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The Role of Social Connectedness in Buffering the Effects of Discrimination on Post-Trauma Cognitions in Forcibly Displaced Muslims

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Abstract

Introduction: Among trauma-exposed, forcibly displaced Muslims, very little is known about how social connectedness, or perceived interpersonal connection and belonging, may alter the relationship between discrimination and negative posttraumatic cognitions. Discrimination may aggravate trauma psychopathology (Helms et al., 2010); however, social connectedness may buffer its negative effects (Juang & Alvarez, 2010).

Objective: We examined whether higher religious and racial/ethnic discrimination would be associated with stronger negative posttraumatic cognitions and whether stronger social connectedness may adaptively buffer this relationship.

Method: Trauma exposed individuals ($N = 99$) who identified as Muslim and as a refugee, asylum seeker, or internally displaced person participated in the study. Measures of discrimination, social connection, and posttraumatic cognitions were completed.

Results: Higher discrimination was moderately associated with stronger negative trauma-related cognitions ($r = .40, p < .001$) and with lower social connectedness ($r = -.32, p = .001$). Social connectedness moderated the relationship between discrimination and posttraumatic cognitions, such that at lower levels of social connectedness there was a stronger relationship between discrimination and posttraumatic cognitions ($-2SD: b = .32, -1SD: b = .23, M: b = .14$), this was not present at higher levels of social connectedness.

Conclusions: Connectedness to one's minority group may be an important protective factor by modulating the effects of discrimination on posttrauma adjustment.

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The data reported in this article were collected as part of a larger data collection and findings from the data collection have been reported in separate manuscripts. MS 1 (Dolezal et al., 2021) examined different refugee and displacement status (refugee, asylum seeker, internally displaced) and how they vary in posttraumatic and psychosocial outcomes. MS 2 (under review) investigated the moderating role of perceived discrimination on the association between religious coping and posttraumatic growth. MS 3 (the current article) focuses on the moderating role of social connectedness on the association between discrimination and posttraumatic cognitions in forcibly displaced Muslims.

Keywords

discrimination; refugee; Muslim; posttraumatic cognitions; social connectedness

There are currently over 70 million forcibly displaced people worldwide; this is the highest number on record (United Nations High Commissioner for Refugees, 2019a). Asylum seekers, refugees, and internally displaced persons, collectively referred to as forcibly displaced individuals, are those who have been forced to flee their homes either within or outside their country of origin due to threat of safety (UNHCR, 2019a). The majority of forcibly displaced individuals come from Muslim majority countries such as Afghanistan (2.7 million), Syria (6.7 million), and Iraq (3.1 million; UNHCR, 2019b). Thus, the global displacement crisis at hand is understood as one that disproportionately impacts Muslims. This trend is significant in understanding the challenges and unique experiences of forcibly displaced persons who identify with multiple forms of marginalization, particularly in the context of mental health and socialization. Recognizing that many of these individuals approach their experiences, including forcible displacement, through the lens of Islam (Maloof & Ross-Sheriff, 2003) is an overlooked yet critical concept that should be utilized to understand mental health problems and inform treatment. Furthermore, identifying factors that exacerbate and buffer against these problems in forcibly displaced Muslims will help address and prevent suffering in this vulnerable population.

Forcible displacement often is a cause or consequence of high levels of exposure to traumatic events, and with such heightened trauma exposure, the development of posttraumatic stress disorder (PTSD) and related mental health disorders, such as depression, is common (Fazel et al., 2005). Further, Muslim refugees, asylum seekers, and internally displaced persons are at high risk for enduring both traumatic and stressful events in all stages of migration; indeed, trauma exposure is not only common in premigration stages but in refugee camps and other temporary midmigration placements as well (Mollica et al., 1993). Rates of PTSD are higher in regions impacted by war, ethnic cleansing, or civil unrest (e.g., 65%; Johnson & Thompson, 2008), particularly with exposure to multiple traumas over time (Karam et al., 2014). Considering its prevalence, PTSD is a critical target for improving the mental health outcomes of forcibly displaced persons.

