depression (0.89) and somatisation (0.82) subscales. The HSCL-37 was found

to have good reliability in the current study with a total scale Cronbach's alphas of .92 and subscale alphas for anxiety (.83), depression (.83) and somatisation (.80).

Grief Questionnaire.

The Grief Scale was developed by Steele (Steele, personal communication, 2007). The scale comprises 5 questions which have face validity. The scale has a stem question: "If you have experienced the death of a close family member(s) or friend(s)...(1) do memories of the person(s) often come into your mind? (4)Do reminders (such as photos, conversations or music) often bring memories into your mind? And (5) since the loss(es) or seperations(s), have you felt particularly lonely, empty inside, or socially withdrawn? Responses are rated on a yes or no basis and the score is summated with a range from 0 to 5.

The Scale was judged to be the most useful scale at the time that the study was developed. The scale thus has a specific focus on interpersonal grief. The Scale has not been validated psychometrically. However, there are now improved grief scales with reported psychometric properties. The examination of Cronbach's alpha for this scale revealed a coefficient of .857.

Procedure

Data Collection

This study was part of larger research project into the psychosocial wellbeing of refugees. After receiving ethical approval through the university Human Research Ethics Committee, counsellors working for a partner organization provided new clients with some information about the research along with an invitation to participate. Where the client expressed interest in research participation, the counsellor referred the client to the researcher or facilitated a meeting with the researcher. Client welfare was prioritized throughout the research process.

The researcher and counsellors worked with interpreters to ensure optimal communication and participants' understanding of the voluntary nature of the study, confidentiality, their right to withdraw from the research, referral processes for counselling and questionnaire items. Where clients provided informed consent, the researcher worked with interpreters and clients to complete the battery of questionnaires, usually over two or three one-hour sessions at the office of the partner organization.

Results

Endorsement of Loss Events and Loss Distress

The mean number of loss events derived from the first section of the scale was 12.72 (SD = 5.15). Table 1 shows proportions of participants who endorsed experiencing the specified loss events and the proportions of participants endorsing specified levels of distress related to each loss event.

Table 1 goes about here

Significant proportions of participants reported loss across personal, social, material, intra-personal and cultural domains. The most frequently cited loss experiences were leaving country (96%) and home (94%), separations from friends or community members (94%), family members (85%) and family member death (84%).

Participants reported experiencing upset or difficulties in relation to the loss events. While each loss event was endorsed as causing a little, quite a bit, or extreme distress, substantial proportions of participants reported that that they experienced quite a bit or extreme distress due to: long separation from a family member (57%), the death of a family member (56%), leaving their house or home (52%), leaving their country (50%), and long separation from friends or community members (45%).

Psychological Symptomatology

Table 2 shows proportions of participants whose scores fell in symptomatic ranges, as well as means and standard deviations for experiencing different types of psychological distress, as indicated by reported loss distress, symptoms of interpersonal grief, traumatisation, anxiety, depression and somatisation. Significant proportions of participants reported experiencing symptoms of anxiety, depression, somatisation and trauma. Based on the application of DSM-IV criteria to HTQ symptoms, nearly 9% of participants reported trauma symptoms that were consistent with meeting the diagnostic criteria of post-traumatic stress disorder (PTSD).

Table 2 goes about here

Factor Analysis

This analysis examined the Loss Distress component of the MLS. The original 24 items of the MLS were subjected to exploratory factor analysis using PASW Statistics 18.0.1 (SPSS, 2009). Considering that no previous research has examined factors underlying refugee loss, factor analyses was used to determine the number and nature of factors (Tabachnick & Fidell, 2007). Responses of the 70 participants were used in the factor analysis.

