Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

HHS Public Access

Author manuscript

Am J Orthopsychiatry. Author manuscript; available in PMC 2016 January 29.

Published in final edited form as:

Am J Orthopsychiatry. 2015 January ; 85(1): 43–55. doi:10.1037/ort0000028.

Understanding Bhutanese Refugee Suicide Through the Interpersonal-Psychological Theory of Suicidal Behavior

B. Heidi Ellis,
Boston Children's Hospital and Harvard Medical School

Emily W. Lankau,
Centers for Disease Control and Prevention, Atlanta, Georgia

Trong Ao,
Centers for Disease Control and Prevention, Atlanta, Georgia

Molly A. Benson,
Boston Children's Hospital and Harvard Medical School

Alisa B. Miller,
Boston Children's Hospital and Harvard Medical School

Sharmila Shetty,
Centers for Disease Control and Prevention, Atlanta, Georgia

Barbara Lopes Cardozo,
Centers for Disease Control and Prevention, Atlanta, Georgia

Paul L. Geltman, and
Massachusetts Department of Public Health, Jamaica Plain, Massachusetts and Harvard Medical School

Jennifer Cochran
Massachusetts Department of Public Health, Jamaica Plain, Massachusetts

Abstract

Attention has been drawn to high rates of suicide among refugees after resettlement and in particular among the Bhutanese refugees. This study sought to understand the apparent high rates of suicide among resettled Bhutanese refugees in the context of the Interpersonal-Psychological Theory of Suicidal Behavior (IPTS). Expanding on a larger investigation of suicide in a randomly

Correspondence concerning this article should be addressed to B. Heidi Ellis, Psychiatry Department, Boston Children's Hospital, 21 Autumn Street, 1st floor, Boston, MA 02115. heidi.ellis@childrens.harvard.edu.

B. Heidi Ellis, Boston Children's Hospital and Harvard Medical School, Department of Psychiatry; Emily W. Lankau, Centers for Disease Control and Prevention, Division of Global Migration and Quarantine, Atlanta, Georgia; Trong Ao, Centers for Disease Control and Prevention, Global Disease Detection Branch, Atlanta, Georgia; Molly A. Benson and Alisa B. Miller, Boston Children's Hospital and Harvard Medical School, Department of Psychiatry; Sharmila Shetty, Centers for Disease Control and Prevention, Immigrant, Refugee, and Migrant Health Branch; Barbara Lopes Cardozo, Centers for Disease Control and Prevention, Emergency Response and Recovery Branch, Center for Global Health, Atlanta, Georgia; Paul L. Geltman, Massachusetts Department of Public Health, Division of Global Populations and Infections Disease Prevention, Jamaica Plain, Massachusetts, and Harvard Medical School, Department of Pediatrics; and Jennifer Cochran, Massachusetts Department of Public Health, Division of Global Populations and Infectious Disease Prevention, Bureau of Infectious Disease, Jamaica Plain, Massachusetts.

Emily W. Lankau is now at LandCow Consulting, Athens, GA.

selected sample of Bhutanese men and women resettled in Arizona, Georgia, New York, and Texas (Ao et al., 2012), the current study focused on 2 factors, thwarted belongingness and perceived burdensomeness, examined individual and postmigration variables associated with these factors, and explored how they differed by gender. Overall, factors such as poor health were associated with perceived burdensomeness and thwarted belongingness. For men, stressors related to employment and providing for their families were related to feeling burdensome and/or alienated from family and friends, whereas for women, stressors such as illiteracy, family conflict, and being separated from family members were more associated. IPTS holds promise in understanding suicide in the resettled Bhutanese community.

Keywords

refugee; suicide; Bhutanese

Suicide is a significant global and local public health issue. The suicide death rate per 100,000 people is approximately 16 worldwide and 10.6 in the United States (Schininà, Sharma, Gorbacheva, & Mishra, 2012). Increasingly, attention has been drawn to the suicide rate among refugees after resettlement. Since 2007, more than 56,000 Bhutanese refugees have resettled in the United States, and by early 2009, increasing numbers of suicides in this population were being reported (Centers for Disease Control and Prevention, 2013). By February 2012, 16 suicides among Bhutanese refugees in the United States were confirmed, a rate of 20.3/100,000 and comparable to the rate of 20.8 documented in the refugee camps in Nepal (Ao et al., 2012; Schininà et al., 2012). The victims of these suicides included nine men and five women, ranging in age from 18 to 83 years old.[1] Understanding what factors are associated with increased suicide risk among Bhutanese refugees is critical to developing prevention and intervention programs. This current study was part of a larger investigation (detailed in Ao et al., 2012) conducted by the Centers for Disease Control and Prevention (CDC) in response to a request by the Refugee Health Technical Assistance Center and the United States Office of Refugee Resettlement to investigate the apparently high rates of suicide among Bhutanese refugees (Centers for Disease Control and Prevention, 2013). This study seeks to further Ao and colleagues' (2012) preliminary survey findings by applying a theory-based model of suicidal behavior, the Interpersonal-Psychological Theory of Suicidal Behavior (IPTS; Joiner, 2005), to the data obtained. Specifically, the purpose of this study was to focus on the factors of perceived burdensomeness and thwarted belongingness, examine individual and postmigration variables associated with these factors, and explore how they differed by gender.

The majority of Bhutanese refugees are descendants of Nepalese migrants to Bhutan in the late 1800s, where they became identified as “Lhotsampas.” They lived in Bhutan, retaining many of their Nepalese customs, until the 1980s when their rights were severely diminished by the Bhutanese government. In 1990, large-scale protests led to over 100,000 Bhutanese fleeing or being moved by force to Nepal (Schininà et al., 2012). Despite their shared ethnic and cultural heritage, Bhutanese refugees were prohibited freedom of movement and the

[1]Data was obtained on 14 of the 16 confirmed cases of suicide with psychological autopsies (Ao et al., 2012).

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

right to work in Nepal. In 2007, after years of unsuccessful negotiations between the two governments, resettlement to third countries was identified as the only solution and the U.S. Bhutanese refugee resettlement program was initiated.

IPTS

In developing the IPTS, Joiner (2005) posited that for a person to die by suicide, two conditions must be met: a desire for suicide and the capability to overcome the innate human drive for survival by acting on that desire. Joiner identified thwarted belongingness and perceived burdensomeness as the two main dimensions that contribute to a desire for death. Thwarted belongingness refers to a sense of alienation from friends, family, and/or important social circles (Ribeiro & Joiner, 2009), whereas perceived burdensomeness is defined as the view that one's death is worth more than one's life (Joiner, 2005). Belonging and nonburden represent important modifiable aspects of a person's cognitive state, fundamental aspects of humanity; when either of these needs is not met, and particularly when *neither* need is met, a person may desire suicide.

Recent research has supported the IPTS prediction that greater perceptions of being burdensome are associated with suicidal ideation (Cukrowicz, Cheavens, Van Orden, Ragain, & Cook, 2011; Garza & Pettit, 2010; Van Orden, Lynam, Hollar, & Joiner, 2006). Van Orden and colleagues (2006) found that perceived burdensomeness uniquely predicted suicidal ideation in a sample of 343 adult outpatients. Similarly, in a study of older adults, perceived burdensomeness was found to significantly predict suicidal ideation when controlling for other standard predictors, such as depressive symptoms, hopelessness, and functional impairment (Cukrowicz et al., 2011). Among Mexican and Mexican American women, perceived burdensomeness again was associated with suicidal ideation, also after controlling for depressive symptoms (Garza & Pettit, 2010). These studies add to a growing body of literature (Joiner et al., 2002; Van Orden, Witte, Gordon, Bender, & Joiner, 2008) supporting the IPTS prediction that perceived burdensomeness is critical to understanding a person's potential desire for death.

Thwarted belongingness has been robustly associated with suicidal ideation, both in direct tests of the IPTS (Timmons, Selby, Lewinsohn, & Joiner, 2011) and with more general examinations of social isolation (Bearman & Moody, 2004; Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer, 2007). It is interesting that some of the evidence supporting the role of thwarted belongingness in suicidal ideation comes from findings that, in times of broad adversity and grief, such as following the assassination of President Kennedy (Biller, 1977) or on September 11, 2001 (Salib, 2003), fewer suicides occur. Such shared adversities may bring people together and, at least temporarily, reduce one's sense of isolation and alienation.