To advance the mental health care for forcibly displaced persons, it is important understand the role of posttraumatic cognitions in the etiology and maintenance of trauma-related psychopathology. Individuals with PTSD often endorse overly negative views about the world (e.g., perceiving the world as completely dangerous) and negative views about themselves (e.g., thinking of the self as incompetent or blaming oneself for the trauma occurring or what has happened afterward; Foa et al., 1999). Theory and previous empirical research suggest that negative posttraumatic cognitions are a central factor in both the development and persistence of PTSD symptoms (e.g., Ehlers & Clark, 2000; Kumpula et al., 2017). Cognitive models have proposed that negative posttraumatic cognitions regarding the traumatic event and aftermath have the common effect of creating a sense of current external or internal threat; such negative appraisals may also maintain PTSD by producing negative emotions like anxiety and contributing to the engagement in maladaptive coping

strategies such as avoidance behaviors that prevent symptom reduction (Ehlers & Clark, 2000). Finally, reductions in negative posttraumatic cognitions have been found to mediate improvement in both PTSD and depression symptoms (Cooper et al., 2017; McLean et al., 2015; Zalta et al., 2014).

When examining posttraumatic cognitions in forcibly displaced Muslim populations, it is important to consider how difficulties related to holding marginalized identities can also negatively impact how one thinks about oneself, the world, and other people. The vast majority of forcibly displaced Muslims are also racial or ethnic minorities, leaving them vulnerable to religious, racial, and ethnic discrimination. The potential for discrimination exists in any context involving social power dynamics or social privilege, including internally displaced persons who remain in their native country or refugees hosted in Eastern nations (Cherepanov, 2017; McIntosh, 1989). For instance, high rates of anti-Black racism have been documented in Middle Eastern countries, impacting Muslim refugees, asylum seekers, and internally displaced persons who racially identify as Black (Bonnett, 2018; Lewis, 1992).

Racial, ethnic, and religious discrimination has been linked to depression (Lowe et al., 2019; Noh et al., 1999), anxiety (Hussain & Cochrane, 2004; Lowe et al., 2019), high stress (Clark et al., 1999; Yang & Chen, 2018), and a negative view of one's self and the world stemming from rejection based on being a minority (Richman & Leary, 2009). Stress from such discrimination can aggravate trauma-related symptoms, suggesting that stressful experiences such as racist attacks or anti-Muslim rhetoric may correlate with stronger negative posttraumatic cognitions (Brooks Holliday et al., 2018.).

Along with considering the influence of risk factors such as discrimination, examining protective factors such as social support that may buffer against the negative impact of such stressors is also necessary. Indeed, the literature highlights that social support has a significant impact on depression severity and recovery (Wang et al., 2018) and that it could be utilized as a protective factor against discrimination when predicting psychological distress (Steers et al., 2019). Facets of social support, such as resources, interpersonal interactions and perceptions, may lead to positive esteem-enhancing appraisals and serve as catalysts to beneficial social connectivity (Heller et al., 1986; Vaux, 1985). Social connectedness at an individual level reflects the quality of social connections and relationships one has with the people around them, such as family, friends, and community members (Lee & Robbins, 1995). A strong sense of social connectedness has been consistently found to buffer against the negative effects of discrimination (Ajrouch et al., 2010; Finch & Vega, 2003), and, within minority communities, feeling connected to one's in-group in particular can counter negative outcomes such as race-based distress and low self-esteem (Duru & Poyrazli, 2011; Juang & Alvarez, 2010). Theoretically, within an adapted model of acculturation (Berry, 1980; Schwartz et al., 2010) during a time of physical and cultural isolation such as being forcibly displaced, connection to one's in-group may buffer the development of maladaptive cognitions related to trauma and discrimination. Quality of social connectedness and support may also impact posttraumatic cognitions, as perceived lower social support has been associated with an increase in negative posttraumatic cognitions (Robinaugh et al., 2011).