Factor analysis indicated that the original 24-item MLS was factorable. Examination of the correlation matrix indicated a considerable number of correlations above .3. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was good at .79, indicating the number of partial correlations was small. The Bartlett test of sphericity was significant, indicating there were sufficient correlations between the items to perform factor analysis $\chi 2$ (276) = 848.90, $p < .001$. Underlying factors were identified on the basis of the eigenvalues and scree test. Six factors had eigenvalues over one, cumulatively explaining 69.68% of the variance

(Hair et al., 1998). The screen test suggested that there was one predominant factor; the remaining five with decreasingly less proportion of the variance apportioned to them (Cattell, 1966). Using Principal Axis Factoring and a .3 cut-off, the analyses was re-run, exploring three, four, five and six factor solutions using Direct Obliminal rotations as it was assumed that the factors would be correlated.

The five factor Direct Obliminal rotation was chosen as it was the most interpretable and was consistent with self-theory of loss. The Orthogonal solution using Varimax rotation was similar to the Oblique solution using Direct Obliminal rotation, indicating the factors were stable (Gorsuch, 1983). Correlations amongst factors (ranging from weak to strong) confirmed use of oblique rotation (Table 3).

Table 3 goes about here

The final 24-item five-factor solution explained a cumulative 64.98% of variance (see Table 4). Factor 1, Loss of Symbolic Self, comprised 12 items relating to traditional cultural beliefs, values and behaviours, and explained 38.31% of variance. Factor 2, Loss of Inter-dependence, comprised three items relating to the loss of social position and support, and explained 8.42% of variance. Factor 3, Loss of Home, comprised four items relating to the loss of house, land, country and possessions, and explained 6.88% of variance. Factor 4, Interpersonal Loss, comprised three items relating to the death or separation from friends and family, explained 5.92% of variance. Factor 5, Loss of Intra-personal Integrity, comprised two items relating to autonomy and wellbeing, and explained 5.46% of variance. Considering that oblique rotation was used and factors were correlated, estimates of variance must be cautiously interpreted.

Table 4 goes about here

Internal Consistency

Two internal consistency estimates of reliability were calculated for the 24-item Refugee Loss Scale. A Chronbach's Alpha of .92 was found for Loss Distress. A Cronbach's Alpha of .85 was found for Experience of Loss. Alphas indicated satisfactory internal consistency for the two components of the scale. The Chronbach's Alphas for internal consistency for the Loss Distress subscales were as follows: Loss of Symbolic Self (.91), Loss of Inter-dependence (.74), Loss of Home (.87), Interpersonal Loss (.71), Loss of Intra-personal Integrity (.48).

Construct Validity

The construct validity of the Multidimensional Loss Scale was investigated by examining the convergent and divergent validity of the 24-item scale, by calculating the correlation coefficients between the Multidimensional Loss Scale (Loss Distress) with: Interpersonal Grief; Traumatisation symptoms, as reported on the Harvard Trauma Questionnaire; and Depression, Anxiety and Somatisation symptoms, as reported on the Hopkins Symptom Checklist.

The distribution for grief was negatively skewed. Distributions for traumatisation, anxiety, depression, loss scores were positively skewed. Although log 10 transformation of trauma scores, an inverse transformation of depression scores and a square root transformation of loss distress scores improved the normality of these variables, transformation did not improve distributions for anxiety and grief scores adequately. Therefore correlation analyses used the Spearman's Rank Order Correlation statistic on untransformed data (Table 5).

Table 5 goes about here

Correlation coefficients indicated that Loss distress was significantly and positively correlated with interpersonal grief, traumatisation and somatisation, sharing 16.8%, 16%, and 7.3% of the variance respectively. The magnitude of the relationships of loss distress with interpersonal grief and traumatisation were moderate, but the magnitude of the relationship of loss distress with somatisation was weak. Loss distress was not correlated with depression or anxiety.

Discussion

This study provides empirical evidence for a new multidimensional measure of loss events and loss distress which is relevant to people from refugee backgrounds. The study reports on the psychometric properties of the new scale which are shown to reveal 5 dimensions of loss.

The scale demonstrates adequate psychometric properties when used with people from refugee backgrounds from Burma. Factor analysis resulted in a 24-item measure of loss with five subscales: Loss of Symbolic Self; Loss of Inter-dependence; Loss of Home; Interpersonal Loss, and Loss of Intra-personal Integrity.