Perceived Burdensomeness, Thwarted Belongingness, and the Refugee Experience

While, to date, no research has empirically tested the IPTS model among refugees, the theory taps into constructs central to the refugee literature. Refugees by definition have been

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

forced to flee their communities (United Nations High Commissioner for Refugees, 1992). While some successfully resettle in new communities, others experience great loss and isolation (Westermeyer, 2011). Loss of family members, linguistic and cultural isolation from the communities of resettlement, dissolution of the refugee group ethnic identity, and lack of physical proximity in the new country may all contribute to real or perceived thwarted belongingness (Garrett, 2006; Goodkind et al., 2014).

The refugee experience may cause refugees to perceive themselves to be burdens to their family or community. Some refugees leave behind robust and meaningful careers in their home country only to find that their training, degrees, or skills do not transfer to the country of resettlement (Miller, Worthington, Muzurovic, Tipping, & Goldman, 2002). Linguistic and cultural differences, and host country discrimination, can make finding new work difficult. Some refugees may find themselves unable to assume the family role that is culturally proscribed, such as a grandfather who must look to his granddaughter for financial support. Thus, while many refugees show great resilience and set up successful lives in their new homes, the structural challenges to belonging and contributing may leave some refugees particularly vulnerable to feelings of worthlessness and isolation. Within the Bhutanese culture, which values collectivism and the needs of the group above the individual, the sense of being a burden to others or not belonging may be particularly salient and damaging to their sense of self (L. Mulder, personal communication, December 11, 2013; Acharya, 2009).

Perceived burdensomeness and thwarted belongingness may also be impacted by gender. Traditionally, Bhutanese women were responsible for child rearing and household activities and had less access to education and resources, whereas men were considered the head of household responsible for land and economic decisions (Giri, 2005; Ranard, 2007). Once resettled in a new culture, women may struggle between maintaining traditional roles and finding work whereas men may feel an increasing burden in finding employment to help support their families. These stressors may leave men and women vulnerable to feelings of perceived burdensomeness and thwarted belongingness.

Family and societal security often change during the refugee flight and during the process of resettlement. During the process of removal from Bhutan, many women were subjected to interpersonal forms of violence, including rape, torture, and physical beatings (Giri, 2005; Human Rights Watch, 2003). Gender-based violence, including rape and domestic violence, continued in the camps (Human Rights Watch, 2003). Some of these female victims faced stigma and shame within the community (Giri, 2005). The process of resettlement may be particularly difficult for these vulnerable women who are not necessarily resettled with female family members or other social supports (Schininà et al., 2012).

Given that the IPTS specifies not only a desire, but also, the capacity for suicide to be present for suicide to occur, an important question is whether the refugee experience increases the acquisition of capability. According to the IPTS, the ability to inflict lethal self-injury, or "acquired capability," is developed through repeated exposure to painful and provocative experiences. The refugee experience itself may be understood as an experience of chronic fear; refugees flee their country out of well-founded fear of persecution or death.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Prior to fleeing, refugees may witness horrific violence and atrocities, and many refugee journeys are marked by moments of extreme threat, danger, and deprivation. Within a camp setting, such exposures often continue. While dangers may lessen after resettlement, continuing neighborhood violence, (Ellis, MacDonald, Lincoln, & Cabral, 2008) domestic violence (Nilsson, Brown, Russell, & Khamphakdy-Brown, 2008), and concern about survival in a new country may continue. Along any or all of the steps in the journey, refugees may experience not just fear but also pain. Trauma exposure rates among refugees are extremely high (Mollica et al., 2001; Steel et al., 2009) and many refugees experience torture (Steel et al., 2009). According to the IPTS, such exposure to chronic fear and repeated pain can inure one to pain and fear such that the prospect of taking one's own life no longer seems out of the realm of possibility.

No research specifically examines acquired capability for suicide among refugees. However, much research has documented the experience of trauma, fear, and deprivation among refugees, factors that theoretically are associated with an acquired capacity for suicide; these factors, in turn, are associated with risk for suicide. There is some evidence that the presence of trauma and/or posttraumatic stress disorder (PTSD) is associated with an increased risk of suicide among refugees (Ferrada-Noli, Asberg, Ormstad, Lundin, & Sundbom, 1998). Bhui and colleagues (2003) investigated trauma history among refugees and found that suicidal ideation was more common among those who experienced premigration shortage of food, serious injury, and those who felt close to death. Within the larger study from which the current research project was drawn, those Bhutanese refugees who had experienced their house or shelter being burned down had 4 times greater odds of reporting suicidal ideation (Ao et al., 2012). Ferrada-Noli, Asberg, and Ormstad (1998) found a high incident rate of suicide attempts (40%) among refugees with PTSD. Furthermore, in a study of refugees who were also torture-survivors, Ferrada-Noli Asberg, Ormstad, Lundin, & Sundbom, (1998) found that the method of torture corresponded to the suicidal ideation or attempt method, for example, water torture and drowning. Whereas there are a number of possible explanations for this finding, it is consistent with the notion of acquired capacity. Taken together, these findings suggest that refugee experiences of trauma, fear, and life threat could plausibly contribute to suicide risk through their contribution to an acquired capacity for suicide.

The Present Study

Ao and colleagues' (2012) investigation of mental health and risk factors associated with suicide and suicidal ideation in Bhutanese refugees resettled in the United States utilized psychological autopsy to describe suicides that have occurred and cross-sectional survey to identify factors associated with suicidal ideation to formulate recommendations for stakeholders to prevent additional suicides. Ao et al. (2012) found that 3% ($N = 13$) of respondents reported a lifetime history of suicidal ideation. Within the study, and consistent with research within other populations, these respondents were more likely to endorse symptoms of anxiety, depression, and PTSD than those who did not report suicidal ideation (Ao et al., 2012; Kanwar et al., 2013; Harwitz & Ravizza, 2000; Tarrier & Gregg, 2004). Other factors that may be particularly salient to the refugee experience also emerged as important risk factors; Postmigration difficulties including poor access to services, unemployment, and family conflict and lack of community structure to resolve family

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

conflict were also associated with suicidal ideation (Ao et al., 2012). In addition, perceived burdensomeness and thwarted belongingness were also more likely to be endorsed by those who reported suicidal ideation.

Given the documented association of perceived burdensomeness and thwarted belongingness with suicidal ideation among Bhutanese refugees (Ao et al., 2012), additional analyses were needed to apply the IPTS model in the larger sample of Bhutanese refugees (not just those who endorsed suicidal ideation). Thus, within this study we sought to identify variables associated with perceived burdensomeness and thwarted belongingness and to test these findings by gender, given the gender-based differences in cultural expectations and refugee experiences.

Method

Sample

Study review and approval was obtained through the CDC's Institutional Review Board. Five hundred seventy-nine Bhutanese refugees were randomly selected for participation from four states with large Bhutanese communities (Arizona, Georgia, New York, or Texas), with the total sample for each state proportionate to the Bhutanese refugee community living in each state (i.e., stratified simple random design).[2] Bhutanese refugees ages 18 years or older who were originally resettled in the above states between January 1, 2008 and November 17, 2011, were eligible for the study. Geographic areas were selected because of either known clusters of Bhutanese suicides in those areas and/or large numbers of Bhutanese refugees residing in those areas. Those who declined to consent, could not complete the interview because of physical or mental impairment, or were unable to complete the interviews either in writing or orally in either English or Nepali language were excluded.

Procedure

Structured interviews were conducted in participants' homes by a trained interviewer who was a native Nepali speaker (Ao et al., 2012). CDC staff accompanied the interviewer to supervise and manage enrollment and data collection. Interviewers made up to three attempts to visit the selected participants. All of the measures used in the study were translated, back-translated, and then piloted for consensus and revisions by Bhutanese community members who were trained as study interviewers. Participants did not receive reimbursement for participating in the study.

Measures

The primary team of researchers of this study selected the measures based on a number of considerations. Of course, first of all, if the instruments used would help answer the research questions. In additions, instruments were selected because they had been used among other refugee populations in the past and/or were already used successfully by the researchers in

[2]Data on the prevalence of mental health conditions among the Bhutanese refugee population resettled in the United States are not available, thus the overall sample size is based on an estimated prevalence of mental health conditions (such as depression) of 50%.

Author Manuscript
Author Manuscript
Author Manuscript
Author Manuscript

other refugee populations. A range of instruments was selected to be able to detect suicidal ideation, mental health conditions, and a number of risk and mitigating factors with an emphasis on cross-cultural relevance.

Health—As part of the structured interview, participants were asked, "In general, would you say your health is …" and asked to rate their health on a 5-point Likert scale (*excellent* to *poor*).