The relationship among discrimination, posttraumatic cognitions, and social connectedness has not been quantitatively examined in a sample of trauma-exposed Muslim refugees, asylum seekers, or displaced persons. Understanding how social connectedness functions in relation to discrimination and negative post-traumatic cognitions could inform prevention programs and the development of more targeted mental health interventions better suited to the unique needs of Muslim refugees. The current study examined how a strong sense of social connectedness could potentially adaptively modulate the relationship between perceived discrimination and posttraumatic cognitions. Given the potential relationship between discrimination and trauma-related negative cognitions (Brooks Holliday et al., 2018; Richman & Leary, 2009), we hypothesized that discrimination (ethnic, racial, and religious) would be associated with stronger negative posttraumatic cognitions. Further, given the potential buffering effect of social connectedness on maladaptive cognitions related to trauma and discrimination (Schwartz et al., 2010; Berry, 1980), we hypothesized that social connectedness would moderate the relationship between discrimination and posttraumatic cognitions. Specifically, we hypothesized that at high levels of social connectedness, social connectedness would help mitigate the relationship between discrimination and posttraumatic cognitions whereas, at low levels social connectedness, the relationship between discrimination and posttraumatic cognitions would be strongest.

Method

Participants

Participants were recruited through a crowdsourced sampling approach using Amazon Mechanical Turk (MTurk), where adults can complete paid tasks (Human Intelligence Tasks; HITs), such as surveys, that are posted by requesters on an online marketplace. Those interested completed an initial prescreening survey that asked about religious background and forcibly displaced person status and were linked to the survey if they identified as Muslim and as either a refugee, asylum seeker, or internally displaced. To be eligible for the study, participants had to be 18 years or older, literate in either English or Arabic, self-identified as Muslim, and self-identified as a refugee per United Nations High Commissioner for Refugees definition (UNHCR, 2019b). The title of the survey “Faith and the Refugee Experience” and the wording of the prescreening items was left open-ended to prevent tailoring of responses for eligibility (e.g., asked open-ended about religion). Participants were informed that they would be compensated for completing the screening items and that they may be offered an additional survey for further compensation. To prevent response tailoring, participants were not informed that their responses to the screening items would determine their eligibility for the additional survey. From a total of 3,174 individuals who were initially screened on a two-item survey, 130 identified as Muslim and either a refugee, asylum seeker, and/or internally displaced. These individuals were invited to complete the larger survey. Of those, 18 were removed from analysis due to incomplete surveys, straightlining (i.e. selecting the same response option for a large set of items), or inappropriate responding to an attention-check question. Of the remaining 112 participants, the subset of participants who endorsed *DSM-5* Criterion A trauma exposure ($N = 99$, 74% male) were selected for analysis in the present study. Demographics and key measures means, standard deviations, and ranges are presented in Table 1.

Measures

Trauma Exposure—The Primary Care PTSD Screen for *DSM-5* (PC-PTSD-5; Prins et al., 2016) was used to screen for *DSM-5* Criterion A trauma exposure. This screener consists of five YES/NO item queries whether the respondent has experienced an “unusually or especially frightening, horrible, or traumatic” event, with examples provided for reference (e.g., a serious accident or fire; a physical or sexual assault or abuse; an earthquake or flood; a war; seeing someone be killed or seriously injured; having a loved one die through homicide or suicide). Participants with a “YES” response to this item were included in the study. Five items on the same YES/NO scale assessed PTSD symptom (i.e. nightmares, avoidance, hypervigilance, numb, guilt/blame) and were summed to generate a total PTSD score.

Discrimination—The Everyday Discrimination Scale–Revised (EDS-R; Williams et al., 1997) was used to measure the severity of perceived discrimination experienced on a day-to-day basis. The EDS-R is a 9-item measure using a 6-point, Likert-type scale ranging from 1 (*never*) to 6 (*almost every day*). The EDS-R ends with a follow up question to identify the perceived reason for discrimination (Williams et al., 1997). The measure has demonstrated high reliability as evidenced by factor analysis, adequate internal consistency ($\alpha = .74$), and adequate test–retest reliability ($r = .70$). The EDS-R has been shown to strongly correlate with an overall latent discrimination factor ($r = .79$; Williams et al., 1997). EDS also correlated significantly to psychological stress (Krieger et al., 2005). The follow up question (“What do you think is the main reason[s] for these experiences?”) was modified for the current study to allow for assessment of target variables including racial discrimination, ethnic discrimination, colorism, and Islamophobia. This modification consisted of omitting some response options on the last question that were not of interest, specifically height, weight, and age. Internal consistency for the present sample was $\alpha = .85$.