Factor 1, Loss of Symbolic Self, comprised items that were characterized by the losses in elements of life that symbolize cultural traditions, values, beliefs and structures, which are important in giving persons a sense of who they are in the world. This factor is consistent with Eisenbruch's notion of cultural bereavement. According to Blackwell (2005), "any cultural transition …involves not only a change in an individual's relationship with something external, but also a reorganization of the internal world, the internal symbolic universe we usually call culture" (p. 39). In aiming to gain a better understanding of the refugee experience of loss, it needs to be appreciated that the individuals were once

embedded in a cultural and symbolic world with familiar beliefs, values, traditions, words and music that gave meaning to the happenings of their lives.

Factor 2, Loss of Inter-dependence, comprised items that related to participants interconnectedness and place within their society, including their roles, position and support network. People from Burmese refugee backgrounds, like many people who are resettled in Australia through the UNHCR, come from collectivist societies. When community members are disconnected through experience of trauma and forced migration, many individuals cannot access their usual support network, may find it difficult to trust enough to make new connections, and are often without the resources to support others. In effect, the disconnections weaken the relational and cultural structure of community.

Factor 3, Loss of Home, comprised items relating to leaving country, land and house and to leaving possessions and animals behind. In a study of Chinese immigrants in the United States (Casado, Hong & Harrington, 2010), attachment to homeland emerged as a significant loss. For James (1890), the material self comprised thoughts and emotions about tangible effects considered to be *me* or *mine*, such as the body, clothes, family, home, property, and those parts of wealth that are "saturated with our labor" (p. 293). From this perspective, any material loss comprises a loss of part of the self and therefore a disruption to identity.

Factor 4, Interpersonal Loss, comprised items relating to experiencing the death of, or long separation from a family member, or the death of a friend or community member. According to Herman (1997), with the refugee experience there is often loss of "…internal psychological structures of a self securely attached to others". One way of thinking about individuals with an inter-dependent self-orientation is that they experience others as part of the self, often reflected through their reference to themselves specifically and contextually in relationship to others (Eaton & Louw, 2000). From this world view, a sense of self is

intimately connected to others through social relationships. The intra-personal and inter-personal are therefore intrinsically intertwined. When persons become separated from others in their community, they become disconnected from parts of self. The bereavement and cross-cultural literature acknowledges the personal suffering of such inter-personal loss (Eisenbruch, 1984; Harvey, 1998).

Factor 5, Loss of Intrapersonal Integrity, comprises items related to health, sense of well-being and autonomy. According to Herman (1997), loss is associated with the trauma of being physically harmed, through the loss of "…their sense of bodily integrity". This bodily or material loss has the potential to constitute loss of that part of the self that allows a sense of personal agency or autonomy in the world.

Internal Consistency

Psychometric analyses examined the internal reliability and construct validity of the Multidimensional Loss Scale. The two components of the full scale, Experience of Loss and Loss Distress, were found to be internally consistent. While four of the subscales had satisfactory internal consistency, the Loss of Intra-personal Integrity subscale had low internal consistency.

Construct Validity

The divergent validity of the Multidimensional Loss Scale was supported by weak positive correlations with depression, anxiety and somatisation. Results indicate that Loss Distress is a distinct construct from depression, anxiety and somatisation. Convergent validity was supported by a moderate positive correlation with grief symptoms, suggesting that Loss Distress is different from grief, but represents a construct with similarities with grief. High positive correlation with trauma scores indicate loss and trauma as being reciprocally embedded constructs.

Research Limitations

This study constitutes the preliminary development and examination of a new and innovative Multidimensional Loss Scale (MLS) and although findings are promising, further investigation is warranted. The current research was limited to newly-arrived adults from Burmese refugee backgrounds. It is possible that results might be specific to this ethnic group. Further research is needed to examine the degree to which the utility of the scale may generalize to other populations, other ethnic groups, other age groups (e.g., children and adolescents); people who have been resettled for longer periods; and people who have been resettled in other countries. The study was also limited by a relatively small sample size.