Perceived burdensomeness and thwarted belongingness—The Interpersonal Needs Questionnaire (INQ; Van Orden et al., 2008) measures thwarted belongingness and perceived burdensomeness. INQ items were derived from hypotheses in line with Joiner's (2005) IPTS. The brief version of the INQ consists of 12 items using a 7-point Likert scale (*not at all true for me* to *very true for me*). In this version, five items measure thwarted belongingness or the extent to which the participant feels connected to others, and seven items measure perceived burdensomeness. Scores are coded such that higher numbers reflect higher levels of thwarted belongingness and perceived burdensomeness. Psychometric analyses support the brief version of the INQ as a valid and reliable instrument (Van Orden et al., 2008). In this study, the Cronbach's alphas were .70 for thwarted belongingness and .67 for perceived burdensomeness.

Depression—The Hopkins Symptom Checklist-25 (HSCL-25; Parloff, Kelman, & Frank, 1954) measures symptoms of anxiety and depression. The 25-item checklist contains two parts. Part 1 contains 10 items to measure anxiety symptoms, and Part 2 has 15 items to measure depression symptoms. Responses are given on a 4-point Likert scale (*not at all* to *extremely*). The depression score correlates with major depression as defined by the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (*DSM–IV*; Kaaya et al., 2002). The HSCL-25 has repeatedly demonstrated high reliability and concurrent validity (Winokur, Winokur, Rickels, & Cox, 1984) and has also been used extensively with refugees (Kleijn, Hovens, & Rodenburg, 2001; Mollica, Wyshak, de Marneffe, Khuon, & Lavelle, 1987). Studies of a sample of Bhutanese refugee torture survivors report Cronbach's alphas ranging from .87 to .89 (Shrestha et al., 1998; Van Ommeren et al., 2002) for the anxiety and depression subscales. In this study, the Cronbach's alphas were also .87 and .89, respectively, for the depression and anxiety subscales.

Trauma exposure and posttraumatic stress disorder—The Harvard Trauma Questionnaire, Part 4 (HTQ; Mollica et al., 1996) is a 16-item measure derived from the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised* (DSM-IIIR)/*DSM–IV* criteria for PTSD. The HTQ uses a 4-point Likert scale (*not at all* to *extremely*). The HTQ has also demonstrated high internal consistency in studies of refugees and has been validated in various countries and cultures (Kleijn et al., 2001). The HTQ, Part 4, demonstrated high internal consistency reliability in this study ($\alpha = .89$).

Suicidal ideation—Questions related to suicide risk, suicidal ideation, and exposure to suicide were assessed using a 19-item measure derived from Suicidality Module of the World Mental Health Composite International Diagnostic Interview (Kessler & Ustün, 2004), Scale for Suicidal Ideation (Beck, Kovacs, & Weissman, 1979), and Disability Injury

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Survey, Afghanistan (CDC, unpublished data, 2001). Participants were asked “Have you ever seriously thought about committing suicide?” If they responded yes, additional questions further assessed frequency, timeframe, intent, and plan.

Social support—Twelve items from the Perceived Social Support (Cutrona, 1989) measure were used to assess perceived social support related to everyday life and how the participant perceived the current social support level provided by his or her social network. Participants were asked to rate how true each item is for them *at that moment* on a 5-point Likert scale (*strongly disagree* to *strongly agree*). The social support score was the sum of all items. The score ranged from 0 (*no perceived social support*) to 48 (*maximum support*), $\alpha = .78$.

Postmigration challenges—This 22-item measure was derived from the Post-Migration Living Difficulties checklist (Laban, Gernaat, Komproe, van der Tweel, & De Jong, 2005). Items were adapted based on focus group discussions with Bhutanese refugees. The items assess a range of stressors often encountered by refugees resettled in the United States and ask participants to rate how much these items were a problem for them on a 4-point Likert scale (*not at all* to *extremely*). Scores were collapsed into two categories (none/a little or a lot) for analyses.

Data Analytic Strategy

Descriptive statistics were reported for all individuals and by gender. Differences between men and women were tested using either a chi-square test (for categorical variables) or a two-tailed *t* test (for continuous variables) in JMP 9 (v. 9.0.2, SAS Institute, Cary, NC). For continuous variables with a non-normal distribution, a Wilcoxon signed-ranks test was run and results compared with those obtained by *t* test. As results obtained on parametric and nonparametric tests were comparable for all non-normal variables, *t* tests are presented.

Conditional logistic regression (conditional by state of residence) adjusted for age and gender was used to explore the relationship between suicidal ideation and mental health symptoms or experiences using the clogit function in the survival package in R (Therneau, 2012). Six individuals were omitted from this analysis because of missing information about experiencing suicidal ideation.

Multivariate modeling of demographic variables associated with thwarted belongingness or perceived burdensomeness was done by gender using backward selection performed on a Gaussian distribution generalized linear model with either perceived burdensomeness or thwarted belongingness as the dependent variable using the stepAIC function in the MASS package of R (Venables & Ripley, 2002). Initial independent variables included state, age, gender, marital status, education, literacy, religion, ethnicity, employment status, days resettled in the United States, and health. State, age, and gender were forced to remain in the model during backward selection. Multivariate models were run with 373 individuals with complete information for all variables of interest; 50 individuals were excluded for missing variables. The original dataset of 423 consenting individuals and reduced dataset of 373 individuals were compared to evaluate the impacts of removing these individuals on demographic variables; no significant differences were detected. For variables retained in

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

the final models, post hoc comparisons were performed with a two-tailed Dunnett's post hoc multiple comparison test using the glht function in the multcomp package in R (Hothorn, Bretz, & Westfall, 2008).

Finally, bivariate associations between problems encountered after migration to the United States and perceived burdensomeness or thwarted belongingness for all individuals and by gender were evaluated using a generalized linear model with p values adjusted for state, age and gender using the glm function in the stats package of R (R Development Core Team, 2011). A false discovery rate analysis was performed for men and women separately for each outcome variable (Benjamini & Hochberg, 1995).

Results

Of the 579 Bhutanese refugees randomly selected for participation in the larger study, 423 (73%) consented to participate (Ao et al., 2012). Descriptive statistics for all and by gender for demographic variables are presented in Table 1 and mental health concerns for all and by gender are presented in Table 2. Women reported being single less, employed less often, having lower levels of education, less able to read and write Nepali and English, and more commonly having fair or poor health than men. Women also reported more depressive and anxiety symptoms than men. Men reported experiencing significantly more traumatic events prior to migration to the United States, and had a lower mean score for perceived social support. Men and women did not differ significantly in their reported levels of perceived burdensomeness, thwarted belongingness, or in the percentage who experienced prior suicidal ideation. As described by Ao and colleagues (2012), 13 participants (3.1%) reported that they had ever thought seriously about committing suicide in their lifetime. Table 3 details the relationships among mental health, social support, perceived burdensomeness, thwarted belongingness, and suicidal ideation controlling for state of residence, gender, and age.

Demographic variables associated with thwarted belongingness and perceived burdensomeness were examined using multivariate models for the whole sample and by gender, see Tables 4 and 5, respectively. For the 432, thwarted belongingness was significantly associated with age, gender, religion, and health and was marginally associated with employment status and literacy. For men, thwarted belongingness was associated with age and health. For women, age, literacy, and health were significant variables retained in the final models; religion was marginally significant. Employment status was not significant in final multivariate models for either gender. Among women in post hoc testing, those who reported being illiterate in both Nepali and English reported marginally higher levels of thwarted belongingness than those reporting literacy in both Nepali and English, but no significant differences compared with those reporting literacy in English only or Nepali only. In models by gender, both men and women reporting poor health reported higher levels of thwarted belongingness compared with those reporting fair, good, or excellent health.

For the total sample, perceived burdensomeness was associated with literacy and health but not significantly related to age or gender. For men, perceived burdensomeness was

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

significantly associated with employment status and health; for women, perceived burdensomeness was associated with literacy and health. For all three models, age and gender (for the model including all responses) were forced to remain in the model as covariates, but were not significantly associated with outcomes. In post hoc comparisons by gender, individuals reporting poor health had higher mean perceived burdensomeness compared with those reporting fair, good, or very good/excellent health. Health trends were similar for both men and women in models by gender. Among men, those reporting current employment had lower perceived burdensomeness than those reporting not being employed. Among women, those reporting a lack of literacy in English and Nepali had significantly higher perceived burdensomeness compared with those literate in Nepali and those literate in both English and Nepali. Relatively few women reported literacy in English only ($n = 5$) and this group was not significantly different in mean perceived burdensomeness from the reference.

In an effort to understand potentially modifiable postmigration variables associated with the experience of perceived burdensomeness and thwarted belongingness by gender, generalized linear models adjusted for state and age were conducted. Refer to Tables 6 and 7, respectively, for the associations between perceived burdensomeness and thwarted belongingness and postmigration challenges. *p* values marked with an asterisk in the Tables 6 and 7 indicated that significance was retained when adjusted for false discovery rate (Benjamini & Hochberg, 1995).