Social Connectedness—Social connectedness was measured using the Social Connectedness Scale–Revised (SCS-R; Lee et al., 2001). SCS-R measures the sense of belonging as well as perceived interpersonal connection with the social world. The full 20-item measure is scored on a 6-point, Likert-type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The SCS-R displays good internal consistency ($\alpha = .92$), correlates positively with measures for independent self-construal and collective self-esteem, and correlates negatively with measures of loneliness, social distress, and avoidance (Lee et al., 2001). In order to limit total survey length and encourage survey completion, six items from the SCS were selected to ensure measurement of each scale factor: (a) “I do not feel I participate with anyone or any group”; (b) “I feel close to people”; (c) “Even around people I know, I do not feel that I really belong”; (d) “I am able to connect with other people”; (e) “I feel understood by people I know”; and (f) “Even among my community, there is no sense of brother/sisterhood.” Internal consistency for these six items in the present sample was $\alpha = .61$. Lower internal consistency than the full version of the SCS-R was anticipated due to the intentional selection of items to reflect different scale factors.

Posttraumatic Cognitions—The Post Traumatic Cognition Inventory (PTCI; Foa et al., 1999) was used to measure thoughts and beliefs related to traumatic experiences. The PTCI

is a 36-item measure that consists of three subscales: negative view of self, negative world view, and self-blame (Foa et al., 1999). The measure is scored on a Likert-type scale ranging from 1 (*totally disagree*) to 7 (*totally agree*). Higher scores suggest more severe and negative posttraumatic cognitions. In Western samples, the PTCI has good test–retest reliability and discriminant validity (Foa et al., 1999). In non-Western samples, the PTCI has also demonstrated good internal consistency, concurrent validity, test-retest stability, and discriminative validity (Su & Chen, 2008). For the purpose of this study, five items (#7 [“People cannot be trusted”], #20 [“I have permanently changed for the worse”], #26[“I cannot stop bad things from happening to me”], #28 [“My life has been destroyed by the trauma”], #36[“Nothing good can happen to me anymore”]) were utilized. These items were chosen based on factor loadings from a Muslim sample (Güleç et al., 2013) and Muslim refugee community feedback on specific item sensitivity and specificity (Zoellner et al., 2018). Internal consistency in the present study was $\alpha = .70$.

Procedure

The prescreening survey was described as a brief survey regarding faith and the experiences of those forced to flee their homes or countries due to violence or persecution. Survey materials were offered in both English and Arabic. All English materials were translated into Arabic by a native Arabic speaker on the research team. Potential participants on MTurk were linked to the Qualtrics screening survey. The prescreening survey included two questions regarding religious identity and refugee status; after selecting their language preference, participants were asked to select their religion from a drop-down menu. They were then shown the UNHCR definitions of a refugee, asylum seeker, and internally displaced person and asked if they identify with one or more of these options (UNHCR, 2019a). Only participants who selected Islam as their religion and who identified as a refugee, asylum seeker, and/or internally displaced person were linked to the main survey; all others ended the survey here and were provided a code to receive payment through MTurk. Based on MTurk requirements, participants had to be over 18 years of age. Participants were paid \$.10 (USD) for completing the prescreening survey.

After completing the prescreening survey, potentially eligible participants reviewed an information sheet describing the study and were asked to agree to the terms of the study. The main survey was comprised of 65 items, including the EDS-R, SCS-R, and PTCI. Five individuals completed the survey in Arabic. At the end of the survey, participants were provided with a unique code to enter into MTurk to receive a \$1.00 (USD) payment. To maintain quality control, an unrelated question, “The sun is hot” was included in the middle of SCS-R items. Data from participants who did not answer “*Strongly Agree*” or “*Agree*” on this question were removed from the sample ($n = 13$). The Unique Turker (Ott, n.d.) option on the MTurk interface, along with custom MTurk Qualifications and manual data checks for duplicate worker identification numbers, was used to prevent individual MTurk workers from completing the survey more than once.