Future Research

This is the first stage of a program of study aimed at developing a scale which will be able to be implemented across refugee groups. Replication is needed to confirm the factor structure and psychometric characteristics of the scale with Burmese refugees and to assess its applicability cross-culturally. Over time we hope to adapt the scale and develop norms for different refugee ethnic groups, so that these can inform research and clinical applications. Future research could also develop a multidimensional loss scale that was relevant to the experience of children and adolescents from refugee backgrounds. The Burmese population that we worked with comprised several linguistic groups. We therefore worked with interpreters to administer the English-worded research questionnaire battery. Future research could utilize back translation techniques to examine the psychometric properties of the Multidimensional Loss Scale, standardized through back-translation techniques. Examination of the temporal stability of Loss distress would provide information on the scale's level of measurement error.

Conclusion

The Multidimensional Loss Scale has demonstrated reliability and validity suggesting its utility in the assessment of loss experience and loss distress. While the current study was based upon participants from Burma, it is expected that the scale may be able to be adapted in assessing people from refugee backgrounds more generally and to complement other culturally sensitive assessment instruments. The capacity to measure loss in a culturally and contextually appropriate way has potential to complement scales which have focused upon other aspects of the refugee experience such as trauma. The MLS makes a conceptual contribution to our understanding of people from refugee backgrounds and also improve the assessment and management of psychological distress experienced by people from refugee backgrounds.

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Table 1

Percentage of Participants Endorsing Exposure to Loss Event Item, and Endorsing Levels of Distress Related to Each Loss Event

Item	Loss Event	%	Not at all	A little	Quite a bit	Extremely
3.	Leaving your country	96	26	20	24	26
1.	Leaving your house/home	94	23	20	31	21
11.	Long separation from friends or community members	90	23	27	36	9
9.	Long separation from a family member	85	23	14	30	27
10.	Death of a family member	84	29	10	27	29
12.	Death of a friend or community member	77	33	23	20	17
2.	Leaving your land	71	37	20	26	11
7.	Change to the type of work you do	66	54	13	13	16
4.	Leaving your possessions or animals behind	62	47	17	17	11
5.	Change in your role or position in your family or community	56	56	17	19	3
6.	Change in who you can call on for support or assistance	51	64	17	15	5
15.	Cut off from traditional/religious ceremonies important to you	42	66	7	13	10
8.	Change in how you are treated by other people	40	70	11	9	1

14.	Cut off from hearing, speaking or seeing your language	39	64	9	9	13
22	Lost some of your health or sense of well-being	39	61	11	19	4
21	Lost some freedom, choice or autonomy in your life	39	69	11	9	7
17	Cut off from important family values or traditional values	36	71	7	11	6
24	Lost some opportunities you previously looked forward to	36	66	9	17	4
13.	Cut off from familiar food	34	71	9	11	4
16.	Cut off from familiar music or song	33	73	6	9	9
18	Cut off from your dreams for the future or plans for your life	31	70	6	11	9
19	Cut off from your hopes for your family	27	71	3	11	10
23	Lost some of your wealth or inheritance	25	77	3	9	6
20	Cut off from beliefs about how life should be	21	79	4	9	4

Table 2

Symptoms of Psychological Distress: Participant Proportions in Symptomatic Range, Means and Standard Deviations

Category	*N*	%	Mean	*SD*	Range
Loss Distress	67	-	19.82	14.39	2.00 – 59.00
Interpersonal Grief	68	-	2.97	1.95	0.00 – 5.00
Traumatisation	68	26.47[a]	1.71	0.58	1.00 – 3.63
Anxiety	70	20.00[b]	1.39	0.45	1.00 – 3.80
Depression	70	35.71[b]	1.66	0.52	1.00 – 3.31
Somatisation	70	37.14[b]	1.61	0.49	1.00- 2.75

[a] Percentage of participants with scores ≥ 2.0 (i.e., symptomatic range)

[b] Percentage of participants with scores ≥ 1.75 (i.e., indicates symptomatic range)