For men, higher thwarted belongingness was associated with difficulty accessing counseling services, but not with difficulty accessing general health care; for women, difficulty accessing both general and mental health services was significantly associated with higher mean thwarted belongingness. For men, those reporting a lot of difficulty with paying living expenses and those with difficulty accessing community structures for family dispute resolution had significantly higher mean thwarted belongingness. In contrast, women reported more diverse postmigration problems associated with elevated thwarted belongingness. In particular, women reporting a lot of difficulty with family related anxieties, general resettlement issues (notably not including difficulty with paying living expenses, as for men), and concerns about community structures for family dispute resolution had higher mean thwarted belongingness.

Consistent with findings for thwarted belongingness, for men, higher perceived burdensomeness was associated with difficulty accessing counseling services but not with difficulty accessing general health care, while for women, difficulty accessing both general and mental health services was significantly associated with higher mean perceived burdensomeness. For men, those reporting difficulty finding employment had significantly higher mean perceived burdensomeness. Women had more diverse resettlement issues and family related anxiety associated with elevated mean perceived burdensomeness including being unable to find work, lack of choice over future, inability to pay living expenses, separation from family, and increased family conflict. For both men and women, lack of community structures to resolve conflict and worries about family back home were associated with higher mean perceived burdensomeness. In addition, men also reported

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

higher mean perceived burdensomeness associated with difficulty maintaining cultural and religious traditions.

Conclusion

As refugees, including Bhutanese refugees, continue to resettle in the United States there is a critical need to understand and prevent suicide within these communities. Findings from this study suggest that the IPTS may hold promise as a framework for understanding suicide among Bhutanese refugees. As predicted by the IPTS, perceived burdensomeness and thwarted belongingness were significantly associated with suicidal ideation (Ao et al., 2012). Those who reported suicidal ideation had 2.7 times greater odds of perceiving themselves as a burden and 2 times greater odds of reporting thwarted belongingness than those who did not report suicidal ideation. Those who acknowledged suicidal ideation also had 0.85 times less odds of reporting lower social support levels. In addition, those experiencing suicidal ideation are experiencing additional stressors such as anxiety, depression and PTSD symptoms, and low social support.

Our analyses suggest that both individual and resettlement variables are associated with perceived burdensomeness and thwarted belongingness. These health-related, economic, and community factors were examined across the sample and separately by gender. Understanding these potentially modifiable variables provides important direction for creating resettlement conditions under which Bhutanese refugees can thrive and risk for suicide can be reduced.

We found that for both genders poor health was consistently associated with higher levels of both thwarted belongingness and perceived burdensomeness. There are several possible explanations for this relationship. It is possible that when rating "health" Bhutanese include ratings related to mental health or somatic symptoms related to mental illness. Bhutanese men and women may also underreport mental health symptoms (Ao et al., 2012; Kohrt & Hruschka, 2010; Luitel et al., 2013; T. Mishra, personal communication, December 18, 2013). It is possible that poor physical health is directly associated with psychological risk. Most Bhutanese refugees lived for several years, if not their entire lifetime, in refugee camps where they had little access to health care or basic resources needed for healthy living. Resulting health problems that have persisted in the United States may be a particular burden for this population. Poor health may also limit refugees' mobility, access to social supports, and increase their reliance on family members for support, therefore contributing to feelings of burdensomeness and thwarted belonging. Given the association of health with psychological risk factors, attention to accessible and culturally sensitive health and mental health services for refugees is critical and primary care physicians may play an important role in identifying Bhutanese refugees at psychological risk.

Compounding the risk related to health, we also identified that a lack of access to health services, including counseling and general health services, was associated with higher levels of perceived burdensomeness and thwarted belongingness. Poor access to counseling services was especially important for men, whereas poor access to both services for women were associated with thwarted belongingness and perceived burdensomeness. Further

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

understanding of what limits the availability or accessibility of health and mental health services for this community is needed. Bhutanese refugees had limited options for seeking help in refugee camps, but at least had access to community or sector heads, whereas in the United States many of these refugees may be unfamiliar with or unable to access services that can provide counseling or health support (T. Mishra, personal communication, December 18, 2013).

Practical challenges of resettlement, such as financial strain and language barriers, were also risk factors for perceived burdensomeness and thwarted sense of belonging. For both genders, being unable to find work and the inability to pay living expenses was associated with perceived burdensomeness. More specifically for men, being unemployed was related to perceived burdensomeness, consistent with their traditional role of obtaining work outside the home to support their families. For women, being illiterate in Nepali or English, language barriers, and lack of choice over the future were associated with higher levels of thwarted belongingness and/or perceived burdensomeness. Many Bhutanese women may not have had opportunities to receive education and are now finding themselves in a new society where they are expected to learn a second language.

Finally, several family and community-related stressors were associated with perceived burdensomeness and thwarted belonging. For women, worries about family back home and additional family related stressors, including separation from family and increased family conflict, were all associated with perceived burdensomeness and thwarted belongingness. Bhutanese women may prefer to keep their thoughts to themselves because they do not want to bring stress and tension to others, with recognition that others are suffering (Acharya, Upadhya, & Kortmann, 2006). Women may be particularly vulnerable to these stressors based on their important role as caregivers within the family. For both men and women, changes within families and community structures were also related to feelings of thwarted belongingness and perceived burdensomeness. These changes included lack of structures for resolving disputes and worries about family back home. For men, difficulty maintaining religious traditions was also associated with perceived burdensomeness.

Whereas these findings provide important information about risk factors for suicide in this community, it is also important to bear in mind resilience factors that are already present in the community. Overall, most of the Bhutanese refugees who participated in this study did not acknowledge high rates of perceived burdensomeness or thwarted belongingness. Despite the incredible adversity experienced, many Bhutanese refugees were reporting high levels of social support and engagement in work and community. The high rates of suicide in the Bhutanese refugee community, nearly double that of the United States as a whole, are surprising given the overall high rates of belonging and low rates of perceived burdensomeness.

One possibility is that when psychological conditions of burdensomeness and thwarted belongingness are present *and* the third component—acquired capability for suicide—is present in high levels then a high rate of suicide results (Joiner, 2005). Could the high rates of suicide in the Bhutanese community be explained by a high rate of acquired capability for suicide? It is important to note that Bhutanese refugees often have a history of trauma. Thus,

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

this population may be considered at risk for having acquired the capacity to inflict self-injury. Most of the reported Bhutanese refugee suicides in the United States occurred by hanging, a particularly lethal form of suicide. Suicide has also been documented at high rates among Bhutanese living in refugee camps, suggesting additional exposure to suicidal behavior prior to arrival in the United States. A psychological autopsy conducted among Bhutanese refugees whose family committed suicide in the United States suggested that many of the victims experienced the suicide of a friend or family member (Ao et al., 2012).

While past trauma and a potential acquired capability for suicide may be contributing factors, it fails to explain the uniquely high rates of suicide among Bhutanese refugees. Most refugee groups have a history of trauma and while there have been suicides among other refugee groups resettled to the United States, they have not been occurring at the same rate as in the Bhutanese refugee community. As a designated Priority 2 (P-2) population by the United States Refugee Admissions Program, Bhutanese refugees from Nepal are resettled based on their humanitarian need as a group (United States Congress, 2014); therefore the resettlement process alone does not present a unique selection process based on individual vulnerabilities. As this is one of the first studies to examine this issue, additional insight into the Bhutanese culture and resettlement experience will be necessary to interpret the relevance of IPTS. The Bhutanese refugee culture differs from the dominant United States culture in many ways, including a more collectivist orientation (Schininà et al., 2012), specific roles and expectations ascribed to men and women, and religious beliefs. The Bhutanese refugee population is predominantly Hindu. The experience and meaning of thwarted belongingness, perceived burdensomeness, and acquired capability for suicide may all be influenced by culture. In addition, Bhutanese resettlement began during a time of economic downturn in the United States as a whole, and a reduction in federal benefits for new arrivals through the refugee resettlement program, which may have had a particular impact on the experience of Bhutanese refugees.

Although additional studies are needed to further elucidate the factors contributing to the higher rate of suicide in this community, our findings suggest that, consistent with IPTS (Joiner, 2005), those experiencing increased levels of perceived burdensomeness and thwarted belongingness in the Bhutanese community are at risk for suicidal ideation. Suicide within the Bhutanese refugee community may both share common elements with suicide within the broader community and also be uniquely shaped by culture. This framework holds important implications for prevention and intervention efforts. While prevention and intervention efforts that have been developed within the broader community are an important foundation from which to build, the role of culture will also need to be considered in adapting and shaping specific efforts within the Bhutanese, or any refugee community.