Data Analysis

Data analyses were performed in SPSS 19. To examine whether discrimination would be associated with posttraumatic cognitions and whether such relationship was moderated by

social connectedness, we utilized PROCESS macro 3.5 for SPSS (Hayes, 2013) to generate 5,000 bootstrap samples. PROCESS macro is based on Ordinary Least Squares regression (OLS) and can be used to generate bootstrapping estimates of the population distribution of statistics. Bootstrapping is a nonparametric test that is not based on large-sample theory and doesn't require the data to meet normality assumptions, and thus can be confidently applied with small sample sizes (Preacher & Hayes, 2004). This procedure involves taking a set of the original data and repeatedly resampling and replacing cases in order to better estimate the population distribution (Russell & Dean, 2000). Therefore, it helps mitigate against power limitations inherent to small sample contexts (Hayes, 2013; Mooney & Duval, 1993). PROCESS macro mean-centered the predictor variables and provided corrections for heteroscedasticity. PROCESS yielded coefficient and standard error estimates for the predictor, moderator, and interaction term. Open source software (InterActive; McCabe et al., 2018) was used for data visualization and testing of simple slopes for one and two standard deviation below the mean, at the mean, and at one and two standard deviation above the mean of the moderator variable.

Results

Frequency of Posttraumatic Cognitions and Discrimination

On the EDS-R, 88% of participants ($n = 87$) reported religion as the basis of the discrimination against them; ethnicity (80%; $n = 79$) and race (67%; $n = 66$) followed as frequently endorsed domains of discrimination experienced. With regard to most frequently endorsed posttraumatic cognitions, 25.3% of the sample responded *agree very much to totally agree* (e.g., the two highest response options) to the following items: "people cannot be trusted," "I cannot stop bad things from happening to me," and "my life has been destroyed by the trauma." For social connectedness, the items "I do not feel I participate with anyone or any group" (31.3%; $n = 31$), "Even around people I know, I do not feel that I really belong" (30.3%, $n = 30$), and "Even among my community, there is no sense of brother/sisterhood" (30.3% $n = 30$) elicited the most frequent *agree to strongly agree* responses.

Perceived Discrimination, Social Connectedness and Posttraumatic Cognitions

Higher perceived discrimination was moderately associated with stronger negative posttraumatic cognitions ($r = .40, p < .001$) and modestly with PTSD symptoms ($r = .32, p = .001$). Additionally, there was a strong association between higher social connectedness and lower posttraumatic cognitions ($r = -.53, p < .001$). Finally, there was a modest association between PTSD symptoms and posttraumatic cognitions ($r = .36, p < .001$).

Finally, social connectedness was tested as a moderator of the relationship between perceived discrimination and posttraumatic cognitions using the PROCESS Macro (Hayes, 2013). The moderation analysis yielded a significant overall model, $F(3, 95) = 18.90, p < .001, R^2 = .37$. The main effect of perceived discrimination on posttraumatic cognitions was significant, such that higher perceived discrimination significantly correlated with stronger negative posttraumatic cognitions ($b = .14, p < .01, 95\% \text{ CI} = [.04, .24]$). Social connectedness was also associated with posttraumatic cognitions ($b = -.49, p < .001, 95\%$

CI = [-.70, -.28]), such that as social connectedness increased post-traumatic cognitions decreased. There was a significant interaction effect between perceived discrimination and social connectedness on posttraumatic cognitions ($b = -.02$, $p = .03$, 95% CI = [-.04, -.001]). InterActive (McCabe et al., 2018) was used to visualize the results of the moderation analyses. As can be seen in Figure 1 and Table 2, at two standard deviations below the mean ($b = .32$, 95% CI = [.13, .51]), one standard deviations below the mean ($b = .23$, 95% CI = [.11, .35]), and at the mean ($b = .14$, 95% CI = [.04, .24]) of social connectedness, the moderating effect was significant, with lower social connectedness exacerbating the relationship between higher perceived discrimination and higher posttraumatic cognitions. These effects became nonsignificant at one and two standard deviations above the mean of social connectedness.