Table 3

Correlations Amongst Factors

Factor	1	2	3	4	5
1. Loss of Symbolic Self	1	-	-	-	-
2. Loss of Interdependence	.27	1	-	-	-
3. Loss of Home	-.56	-.28	1	-	-
4. Interpersonal Loss	.33	.24	-.40	1	-
5. Loss of Intrapersonal Integrity	.31	.04	-.16	.09	1

Table 4

Factor Loadings, Means and Standard Deviations for Multidimensional Loss Scale Items

Item	1	2	3	4	5	*M*	*SD*
Factor 1: Loss of Symbolic Self							
23. Have you lost some of your wealth of inheritance	**.88**					.36	.11
14. Have you been cut off from hearing, speaking or seeing your language	**.72**					.71	.15
15. Have you been cut off from traditional or religious ceremonies that are important to you	**.70**					.66	.14
20. Have you been cut off from your beliefs about how life should be	**.70**					.37	.11
24. Have you lost some opportunities you previously looked forward to	**.58**					.61	.13
19. Have you been cut off from your hopes for your family	**.56**					.58	.14
16. Have you been cut off from familiar music or song	**.55**					.51	.13
17. Have you been cut off from important family or traditional values	**.48**					.49	.12
18. Have you been cut off from your dreams for the future or plans for your life	**.44**					.61	.14
7. Have you experienced change in the type of work you do	**.41**					.97	.16
13. Cut of from familiar food	**.40**					.46	.12
11. Long separation from friends or community members	**.35**					1.3	.12

Factor 2: Loss of Inter-dependence					
5. Have you experienced change in your role or position in your family or community	**.70**			.71	.11
8. Have you experienced change in how you are treated by other people	**.66**			.37	.10
6. Have you experienced change in who you can call on for support or assistance	**.61**			.63	.12
Factor 3: Loss of Home					
3. Have you experienced leaving your country		**.85**		1.47	.15
1. Have you experienced leaving your house/home		**.84**		1.51	.14
2. Have you experienced leaving your land		**.81**		1.15	.14
4. have you experienced leaving your possessions or animals behind		**.55**		1.02	.14
Factor 4: Interpersonal Loss					
12. Have you experienced death of a friend or community member			**.90**	1.27	.15
10. Have you experienced death of a family member			**.68**	1.63	.16
9. Have you experienced long separation from a family member			**.41**	1.73	.15
Factor 5: Loss of Intrapersonal Integrity					
21. Have you lost some freedom, choice or autonomy in your life				.51	.12
22. Have you lost some of your health or sense of well-being				.64	.13

Table 5

Correlations between Loss Distress, Interpersonal Grief and Symptoms of Trauma, Anxiety, Depression and Somatisation using Spearman's Rank Order Correlation Statistics (N = 67)

	1	2	3	4	5	6
1.Loss Distress	1	-	-	-	-	-
2.Interpersonal Grief	.41**	1	-	-	-	-
3.Trauma Symptoms	.40**	.31**.	1	-	-	-
4.Anxiety Symptoms	.17	.19	.47**	1	-	-
5.Depression Symptoms	.23	.33**	.68**	.65**	1	-
6.Somatisation Symptoms	.27*	.34**	.76**	.65**	.84**	1

* $p < .05$ ** $p < .01$

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Mar 03, 2011

Dear Associate Professor Schweitzer,

We have now carefully considered your manuscript. The comments from our referees, included below*, lead us to conclude that your article is of potential interest to our readers but is not ready for publication in its present form. We urge you to consider the comments carefully, understanding that they are offered in the spirit of constructive criticism.

If you submit a revised manuscript, please include an itemized, point-by-point response to the comments of the reviewers as a separate file without author identification. The revisions should be completed by Jul 01, 2011 to avoid being considered as a new submission. Instructions for the online revision requirements (including signed copyright forms) are appended**.

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Response to Reviewer's Feedback: Ref.: jnmdS11070, entitled "The Multidimensional Loss Scale: Initial Development and Psychometric Evaluation"

We appreciate the very timely response by the reviewers and their feedback. We have gone through the feedback carefully and have responded to the feedback, as indicated by our responses below.