Limitations

The study has several limitations. Testing larger multivariate models for synergistic effects of the combination of burdensomeness and belongingness specifically related to suicidal ideation was not possible because of the relatively low rates of suicidal ideation (3%; Ao et al., 2012), Furthermore, cultural taboos or biases may have led to underreporting of suicidal ideation in the larger study. Because constructs such as burdensomeness and sense of

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

belonging may be strongly culturally determined, further research that includes qualitative assessment of Bhutanese refugee understanding of and meaning associated with these variables will be important. Similarly, this study collected data using assessment measures that capture western concepts of mental health symptoms and did not seek to identify culturally specific idioms of distress (see Kohrt & Hruschka, 2010). This study did not assess acquired capability for suicide; future work will be important to understanding whether the high rates in part result from past trauma and/or an acquired capability for self-injury. Finally, as with all cross-sectional studies, our ability to infer causality is limited.

Intervention Implications and Future Directions

Given the importance of preventing suicide within what appears to be a particularly at-risk population, important next steps will be to translate findings into intervention and prevention programs. Greater availability of language classes, job training and assistance, educational opportunities, or identification of meaningful volunteer roles within the community may provide important avenues for easing the perception of being a burden and increasing one's sense of internal capacity. In addition, community programs that offer a way for refugee community members to gather and share with one another in meaningful ways, and programs that support integration into the new country and culture, may ease perceptions of thwarted belongingness and isolation.

Acknowledgments

This research was supported by the Refugee Health Technical Assistance Center (funded by Office of Refugee Resettlement) and the Centers for Disease Control and Prevention. We thank our Bhutanese colleagues, Radha Adhikari, Tej Mishra, and Luna Mulder, for their thoughtful review of this article and their invaluable contributions to the interpretation of the study's findings and Laura Vonnahme, for her help with data analysis.

References

Acharya L. Bhutanese refugees 15 years later: A study on the effects of trauma among women who are survivors of torture. Dissertation Abstracts International. 2009; 69:4406.

Acharya L, Upadhya K, Kortmann F. Mental health and psychosocial support aspects in disaster preparedness: Nepal. International Review Of Psychiatry. 2006; 18:587–592. http://dx.doi.org/10.1080/09540260601038407. [PubMed: 17162702]

Ao, T.; Lopes-Cardozo, B.; Silvilli, TI.; Blanton, C.; Shetty, S.; Talyor, E.; Geltman, P. Suicide among Bhutanese refugees in the US 2009–2012: Stakeholders report. Atlanta, GA: Center for Disease Control and Prevention; 2012. Retrieved from http://www.refugeehealthta.org/files/2012/10/Bhutanese-Suicide-Stakeholder_Report_October_22_2012_Cleared_-For_Dissemination.pdf

Bearman PS, Moody J. Suicide and friendships among American adolescents. American Journal of Public Health. 2004; 94:89–95. http://dx.doi.org/10.2105/AJPH.94.1.89. [PubMed: 14713704]

Beck AT, Kovacs M, Weissman A. Assessment of suicidal intention: The Scale for Suicide Ideation. Journal of Consulting and Clinical Psychology. 1979; 47:343–352. http://dx.doi.org/10.1037/0022-006X.47.2.343. [PubMed: 469082]

Benjamini Y, Hochberg Y. Controlling the false discovery rate: A practical and powerful approach to multiple testing. Journal of the Royal Statistical Society. Series B Methodological. 1995; 57:289–300. Retrieved from http://engr.case.edu/ray_soumya/mlrg/controlling_fdr_benjamini95.pdf.

Bhui K, Abdi A, Abdi M, Pereira S, Dualeh M, Robertson D, …Ismail H. Traumatic events, migration characteristics and psychiatric symptoms among Somali refugees. Social Psychiatry and Psychiatric Epidemiology. 2003; 38:35–43. http://dx.doi.org/10.1007/s00127-003-0596-5. [PubMed: 12563557]

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Biller WA. Suicide related to the assassination of President John F. Kennedy. Suicide and Life-Threatening Behavior. 1977; 7:40–44. [PubMed: 349785]

Centers for Disease Control and Prevention. Suicide and suicidal ideation among Bhutanese refugees —United States, 2009–2012. Morbidity and Mortality Weekly Report. 2013; 62:533–536. [PubMed: 23820966]

Cukrowicz KC, Cheavens JS, Van Orden KA, Ragain RM, Cook RL. Perceived burdensomeness and suicide ideation in older adults. Psychology and Aging. 2011; 26:331–338. http://dx.doi.org/10.1037/a0021836. [PubMed: 21401264]

Cutrona CE. Ratings of social support by adolescents and adult informants: Degree of correspondence and prediction of depressive symptoms. Journal of Personality and Social Psychology. 1989; 57:723–730. [PubMed: 2795439]

Ellis BH, MacDonald HZ, Lincoln AK, Cabral HJ. Mental health of Somali adolescent refugees: The role of trauma, stress, and perceived discrimination. Journal of Consulting and Clinical Psychology. 2008; 76:184–193. http://dx.doi.org/10.1037/0022-006X.76.2.184. [PubMed: 18377116]

Ferrada-Noli M, Asberg M, Ormstad K. Suicidal behavior after severe trauma. Pt. 2: The association between methods of torture and of suicidal ideation in posttraumatic stress disorder. Journal of Traumatic Stress. 1998; 11:113–124. http://dx.doi.org/10.1023/A:1024413301064. [PubMed: 9479680]

Ferrada-Noli M, Asberg M, Ormstad K, Lundin T, Sundbom E. Suicidal behavior after severe trauma. Pt. 1: PTSD diagnoses, psychiatric comorbidity, and assessments of suicidal behavior. Journal of Traumatic Stress. 1998; 11:103–112. http://dx.doi.org/10.1023/A:1024461216994. [PubMed: 9479679]

Garrett, KE. Living in America: Challenges facing new immigrants and refugees. Robert Wood Johnson Foundation; 2006. Retrieved from http://www.rwjf.org/content/dam/farm/reports/reports/2006/rwjf13807

Garza MJ, Pettit JW. Perceived burdensomeness, familism, and suicidal ideation among Mexican women: Enhancing understanding of risk and protective factors. Suicide and Life-Threatening Behavior. 2010; 40:561–573. http://dx.doi.org/10.1521/suli.2010.40.6.561. [PubMed: 21198325]

Giri B. Mourning the 15th anniversary of crisis: The plight of Bhutanese refugee women and children. Journal of Asian and African Studies. 2005; 40:345–369. http://dx.doi.org/10.1177/0021909605057742.

Goodkind JR, Hess JM, Isakson B, LaNoue M, Githinji A, Roche N, …Parker DP. Reducing refugee mental health disparities: A community-based intervention to address postmigration stressors with African adults. Psychological Services. 2014; 11:333–346. http://dx.doi.org/10.1037/a0035081. [PubMed: 24364594]

Hall-Lande JA, Eisenberg ME, Christenson SL, Neumark-Sztainer D. Social isolation, psychological health, and protective factors in adolescence. Adolescence. 2007; 42:265–286. Retrieved from http://facweb.northseattle.edu/lchaffee/PSY100/Journal%20Articles/Hall-Lande%20et%20al%202007.pdf. [PubMed: 17849936]

Harwitz D, Ravizza L. Suicide and depression. Emergency Medicine Clinics of North America. 2000; 18:263–271. ix. http://dx.doi.org/10.1016/S0733-8627(05)70123-1. [PubMed: 10767883]

Hothorn T, Bretz F, Westfall P. Simultaneous inference in general parametric models. Biometrical Journal Biometrische Zeitschrift. 2008; 50:346–363. http://dx.doi.org/10.1002/bimj.200810425. [PubMed: 18481363]

Human Rights Watch. (HRW). Trapped by inequality: Bhutanese refugee women in Nepal. 2003; 15(8) Retrieved from http://www.hrw.org/sites/default/files/reports/nepal0903full.pdf.

Joiner, TE, Jr. Why people die by suicide. Cambridge, MA: Harvard University Press; 2005.

Joiner TR, Pettit JW, Walker RL, Voelz ZR, Cruz J, Rudd M, Lester D. Perceived burdensomeness and suicidality: Two studies on the suicide notes of those attempting and those completing suicide. Journal of Social and Clinical Psychology. 2002; 21:531–545. http://dx.doi.org/10.1521/jscp.21.5.531.22624.