Discussion

In this sample of forcibly displaced Muslim refugees, exposure to higher discrimination for one's faith, ethnicity, or race was associated with worse trauma-related cognitions, notably worse trauma-related beliefs about oneself, the world, and others. This builds and extends on the previous research showing that exposure to marginalization can worsen trauma-related symptoms in minority groups (Brooks Holliday et al., 2018; Helms et al., 2010). More broadly, this suggests a need to conceptualize trauma-related difficulties for forcibly displaced Muslims not just as symptoms in response to an event, but a complex presentation may be related to prior trauma exposure and other factors such as minority oppression, migration factors, historical trauma, and cultural intricacies. In this forcibly displaced Muslim sample, perceived discrimination emerged as moderately associated with worse posttraumatic cognitions, with higher levels of social connectedness mitigating this relationship.

Refugees, asylum seekers, or individuals displaced internally may unfairly be viewed as a drain on a country's resources and are more likely to face perceived discrimination during or after migration (Schwartz et al., 2010); this study showed a small to moderate relationship between perceived discrimination and posttraumatic cognitions ($r = .40$). The effects of trauma on an individual's meaning systems have been described using "shattered assumptions" theory (Janoff-Bulman, 1992). This theory posits that a traumatic experience either solidifies existing beliefs or assumptions about the world and oneself or shatters the individual's preexisting belief systems and worldviews. Discrimination may signal to an individual that they are insignificant or peripheral, which can be incorporated into an individual's belief system over time (Major et al., 2007); traumatic events may reinforce the same message and belief, and vice versa. From this perspective, both pre- and posttraumatic cognitions (e.g., Bomyea et al., 2012; Ehlers & Clark, 2000) may interact with discrimination and an individual's meaning system. These potential interactions highlight the intricacies of the established association between discrimination and trauma-related cognitions. This relationship doesn't mean that discrimination-related responses are somehow "distorted," as posttraumatic cognitions are often described. Underrepresented groups face objective threats to their safety, and the research on this association should highlight the importance of varying cognitive styles and not be utilized to minimize the lived experiences of such groups.

This study also illuminates potential detrimental effects pertaining to the lack of social connectedness within samples of trauma-exposed, forcibly displaced Muslims facing moderate to high levels of perceived discrimination. The circumstances that lead to trauma exposure and the development of trauma-related psychological distress may disrupt social connections and normalcy. The impact of this social disruption is well known in the larger psychological trauma literature, where lack of social support predicts later PTSD (e.g., Brewin et al., 2000; Ozer et al., 2003). Forcibly displaced persons might then attempt to rebuild this sense of normalcy during and post migration, but they often face additional stressors like discrimination, which in turn could diminish their sense of social connectedness and exacerbate posttraumatic cognitions. Within this sample, we found that social connectedness may change the relationship between discrimination and posttraumatic cognitions; strong social connections in host countries and maintained connections within countries of origin via use of technological communication methods may have the capacity to buffer negative impacts of perceived discrimination postmigration.

If social connectedness is particularly influential as a protective agent, facilitating factors that foster such connection might prove to be essential to the mental health of many forcibly displaced Muslims. Such factors include the utilization of social and spiritual practices that are important in order to build social connections and address mental health needs. Recent models of trauma exposure and forced displacement (e.g., Silove, 2013) highlight the roles of bonds and networks, as well as identities and meaning in the aftermath of mass conflict. The present results further undergird the importance of restoring interpersonal bonds and explicitly addressing discrimination in facilitating recovery and in the treatment of trauma-related outcomes not compartmentalized as unrelated life stressors (Drożdżek, 2015).