Reviewer #2: The objective of this study - to develop a measure of loss/loss distress for use with refugee populations is laudable. The authors are correct in indicating that there is not yet a measure that is specific to this population, at least not in general use.

The case for developing such a measure could be put much more succinctly in the introduction. It is true that the field has given particular weight to the impact of trauma and the category of PTSD. It is not, however, true that the issue of loss has been overlooked in theory or in research in relation to refugees. The authors do not review the literature adequately in this regard. Loss has indeed been considered from a theoretical point of view and by some research studies over the last 20 years (see studies/theoretical pieces other than those referenced, by Beiser, Eisenbruch, Gorst-Unsworth, Silove, Steel, Momartin, Caspi and others). In addition, there are studies emerging in the area of grief that include war-affected and refugee groups - these have not been referred to. In summary, I believe that a much tighter introduction is needed leaving out the more strident criticisms of the existing body of research and providing a more succinct theoretical position (the review of James' views, although intersting, could be summarized in much less space).

In relation to the substantive research, more information is needed concerning the development of the item pool. It needs to be clear to what extent the theoretical model proposed (albeit somewhat indistinctly) in the introduction was brought to bear on the process of devising the items: how were the theoretical constructs of James matched with the more concrete domains (personal, social, etc) indicated in the method? How did the two psychologists judge the face validity of the items - based on the informing theory, the more concrete domains listed, or on their clinical experience? I have some concerns about the wording of items. Using the same stems for multiple items (for example, have you experienced leaving; have you experienced change; being "cut off" etc) could lead to a uniform response tendency. A further question is whether exploratory or confirmatory factor analysis should be applied. If there were clear dimensions in mind, that is, the authors were testing a preconceived structure(as appears to be the case), then the more stringent test would be a confirmatory factor analysis. Further statistical advice would be useful.

Although all members of the sample originate from Burma, the number of ethnic/language groups is large. How did the authors deal with these linguistic/cultural factors?

All participants were interviewed in an agency where we were afforded the opportunity of working with professional interpreters.

Finally, the correlation matrix aiming to assess the construct validity of the loss/ distress scale does not go far enough: there are some

dimensions within the new measure that would be expected to correlate strongly with grief and others that are likely to be only distantly relevant to that reaction. It would be important to examine for associations of each subscale with the index of grief.

Reviewer #4: The manuscript "The Multidimensional Loss Scale: Initial Development and Psychometric Evaluation" represents an important contribution to the refugee mental health literature. As the authors have noted, there has been little empirical investigation of aspects of loss suffered by refugees. The development of a scale that indexes various types of losses and associated distress is timely and has great utility. Overall, I found this study to be of value, and the article was thoughtfully written. However, I believe this manuscript could be considerably improved across a number of areas which I will detail below:

INTRODUCTION

1. Overall, the introduction provided a comprehensive overview of the topic at hand. A particular strength of the introduction was the positioning of the current findings within theoretical models that are often erroneously neglected in this literature. However, while the content of the introduction was pertinent and interesting, I found this section to be poorly structured. For example, I believe the information on postmigration difficulties could be better organized. These stressors, which are an important part of the refugee experience, were discussed numerous times. However, this lacked a cohesive format. For example, the fact that postmigration stressors can represent various types of loss was only made at the end of the introduction. I would have preferred to see this point early on as it would provide a context for discussion of these difficulties, which sometimes felt disjointed from the rest of the paper. Similarly, the discussion of grief reactions appeared to be
scattered throughout the paper. I would try to make this more concise and group this literature together to illustrate both the importance of investigating grief reactions and the limitations of this approach given the many losses that refugees suffer. Research on loss is also mentioned several times in different areas of the introduction.