Kaaya SF, Fawzi MC, Mbwambo JK, Lee B, Msamanga GI, Fawzi W. Validity of the Hopkins Symptom Checklist-25 amongst HIV-positive pregnant women in Tanzania. Acta Psychiatrica

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Scandinavica. 2002; 106:9–19. http://dx.doi.org/10.1034/j.1600-0447.2002.01205.x. [PubMed: 12100343]

Kanwar A, Malik S, Prokop LJ, Sim LA, Feldstein D, Wang Z, Murad MH. The association between anxiety disorders and suicidal behaviors: A systematic review and meta-analysis. Depression and Anxiety. 2013; 30:917–929. [PubMed: 23408488]

Kessler RC, Ustün TB. The World Mental Health (WMH) Survey Initiative Version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). International Journal of Methods in Psychiatric Research. 2004; 13:93–121. http://dx.doi.org/10.1002/mpr.168. [PubMed: 15297906]

Kleijn WC, Hovens JE, Rodenburg JJ. Posttraumatic stress symptoms in refugees: Assessments with the Harvard Trauma Questionnaire and the Hopkins Symptom Checklist-25 in different languages. Psychological Reports. 2001; 88:527–532. http://dx.doi.org/10.2466/PR0.88.2.527-532. [PubMed: 11351903]

Kohrt BA, Hruschka DJ. Nepali concepts of psychological trauma: The role of idioms of distress, ethnopsychology and ethnophysiology in alleviating suffering and preventing stigma. Culture, Medicine and Psychiatry. 2010; 34:322–352. http://dx.doi.org/10.1007/s11013-010-9170-2.

Laban CJ, Gernaat HB, Komproe IH, van der Tweel I, De Jong JT. Postmigration living problems and common psychiatric disorders in Iraqi asylum seekers in the Netherlands. Journal of Nervous and Mental Disease. 2005; 193:825–832. http://dx.doi.org/10.1097/01.nmd.0000188977.44657.1d. [PubMed: 16319706]

Luitel NP, Jordans MJD, Sapkota RP, Tol WA, Kohrt BA, Thapa SB, …Sharma B. Conflict and mental health: A cross-sectional epidemiological study in Nepal. Social Psychiatry and Psychiatric Epidemiology. 2013; 48:183–193. http://dx.doi.org/10.1007/s00127-012-0539-0. [PubMed: 22777395]

Miller KE, Worthington GJ, Muzurovic J, Tipping S, Goldman A. Bosnian refugees and the stressors of exile: A narrative study. American Journal of Orthopsychiatry. 2002; 72:341–354. http://dx.doi.org/10.1037/0002-9432.72.3.341. [PubMed: 15792046]

Mollica RF, Caspi-Yavin Y, Lavelle J, Tor S, Yang T, Chan S, De Marneffe D. Harvard Trauma Questionnaire (HTQ): Manual for Cambodian, Laotian and Vietnamese versions. Torture. 1996; 6(Suppl 1):19–33. Retrieved from http://www.irct.org/library/torture-journal.aspx.

Mollica RF, Sarajli N, Chernoff M, Lavelle J, Vukovic IS, Massagli MP. Longitudinal study of psychiatric symptoms, disability, mortality, and emigration among Bosnian refugees. JAMA: Journal of the American Medical Association. 2001; 286:546–554. http://dx.doi.org/10.1001/jama.286.5.546. [PubMed: 11476656]

Mollica RF, Wyshak G, de Marneffe D, Khuon F, Lavelle J. Indochinese versions of the Hopkins Symptom Checklist-25: A screening instrument for the psychiatric care of refugees. The American Journal of Psychiatry. 1987; 144:497–500. http://ajp.psychiatryonline.org. [PubMed: 3565621]

Nilsson JE, Brown C, Russell EB, Khamphakdy-Brown S. Acculturation, partner violence, and psychological distress in refugee women from Somalia. Journal of Interpersonal Violence. 2008; 23:1654–1663. http://dx.doi.org/10.1177/0886260508314310. [PubMed: 18309044]

Parloff MB, Kelman HC, Frank JD. Comfort, effectiveness, and self-awareness as criteria of improvement in psychotherapy. The American Journal of Psychiatry. 1954; 111:343–352. http://ajp.psychiatryonline.org. [PubMed: 13197596]

Ranard, DA., editor. Bhutanese refugees in Nepal, October 2007. Washington, DC: Cultural Orientation Resource Center; 2007. Retrieved from http://www.culturalorientation.net/learning/backgrounders

R Development Core Team. R: A language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing; 2011. Retrieved from http://www.R-project.org

Salib E. Effect of 11 September 2001 on suicide and homicide in England and Wales. The British Journal of Psychiatry. 2003; 183:207–212. http://dx.doi.org/10.1192/bjp.183.3.207. [PubMed: 12948992]

Schininà, G.; Sharma, S.; Gorbacheva, O.; Mishra, AK. Who am I? Assessment of psychosocial needs and suicide risk factors among Bhutanese refugees in Nepal and after third country resettlement. Geneva, Switzerland: International Office for Migration; 2012. Retrieved from http://

www.dbhds.virginia.gov/2008CLC/documents/2012Pres/clc-pres-Refugees-Bhutanese-MH-Assesmt-Nepal.pdf

Shrestha NM, Sharma B, Van Ommeren M, Regmi S, Makaju R, Komproe I, … de Jong JT. Impact of torture on refugees displaced within the developing world: Symptomatology among Bhutanese refugees in Nepal. JAMA: Journal of the American Medical Association. 1998; 280:443–448. http://dx.doi.org/10.1001/jama.280.5.443. [PubMed: 9701080]

Steel Z, Chey T, Silove D, Marnane C, Bryant RA, van Ommeren M. Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: A systematic review and meta-analysis. JAMA: Journal of the American Medical Association. 2009; 302:537–549. http://dx.doi.org/10.1001/jama.2009.1132. [PubMed: 19654388]

Tarrier N, Gregg L. Suicide risk in civilian PTSD patients: Predictors of suicidal ideation, planning and attempts. Social Psychiatry and Psychiatric Epidemiology. 2004; 39:655–661. http://dx.doi.org/10.1007/s00127-004-0799-4. [PubMed: 15300376]

Therneau T. A package for survival analysis in S. R package version 2. 2012:36–12.

Timmons KA, Selby EA, Lewinsohn PM, Joiner TE. Parental displacement and adolescent suicidality: Exploring the role of failed belonging. Journal of Clinical Child and Adolescent Psychology. 2011; 40:807–817. http://dx.doi.org/10.1080/15374416.2011.614584. [PubMed: 22023272]

United Nations High Commissioner for Refugees. Handbook on procedures and criteria for determining refugee status under the 1951 convention and the 1967 protocol relating to the status of refugees. Geneva, Switzerland: Author; 1992.

United States Congress, Committees on the Judiciary United States Senate and United States House of Representatives. Proposed refugee admissions for fiscal year 2014: Report to the Congress. 2014. Retrieved from http://www.state.gov/documents/organization/219137.pdf

Van Ommeren M, Sharma B, Sharma GK, Komproe I, Cardeiia E, de Jong JTVM. The relationship between somatic and PTSD symptoms among Bhutanese refugee torture survivors: Examination of comorbidity with anxiety and depression. Journal of Traumatic Stress. 2002; 15:415–421. [PubMed: 12392230]

Van Orden KA, Lynam ME, Hollar D, Joiner T. Perceived burdensomeness as an indicator of suicidal symptoms. Cognitive Therapy and Research. 2006; 30:457–467. http://dx.doi.org/10.1007/s10608-006-9057-2.