Several caveats are relevant. This study was cross-sectional, which precludes causal inference. Another limitation of this study is sample representation. Although utilizing the MTurk platform allows wide-spread reach to the digital community, it also limits accessibility, especially for forcibly displaced individuals, and likely targets a male sample. However, MTurk has been shown to be accessible in refugee camps such as the Dadaab Refugee Complex in Kenya, so participation from forcibly displaced Muslims is possible (Giles, 2009). United Kingdom (17.9%) and India (25%) were the most represented countries, with no respondents from the U.S. Although posttraumatic cognitions are a strong marker of both PTSD and general wellbeing (Robinaugh et al., 2011), trauma-related beliefs are influenced by culture and may be idiographic in nature (Osterman & De Jong, 2007). The items chosen to measure posttraumatic cognitions were derived from pilot data with Somali refugees and factor loadings from a study with Turkish Muslims. Good qualitative data asking about how the trauma has changed or strengthened how one thinks about oneself, the world, others, and Allah (God) are needed. Additionally, a one-item screen for trauma exposure was utilized in this study, which does not cover the complexities of different trauma types and frequency and how that might influence posttraumatic symptomology. Assessment of trauma-related beliefs that organically reflects the cultural intricacies of a sample is necessary, while still approaching forcibly displaced Muslims not as a monolith but rather reflecting significant ethnic and cultural variability.

In conclusion, with examining the mental health picture of Muslim refugees, asylum seekers, and internally displaced persons, the consideration of social factors and minority stressors appears critical in relation to common shifts in beliefs after trauma exposure. From social isolation and discrimination to more fundamental hardships such as lack of housing and employment opportunities, forcibly displaced Muslims likely face a unique set of challenges that mental health professionals must consider in order to successfully alleviate psychological distress. Studies like this allow insight into what protective and risk factors are particularly influential in regards to trauma psychopathology and in turn further illuminate important areas of focus in mental health considerations. Examining the nuances of how social connectedness influences the relationship between discrimination and posttraumatic cognitions is needed, including careful examination of in-group and out-group social connectedness (Ng & Lai, 2009). Considering the influential role of social connectedness in buffering the negative effects discrimination has on posttraumatic cognitions, these results may call for the development of intervention programs targeting factors that build and enhance social connectedness in forcibly displaced Muslims. Such programs could be community-based and integrate evidence-based treatments with spiritual and cultural practices in order to increase acceptability and ecological validity (e.g., Zoellner et al., 2018). Finally, it is necessary to realize these considerations as we are witnessing historical levels of international displacement, and therefore it demands a weighty and urgent response. Investment in the mental health needs of forcibly displaced persons is emerging as a notable focus for the United Nations High Commissioner for Refugees (UNHCR) and other agencies, framing studies like this as a critical contribution to the minimal existing body of literature on this topic (Hassan et al., 2015).

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Clinical Impact Statement

This study suggests that connectedness to one's social group, especially in times of higher discrimination, is crucial for forcibly displaced Muslims with a history of trauma. That is, social connectedness may mitigate the association between discrimination and negative trauma-related cognitions.