2. Further, I thought the introduction was very long and looked at the relationship between theory and the refugee experience of loss in great detail. In contrast, the discussion was very short and lacked depth. The findings from the current study were not considered in the context of theory in the discussion, which I felt was the major limitation of the paper. I would suggest moving some of the detail provided in the introduction to the discussion. This would both facilitate the shortening of the introduction and allow the specific findings of this study to be discussed in the context of theory.Some suggestions of areas that might be moved to the discussion is the idea of "social capital", the quotes

elucidating the perception of loss in different cultures, James' conceptualization of self. I also was unclear about the link between the discussion of Colic-Peisker's work and the present study. This could be moved to the discussion and elaborated further.

3. There are certain areas of the article in which stylistic errors were made, or which I would suggest should be rewritten for clarity. For example, the first sentence should read "loss and feelings of disconnection are at the very centre". Also, the final sentence of the second paragraph was not clear - responses of refugees aren't based on the assumption that refugees present with pathology. It is possible that responses of clinicians are based on this assumption - perhaps this is what the authors meant?

4. Certain important references were missing - for example, Mollica's research with Vietnamese and Cambodian refugees should be cited when discussing the dose-response effect of trauma on PTSD (p. 2, paragraph 2). The authors should also check that page numbers are provided with all quotes. I think "Steele" is not spelled correctly in-text (it should be Steel), although it is correct in the reference list.

5. I was not clear as to why multi-modal interventions were referred to in page 2, paragraph 3. Similarly, while this may be the case, I didn't feel that the paper substantiated the claim that re-exposure to trauma might be destructive (p. 3, paragraph 1).

6. I would introduce Eisenbruch's notion of cultural bereavement in the introduction as it is probably the closest mental health-related construct to what the authors are proposing.

7. The explanation of Finkestein & Solomon's study on grief was unclear - I couldn't understand how it was possible that 38% of participants demonstrated both patterns of prolonged grief and lack of grief.

METHOD

8. I noted that Schweitzer (2011) was referenced when reporting rates of psychopathology. If the rates of psychopatholgy are measured in the present study, it is not necessary to reference another study.

9. The original citation for the HTQ (Mollica et al., 1992) should be provided. I would also cite a precedent study for measuring family-level trauma (Schweitzer et al., 2006).

10. One of the less convincing aspects of this study was the comparison of the current unvalidated scale to another unvalidated scale (the Grief scale). Is this scale based on the Core Bereavement Index detailed in the paper by Momartin, Silove, Manicavasagar and Steel in 2004? If so, it might be useful to cite this paper to demonstrate a version of the scale has been used before. If not, I would note this in the limitations.

11. Were all clients interviewed via interpreter? Who were the interviewers?

RESULTS

12. While Table 1 provided useful information regarding how many participants endorsed each loss event, it was hard to interpret the frequencies of endorsement of each level of distress. One possible option to make this easier to understand would be to impose a cut-off representing significant distress (i.e. quite a bit or extremely) and report the proportion of participants who said they had experienced each event that had found it significantly distressing.

13. It seems that the established continuous cut-offs were used for the HTQ and HSCL to indicate caseness -this should be specified in the method section. Further, the term "traumatization" may be a bit misleading - I would suggest referring to this as PTSD symptoms or trauma-related symptoms instead. The considerable discrepancy between rates of trauma symptoms and PTSD diagnosis may be due to the application of the community-level cut-off for the HTQ (2.0), which is typically much less stringent than the DSM criteria for PTSD. i would note this in the discussion.

14. 70 participants is a very small number for a factor analysis. My knowledge of factor analysis is limited, but I believe that 300 cases is often considered the minimum for this type of analysis. My understanding is that this greatly limits the validity of the findings. Can the authors provide evidence from the literature that this sample size is adequate?

15. p. 15, paragraph 1 should read "scree" rather than "screen" test

16. I found it interesting that some of the factors were negatively correlated, and was hoping for some discussion of why this might be the case.

DISCUSSION

17. I felt that the discussion was the weakest aspect of this paper as it did not contextualize or interpret the findings. Further, I felt much of the information in the discussion was statistical in nature and had already been covered in the results section. See above for suggestions of aspects of the introduction that may be elaborated on in/ moved to the discussion

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