Van Orden KA, Witte TK, Gordon KH, Bender TW, Joiner TE Jr. Suicidal desire and the capability for suicide: Tests of the interpersonal-psychological theory of suicidal behavior among adults. Journal of Consulting and Clinical Psychology. 2008; 76:72–83. http://dx.doi.org/10.1037/0022-006X.76.1.72. [PubMed: 18229985]

Venables, WN.; Ripley, BD. Modern applied statistics with S. 4. New York, NY: Springer; 2002. http://dx.doi.org/10.1007/978-0-387-21706-2

Westermeyer JJ. Refugee resettlement to the United States: Recommendations for a new approach. Journal of Nervous and Mental Disease. 2011; 199:532–536. http://dx.doi.org/10.1097/NMD.0b013e318225eebf. [PubMed: 21814074]

Winokur A, Winokur DF, Rickels K, Cox DS. Symptoms of emotional distress in a family planning service: Stability over a four-week period. The British Journal of Psychiatry. 1984; 144:395–399. http://dx.doi.org/10.1192/bjp.144.4.395. [PubMed: 6722401]

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Table 1

Demographics of All Bhutanese Refugee Respondents and by Gender

Variable	All (*N* = 423), *M* (*SD*) or *n* (%)	Male (*N* = 221, 52.2%), *M* (*SD*) or *n* (%)	Female (*N* = 202, 47.8%), *M* (*SD*) or *n* (%)	Male vs. female *p* (*df*:test statistic)[a]
Age	38.3 (16.0)	37.7 (15.9)	38.8 (16.1)	.491 (409:–0.69)
Years resettled in United States	1.80 (0.99)	1.71 (0.99)	1.89 (0.98)	.069 (402:–1.83)
Household size	5.32 (1.67)	5.25 (1.71)	5.39 (1.62)	.408 (414:–0.83)
Number of children	2.41 (2.61)	2.16 (2.59)	2.67 (2.61)	.044 (419:–2.02)
Marital Status				.004 (2:11.25)
Married	301 (71.2%)	151 (68.3%)	150 (74.3%)	
Single	93 (22.0%)	60 (27.2%)	33 (16.3%)	
Other	24 (5.7%)	7 (3.2%)	17 (8.4%)	
Religion				.122 (3:5.788)[b]
Hindu	306 (72.3%)	150 (67.9%)	156 (77.2%)	
Christian	68 (16.1%)	39 (17.7%)	29 (14.4%)	
Buddhist	42 (9.9%)	29 (13.1%)	13 (6.4%)	
Other	7 (1.7%)	3 (1.4%)	4 (2.0%)	
Employment status				<.001 (1:41.40)
Yes	216 (51.1%)	146 (66.1%)	70 (35.2%)	
No	202 (47.8%)	73 (33.0%)	129 (64.8%)	
Education				<.001 (4:20.73)
No education	148 (35.0%)	57 (25.9%)	91 (45.3%)	
Primary school	56 (13.2%)	32 (14.6%)	24 (11.9%)	
Secondary school	163 (38.5%)	92 (41.8%)	71 (35.3%)	
College	42 (9.9%)	32 (14.6%)	10 (5.0%)	
Graduate	12 (2.8%)	7 (3.2%)	5 (2.5%)	
Ethnicity				.068 (4:8.74)[b]
Bahun	139 (37.3%)	72 (40.4%)	67 (34.4%)	
Chhetri	94 (25.2%)	49(27.5%)	45 (23.1%)	
Dalit	29 (7.8%)	16 (89.9%)	13 (6.7%)	
Janajati	101 (27.1%)	39 (21.9%)	62 (31.8%)	
Other	10 (26.8%)	2(1.1%)	8 (4.1%)	
Literacy (read/write)				<.001 (3:52.95)
Both	213 (58.9%)	141 (63.8%)	99 (49.3%)	
English Only	7 (1.9%)	6 (2.7%)	5 (2.5%)	
Nepali Only	52 (14.3%)	49 (22.2%)	16 (8.0%)	
Neither	90 (24.9%)	25 (11.3%)	81 (40.3%)	
Health				.002 (3:15.19)
Excellent or very good	56 (13.2%)	30 (13.4%)	26 (12.9%)	
Good	112 (26.5%)	75 (33.9%)	37 (18.3%)	
Fair	153 (36.2%)	73 (33.0%)	80 (39.6%)	
Poor	102 (24.1%)	43 (19.5%)	59 (29.2%)	

[a]Test statistic was χ^2 for categorical variables or a two-tailed *t* test for continuous variables.

[b]Yates correction for comparisons in which >20% of cells were <5.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Table 2

Mental Health Symptoms, Traumatic Experience Numbers, and Perceived Social Support Reported by All Bhutanese Refugees and by Gender

Symptoms/experiences	All (*N* = 423), *n* (%) or *M* (*SD*)	Male (*N* = 221), *n* (%) or *M* (*SD*)	Female (*N* = 202), *n* (%) or *M* (*SD*)	Male vs. female *p* (*df*:test statistic)[a]
Suicidal ideation	13 (3.1%)	6 (2.7%)	7 (3.5%)	.679 (1:0.171)
Depression symptoms	82 (19.4%)	33 (14.9%)	49 (24.3%)	.008 (1:7.04)
Anxiety symptoms	79 (18.7%)	33 (14.9%)	46 (22.8%)	.039 (1:4.27)
PTSD	19 (4.5%)	7 (3.2%)	12 (5.9%)	.172 (1:1.86)
Number of traumas	6.11 (3.63)	6.90 (3.79)	5.24 (3.24)	<.001 (421:4.85)
Perceived burdensomeness	1.76 (0.74)	1.75 (0.69)	1.77 (0.80)	.750 (410:−0.32)
Thwarted belongingness	2.48 (1.13)	2.54 (1.07)	2.41 (1.19)	.255 (415:1.14)
Perceived social support	46.3 (6.02)	45.6 (5.54)	47.0 (6.44)	.013 (407:−2.48)

Note. PTSD = posttraumatic stress disorder, yes or no.

[a]Test statistic was χ^2 for categorical variables or a two-tailed *t* test for continuous variables.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Table 3

Association Between Suicidal Ideation and Mental Health Symptoms, Traumatic Experiences, and Perceived Social Support

	***n* (%) or *Mean* (*SD*)**				
Variable	**Ideation ($N = 13$)**	**No ideation ($N = 404$)**	p^{a}	**OR 95% CI**	**AIC**
Anxiety[b]	11 (84.6%)	67 (16.6%)	<.001	38.4 [7.89, 186.8]	74.0
Depression[b]	8 (61.5%)	74 (18.3%)	<.001	11.18 [2.90, 43.00]	83.0
Perceived social support	40.2 (6.7)	46.5 (5.83)	<.001	0.85 [0.78, 0.93]	86.2
Perceived burdensomeness	2.62 (1.14)	1.73 (0.72)	<.001	2.73 [1.60, 4.66]	86.7
Thwarted belonging	3.62 (1.08)	2.44 (1.12)	.002	2.03 [1.28, 3.23]	95.0
PTSD[b]	3 (23.1%)	16 (4.0%)	.021	7.27 [1.62, 32.65]	99.1
Number of traumas	6.23 (2.74)	6.11 (3.66)	.498	1.06 [0.89, 1.27]	104.0

Note. OR = odds ratio; CI = confidence interval; AIC = Akaike's information criterion; PTSD = posttraumatic stress disorder symptoms.

[a]Results are logistic models, conditional by state and adjusted by age and gender, calculated using the clogit function in *R*.

[b]Yes or no.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Table 4

Demographic Factors Associated With Thwarted Belongingness

Variable	All (N = 373)[a]			Male (N = 195)			Female (N = 178)		
	Thwarted belonging, M (SEM)*	LR	LR test, p	Thwarted belonging, M (SEM)	LR	LR test, p	Thwarted belonging, M (SEM)	LR	LR test, p
Age		7.70	.006	—	5.49	.019	—	4.42	.036
Gender		4.09	.043						
Male	2.57 (0.08)								
Female	2.32 (0.09)								
Religion		8.68	.035					7.80	.050
Hindu	2.33 (0.07)		Ref.				2.20 (0.09)		
Christian	2.75 (0.16)		.111				2.93 (0.30)		
Buddhist	2.78 (0.18)		.084				2.64 (0.37)		
Other	2.92 (0.55)		.682				3.27 (0.92)		
Employment status		3.32	.069						
Yes	2.51 (0.08)								
No	2.39 (0.09)								
Literacy (read/write)		7.20	.066					8.10	.043
Both	2.40 (0.07)						2.18 (0.10)		.078
English only	1.94 (0.38)						1.27 (0.13)		.187
Nepali only	2.47 (0.14)						2.09 (0.33)		.274
Neither	2.61 (0.14)						2.60 (0.16)		Ref.
Health		21.90	<.001		14.37	.002		11.58	.028
Excellent/very good	2.07 (0.11)		<.001	2.05 (0.14)		<.001	2.09 (0.16)		.194
Good	2.44 (0.11)		.001	2.57 (0.13)		.033	2.19 (0.20)		.096
Fair	2.40 (0.08)		<.001	2.62 (0.13)		.113	2.20 (0.11)		.010
Poor	2.81 (0.15)		Ref.	2.89 (0.21)		Ref.	2.75 (0.21)		Ref.

Note. LR = Likelihood Ratio; Ref. = reference group.