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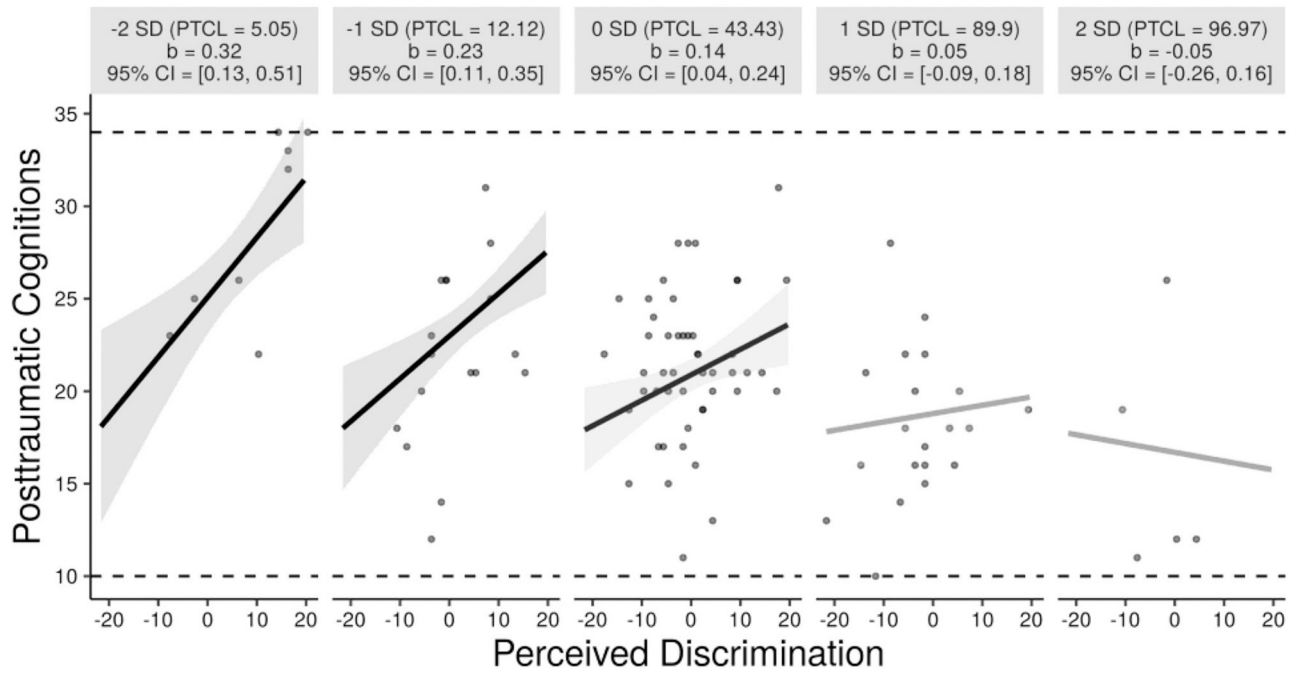


Figure 1. Levels of the Social Connectedness as a Moderator Between Perceived Discrimination and Posttraumatic Cognitions

Note. PTCL = percentile of data points up to a certain standard deviation on moderator. CI = confidence intervals. Darker (bold) slopes represent a significant interaction between social connectedness and perceived discrimination as predicting posttraumatic cognitions. Here, a significant interaction is seen at one and two standard deviations below the mean and at the mean on social connectedness, arguing that at lower levels of social connectedness there was a moderate relationship between higher perceived discrimination and higher negative posttraumatic cognitions, which disappeared at the higher levels of social connectedness.

Table 1

Frequencies and Descriptive Information for the Overall Sample (N = 99)

	<i>M</i> or %	<i>SD</i>	Range
Age (years)	28.28	4.84	18–44
Female	26.3%		
Refugee status:			
Refugee	47.5%		
Asylum seeker	25.3%		
Internally displaced persons	15.2%		
Both a refugee and an asylum seeker	8.1%		
Both a refugee and internally displaced	4.0%		
Country of origin			
South Asia	49.5%		
Middle East and North Africa	34.3%		
Other	16.2%		
Country of residence			
South Asia	41.4%		
Europe	33.2%		
Canada	6.1%		
Other	19.3%		
Posttraumatic stress symptoms (PC-PTSD-5)	3.92	1.17	0–5
Discrimination (EDS-R)	30.64	8.78	9–51
Posttraumatic cognitions (PTCI) ^a	21.14	5.14	10–34
Social connectedness (SCS)	21.86	4.29	10–33

Note. PC-PTSD–5: Primary Care PTSD Screen for DSM–5; EDS-R: Everyday Discrimination Scale-Revised; PTCI: Posttraumatic Cognitions Inventory; SCS: Social Connectedness Scale.

^a 5 item adapted version of the PTCI.

Table 2

Levels of the Social Connectedness as a Moderator Between Perceived Discrimination and Posttraumatic Cognitions

Value	Percentile (PTCL)	<i>b</i>	Lower 95% CI	Upper 95% CI
-2SD	5.05	.32	.13	.51
-1SD	12.12	.23	.11	.35
<i>M</i>	43.43	.14	.04	.24
+1SD	89.9	.05	-.09	.18
+2SD	96.97	-.05	-.26	.16

Note. PTCL = percentile of data points up to the standard deviation on moderator. Lower limit of 95% confidence interval. Upper limit of 95% confidence interval.

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