[a]Models were run on a subset of 373 individuals that had complete information for all variables analyzed.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Table 5

Demographic Factors Associated With Perceived Burdensomeness

Variable	All (N = 373)[a]			Male (N = 195)			Female (N = 178)		
	Perceived burdensomeness, M (SEM)*	LR	LR test, p	Perceived burdensomeness M (SEM)	LR	LR test, p	Perceived burdensomeness M (SEM)	LR	LR test, p
Age	—	0.25	.621	—	0.27	.601	—	0.58	.446
Gender		1.32	.251						
Male	1.76 (0.05)								
Female	1.79 (0.06)								
Employment status					4.19	.041			
Yes				1.59 (0.05)					
No				2.11 (0.11)					
Literacy (read/write)		11.54	.009					12.13	.007
Both	1.61 (0.04)		.004				1.59 (0.05)		.037
English only	1.90 (0.27)		.997				1.71 (0.50)		.837
Nepali only	1.87 (0.10)		.109				1.53 (0.13)		.037
Neither	2.12 (0.11)		Ref.				2.11 (0.13)		Ref.
Health		24.26	<.001		11.46	.009		8.84	.031
Excellent/very good	1.51 (0.07)		<.001	1.45 (0.10)		.005	1.58 (0.10)		.175
Good	1.63 (0.06)		<.001	1.59 (0.08)		.008	1.71 (0.10)		.470
Fair	1.69 (0.05)		<.001	1.75 (0.08)		.018	1.63 (0.07)		.014
Poor	2.25 (0.12)		Ref.	2.30 (0.14)		Ref.	2.22 (0.18)		Ref.

Note. LR = Likelihood Ratio; Ref. = reference group.

[a]Models were run on a subset of 373 individuals that had complete information for all variables analyzed.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Table 6

Association of Problems Encountered After Resettlement in the United States With Thwarted Belongingness

Postmigration problems	Experienced in United States	Males (N = 195)			Females (N = 178)		
		n	Thwarted belongingness, M (SEM)	p	n	Thwarted belongingness, M (SEM)	p
Access to health resources							
Poor access to healthcare	A lot	51	2.65 (0.15)	.421	59	2.77 (0.16)	.002*
	Little to none	144	2.54 (0.08)		119	2.09 (0.09)	
Poor access to counseling services	A lot	40	3.04 (0.16)	<.001*	35	3.27 (0.21)	<.001*
	Little to none	155	2.45 (0.08)		143	2.09 (0.08)	
Resettlement to United States							
Language barriers	A lot	109	2.59 (0.11)	.290	116	2.46 (0.11)	.047
	Little to none	86	2.53 (0.10)		62	2.06 (0.11)	
Being unable to find work	A lot	68	2.55 (0.13)	.797	66	2.76 (0.15)	<.001*
	Little to none	127	2.58(0.09)		112	2.06 (0.09)	
Lack of choice over future	A lot	87	2.69 (0.12)	.097	88	2.66 (0.13)	<.001*
	Little to none	108	2.47 (0.09)		90	1.99 (0.09)	
Inability to pay living expenses	A lot	49	2.91 (0.16)	.008*	45	2.63 (0.20)	.236
	Little to none	146	2.45 (0.08)		133	2.21 (0.08)	
Aid/support							
Little help from government	A lot	65	2.56 (0.12)	.969	59	2.37 (0.15)	.224
	Little to none	130	2.57 (0.09)		119	2.29 (0.10)	
Little help from charities or other agencies	A lot	42	2.45 (0.15)	.548	45	2.32 (0.17)	.550
	Little to none	153	2.60 (0.08)		133	2.32 (0.09)	
Religion/culture							
Discrimination	A lot	13	2.60 (0.37)	.858	10	2.16 (0.21)	.473
	Little to none	182	2.57 (0.07)		168	2.33 (0.09)	
Crime	A lot	3	1.86 (0.33)	—	0	—	—
	Little to none	192	2.58 (0.07)		178	2.32 (0.08)	
Lack of community structures for resolving family disputes	A lot	17	3.31 (0.30)	<.001*	13	3.01 (0.38)	.006*
	Little to none	178	2.50 (0.07)		165	2.26 (0.08)	

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Postmigration problems	Experienced in United States	Males (N = 195)			Females (N = 178)		
		n	**Thwarted belongingness, *M* (*SEM*)**	***p***	***n***	**Thwarted belongingness, *M* (*SEM*)**	***p***
Lack of religious community	A lot	34	2.66 (0.17)	.432	34	2.27 (0.19)	.809
	Little to none	161	2.55 (0.08)		144	2.33 (0.09)	
Difficulty maintaining cultural and religious traditions	A lot	45	2.64 (0.16)	.359	33	2.15 (0.19)	.302
	Little to none	150	2.55 (0.08)		145	2.36 (0.09)	
Family-related anxiety							
Separation from family	A lot	21	2.91 (0.23)	.105	32	2.88 (0.24)	.003*
	Little to none	174	2.53 (0.08)		146	2.20 (0.08)	
Worries about family back at home	A lot	65	2.67 (0.14)	.269	80	2.61 (0.13)	.011*
	Little to none	130	2.52 (0.09)		98	2.08 (0.10)	
Increased family conflict	A lot	4	3.15 (0.42)	.394	8	4.07 (0.53)	<.001*
	Little to none	191	2.56 (0.07)		170	2.24 (0.08)	

* Significance was retained when adjusted for false discovery rate.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Table 7

Association of Problems Encountered After Resettlement in the United States With Perceived Burdensomeness

Postmigration problems	Experienced in United States	Males (N = 195)			Females (N = 178)		
		n	Perceived burdensomness, *M* (*SEM*)	*p*	*n*	Perceived burdensomness, *M* (*SEM*)	*p*
Access to health resources							
Poor access to healthcare	A lot	51	1.74 (0.12)	.831	59	2.16 (0.14)	<.001*
	Little to none	144	1.76 (0.06)		119	1.61 (0.05)	
Poor access to counseling services	A lot	40	2.03 (0.13)	.014*	35	2.69 (0.20)	<.001*
	Little to none	155	1.69 (0.05)		143	1.57 (0.04)	
Resettlement to United States							
Language barriers	A lot	109	1.90 (0.08)	.077	116	1.91 (0.09)	.186
	Little to none	86	1.58 (0.06)		62	1.58 (0.07)	
Being unable to find work	A lot	68	1.96 (0.10)	.011*	66	2.09 (0.12)	<.001*
	Little to none	127	1.65 (0.05)		112	1.61 (0.06)	
Lack of choice over future	A lot	87	1.89 (0.09)	.115	88	2.05 (0.11)	.002*
	Little to none	108	1.65 (0.06)		90	1.54 (0.05)	
Inability to pay living expenses	A lot	49	2.01 (0.13)	.027	45	2.19 (0.17)	<.001*
	Little to none	146	1.67 (0.05)		133	1.65 (0.05)	
Aid/support							
Little help from government	A lot	65	1.71 (0.09)	.476	59	1.87 (0.11)	.165
	Little to none	130	1.78 (0.06)		119	1.75 (0.07)	
Little help from charities or other agencies	A lot	42	1.76 (0.12)	.965	45	1.87 (0.15)	.304
	Little to none	153	1.756 (0.06)		133	1.76 (0.06)	
Religion/culture							
Discrimination	A lot	13	1.90 (0.27)	.550	10	1.80 (0.20)	.691
	Little to none	182	1.75 (0.05)		168	1.79 (0.06)	
Crime	A lot	3	1.33 (0.27)	—	0	—	—
	Little to none	192	1.76 (0.05)		178	1.79 (0.06)	
Lack of community structures for resolving family disputes	A lot	17	2.63 (0.19)	<.001*	13	2.33 (0.37)	.007*
	Little to none	178	1.67 (0.5)		165	1.75 (0.06)	

Postmigration problems	Experienced in United States	Males (N = 195)			Females (N = 178)		
		n	Perceived burdensomness, M (SEM)	p	n	Perceived burdensomness, M (SEM)	p
Lack of religious community	A lot	34	1.91 (0.12)	.458	34	1.91 (0.18)	.734
	Little to none	161	1.72 (0.06)		144	1.76 (0.06)	
Difficulty maintaining cultural and religious traditions	A lot	45	2.09 (0.12)	.004*	33	1.85 (0.17)	.955
	Little to none	150	1.66 (0.05)		145	1.78 (0.07)	
Family-related anxiety							
Separation from family	A lot	21	2.10 (0.20)	.051	32	2.17 (0.21)	.015*
	Little to none	174	1.72 (0.05)		146	1.71 (0.06)	
Worries about family back at home	A lot	65	1.91 (0.10)	.048	80	1.98 (0.10)	.046
	Little to none	130	1.68 (0.06)		98	1.64 (0.07)	
Increased family conflict	A lot	4	2.71 (0.50)	—	8	3.45 (0.52)	<.001*
	Little to none	191	1.74 (0.05)		170	1.71 (0.05)	

* Significance was retained when adjusted for false discovery rate.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript