

Discrimination and Distress among Afghan Refugees in Northern California: The Moderating Role of Pre- and Post-Migration Factors

Qais Alemi ^{1,*} and Carl Stempel ^{2,†}

¹ School of Behavioral Health, Department of Social Work & Social Ecology, Loma Linda University, Loma Linda, CA 92350, USA

² Department of Sociology and Social Services, East Bay, California State University, Long Beach, CA 90802, USA; carl.stempel@csueastbay.edu

* Corresponding author: qalemi@llu.edu

† These authors contributed equally to this work.

Abstract

This study investigates the effect of perceived discrimination on the mental health of Afghan refugees, and secondly, tests the distress moderating effects of pre-migration traumatic experiences and post-resettlement adjustment factors. In a cross-sectional design, 259 Afghans completed surveys assessing perceived discrimination and a number of other factors using scales developed through inductive techniques. Multivariate analyses consisted of a series of hierarchical regressions testing the effect of perceived discrimination on distress, followed by a sequential analysis of moderator variables. Perceived discrimination was significantly associated with higher distress, and this relationship was stronger among those with a strong intra-ethnic identity, high civic engagement, and high pre-resettlement traumatic experiences. Discrimination is a significant source of stress for Afghan refugees, which may exacerbate stresses associated with other post-migration stressors. Future research is needed to tailor interventions that can help mitigate the stress associated with discrimination among this highly vulnerable group.

Key words: Afghan, civic engagement, discrimination, distress, ethnic identity, pre-resettlement trauma

Introduction

Afghanistan remains a major source country for refugees with over 2.6 million Afghans currently residing in Iran and Pakistan, and thousands spread over 70 countries including the United States (U.S.) [1]. Based on the 2005-09 American Community Survey (ACS) it is estimated that almost 90,000 people of Afghan ancestry currently reside in the U.S. with the largest population residing in northern California, concentrated in Alameda County [2]. Alameda County is the site of ground-breaking studies on Afghan refugees where various health problems and insights into social and cultural stressors associated with being uprooted were uncovered for this population [3-4].

Research on the mental health of Afghans [5], and of many other refugee nationalities has focused on the influences of pre-migration traumas [6] and post-resettlement factors such as ethnic ties, social support, socio-economic and cultural adjustment difficulties, and difficulty

with immigration officials [7-9]. While not a central focus of this line of research, several studies assess the impact of perceived discrimination on refugee health and mental health [10-11].

Perceived discrimination, defined as a type of stressor resulting from perceived assaults, fear, and exclusion experienced by racial and ethnic outgroups [12], has been shown to impact health through multiple pathways including reduced access to employment, housing and education leading to adverse emotional processes and associated psychopathology [10]. Additionally, stress models indicate that negative emotional states brought on by discriminatory experiences lead to structural and functional changes in multiple physiological systems [13]. Furthermore, it has been found that the perception of unfair treatment can harm an individual's self-esteem and self-efficacy or hinder opportunities to be active in social and economic spheres [14]. For refugees, acts of discrimination may influence refugees' host country perceptions, resulting in the victim turning away from the assaulting group or host population, in turn, negatively affecting social adaptation [15].

As far as we know, only two studies of Afghan refugees relate to this topic. In a qualitative study of recently resettled Afghans in Australia, discriminatory experiences exacerbated emotional responses to trauma (e.g. anger, fear, hopelessness, dispossession) [16]. And a study of primarily young adult 1st and 2nd generation Afghan-Americans [17] found perceived discrimination associated with depressive symptoms. Similar patterns were observed among Somali youth in the U.S. [18], young middle eastern refugees in Denmark [15], and among young adult (predominantly) Iraqi refugees in Sweden [19]. Yet discrimination was not predictive of mental disorders among Vietnamese refugees in Finland [20] or Bosnian refugees in Austria [21].

When considering coping responses to discrimination among refugees, important considerations include strength of ethnic identities and ties with families, coethnics, and members and organizations of the host society, all of which might buffer the negative health and mental health effects of discrimination. Yet little work on these topics has been done on refugees, who often have unique vulnerabilities (e.g. exposure to multiple traumas and life threatening conditions) and modes of incorporation. Among Southeast Asian refugees in Canada, Noh et al. [22] as well as Beiser and Hou [23] found that stronger ethnic identity amplifies the risk of depressive symptoms, perhaps because discrimination is perceived as assaulting a core part of the self. We did not find other research on the moderating effects of ethnic identities or ties on the influence of discrimination on mental health among refugees, but Mossakowski [24] shows that for Filipino Americans a strong ethnic identity reduced the influence of discrimination on depressive symptoms and a recent review of studies focusing on health effects of discrimination among ethnic minorities and immigrant groups found inconsistencies with relation to the buffering effects of ethnic identity and social support [25]. The inconsistencies may be linked to methodological factors such as small samples, diverse measures, little control over extraneous variables, and scales that rely only on perceptions/recall of past (discriminatory) events.

This paper examines the extent to which current and former Afghan refugees residing in northern California perceive experiencing discriminatory acts, how this affects their mental health, and examines the moderation effects of pre-migration traumas and a number of post-resettlement factors. We hypothesized that 1) higher reported perceived discrimination will be significantly associated with higher levels of psychological distress, after controlling for salient demographic characteristics; 2) post-resettlement adjustment factors (higher intra-ethnic orientation, ethnic identity, social support, and civic engagement) will exert a buffering effect on

the discrimination-distress pathway; whereas, 3) pre-migration trauma will amplify the relationship between discrimination and distress.

Aside from the importance of learning more about the effects of discrimination on refugee's mental health, this study is significant because several factors may make Afghans more vulnerable to discrimination stress: 1) the rise in anti-foreigner prejudice and *xenophobic* discrimination toward immigrants and refugees in general [26]; relatedly, 2) their Muslim faith, made more visible through increased media attention after 9/11; and, 3) recent sociopolitical events, for example, the fact that the U.S. is militarily involved in Afghanistan, which likely influences views toward Afghans. Our tests for moderating effects could provide mental health professionals insight into developing interventions that build on protective/resiliency assets that mitigate the stress associated with discriminatory experiences.

Materials & Methods

Sampling

Inclusion criteria for this study consisted of being of Afghan ancestry, an adult over the age of 18 years, and having originally resettled in the U.S. as a refugee. Participants were recruited in Alameda County, California between November 2007 and May 2008. Recruitment took place through various organizations or programs serving the local Afghan community, including mosques with large Afghan congregations, and health and social services organizations providing a range of services to Afghans (e.g. cultural preservation, and assistance navigating welfare, immigration, and medical bureaucracies). If the organization had a basis for developing a sampling frame we created the list and selected participants at random. Slightly over half of the sample was created this way. In instances where a sampling frame was unavailable, we sampled purposively to create a representative gender and age balance, and additionally selected organizations that would improve representation across ethnicity and year of arrival/migration wave (e.g. 1980s, 1990s, post-9/11).

Procedures

The survey of primarily fixed-choice questions was constructed by the second author aided by a team of Afghan informants and community leaders. After piloting an English version of the survey with Afghans fluent in English, two Dari translations and a Dari-in-English transliteration were produced independently by two bilingual Afghan educators and a graduate student. Differences were reconciled in conference with the second author, a 2nd generation researcher, and two bilingual 1st generation informants (one with social science training) to produce exactly matching Dari and Dari-in-English versions. We then pre-tested the survey, made final changes, and computerized the survey using CATI software to improve coding accuracy and reliability of skip sequences. The research, survey design, and signed consent process were approved by the Institutional Review Board at the second author's university.

Measures

Dependent Variable

Psychological Distress. The dependent variable in our analyses is the *Talbieh Brief Distress Inventory* (TBDI) which was designed as a general measure of distress among

immigrants [27]. The TBDI draws 11 items from the Psychiatric Epidemiology Research Interview Demoralization Scale (PERI-D) and 13 items from the Brief Symptom Inventory (BSI) that include items related to obsessiveness, hostility, sensitiveness, depression, anxiety, and paranoid ideation. Items are based on a one-month recall period where respondents are asked to indicate the degree of discomfort caused by each item with response choices ranging from 0 = “not at all” to 4 = “extremely”. Scores range from 0-4 with higher scores indicative of higher severity of distress. For our sample, the TBDI demonstrated excellent internal reliability (Cronbach’s $\alpha = .960$).

Primary Independent Variable

Perceived Discrimination. The primary independent variable is *perceived discrimination*, assessed using an equally weighted 4-item scale developed through preliminary qualitative interviews with members of the Afghan community residing in the Alameda area. Two items are standard questions about personal experiences of discrimination and perception of how fairly Afghans are treated when seeking employment, and two items were developed based on preliminary research to focus on experiences and perceived threats after the events of 9/11. Perceived discrimination has a Cronbach’s α of .557. While somewhat low, it is acceptable because different dimensions of discrimination were measured. A Principal Component’s Analysis using a varimax rotation found one component with an Eigenvalue of 1.0 or higher and the four items each loaded at .576 or higher.

Moderating Variables: Pre- and Post-Resettlement Factors

Ethnic Orientation. *Ethnic orientation* consists of four dummy variables constructed by comparing the scores on questions on strength of Afghan and American identities that had four response choices ranging from “not important” to “very important.” Informed by Berry’s [28] acculturation typology, we operationalized ethnic orientation using the following categories: *assimilation* = American identity is stronger than Afghan identity; *separation* = Afghan identity is stronger than American identity; *integration* = very important Afghan *and* very important American identities; *attenuated integration* (attenuation) = Afghan and American identities are equally strong, but neither are not “very strong.” Berry’s fourth category is *marginalization*, but informants suggested that some Afghans who were best adapted to life in the U.S. de-emphasized both Afghan and American identities (thus ‘attenuated’).

Intra-ethnic Identity. *Intra-ethnic identity* is a binary variable based on questions on strength of identification with major ethnic groups in Afghanistan (Pashtun, Tajik, Hazara, Uzbek, Turkman). Respondents were coded as 1 (‘yes’) if they said *any* of their intra-ethnic identities were “very important” (the strongest rating of 4 choices).

Civic Engagement. We used a summated index of four ‘yes/no’ items for measuring *civic engagement*. Items gauge 1) Is the respondent a U.S. citizen? 2) Did he/she vote in the 2006 election? 3) Did she/he volunteer in an organization serving Afghans in the past year? 4) Did she/he volunteer in another civic organization in the past year (not serving Afghans). Internal reliability for the civic engagement scale was relatively low for this sample (Cronbach’s $\alpha = .541$).

Social Support. *Social support* is a summated index of four yes/no items: Is the respondent married and living with his/her spouse? Is one or more other family members living in his/her household? Does he/she see at least 10 other family members (not in household) on at least a monthly basis (extended family)? Does she/he have one or more close friends she/he can rely on if she/he needs help? Cronbach’s α for this variable is a very low .193. Nevertheless,

combining these items is justified because the index captures different dimensions of intimate ties that are likely to provide substantial emotional or practical support.

Pre-resettlement Traumas. We assessed *pre-resettlement traumas* using a summated index of 11 ‘yes/no’ items on war-related traumatic events that participants either experienced or witnessed while in Afghanistan and when fleeing. Items related to witnessing atrocities such as seeing someone being killed or injured, the death or disappearance of close friends and family members, threats to one’s own life, being imprisoned, being internally displaced, having resided in a refugee camp. This index demonstrated adequate reliability for this sample (Cronbach’s $\alpha = .749$).

Control Variables

We controlled for a number of salient variables shown to influence psychological distress in prior studies of Afghans. Control variables included age in years, gender, English language ability, education, year of arrival in the U.S., and employment status. *Education* is a four-category variable measuring the highest level of education (achieved in Afghanistan, the U.S., or some other country). The categories are less than high school; high school graduate or GED; some college, two-year Associate’s degree, or technical degree; and 4-year college degree or higher. *English Ability* is the mean score of 3 items on self-rated ability in speaking, writing, and reading English (0 = “Not at all” to 4 = “Very fluent”). Cronbach’s α for the English ability scale is .973.

Data Analysis

We used SPSS, version 24.0 for all data analysis. We replaced missing items with mean scores for respondents who answered at least 21 of 24 TBDI items and 3 of 4 perceived discrimination items, dropping those without 21 of 24 or 3 or 4 respectively from the analysis. For other variables cases were dropped for missing items; however, we imputed values for two of the 11 items for 48 cases in pre-resettlement traumas (missing due to interviewer or computer error) using predicted values from models that regressed the item scores on the remaining trauma items, age, gender, employment status, and education variables. We believe this solution for the missing pre-resettlement items only modestly affected the results because there was comparatively little variation in these two items. Almost seven in eight (87.1%) had experienced “life threatening situations”, while less than one in seven (13.9%) were “captured, imprisoned, or held hostage”. Pearson’s r between the 9-item index and the 11-item index is 0.987. When it made analytical sense, we treated “don’t know” responses as “no”, for example, two respondents who said they “don’t know” if they have a close friend they can rely on were treated as not having a close friend. The sample size for regressions ranged from 241 to 250.

Pearson, point-biserial, and Spearman’s correlations were used to examine relationships between continuous and categorical independent variables and the dependent variable (TBDI). To test our hypotheses, hierarchical regression analyses were used, consisting of nine ordinary least squares (OLS) regression models explaining TBDI. In Step 1 we entered five socio-demographic variables as core controls; Step 2 added discrimination to assess its independent influence; and Step 3 added four key explanatory variables related to resettlement conditions. Steps 4–6 each add to Model 3 one discrimination interaction term (e.g., civic engagement \times discrimination in Model 4). We report only interaction terms significant at $p < 0.10$. We relaxed the $p < 0.05$ standard to $p < 0.10$ for interactions because of concern about Type II errors with our relatively small sample size and to identify possible moderators for future studies. Each of these interactions are plotted or graphed in SFigs 1–4. Model 7 presents the full model of

resettlement factors by including all three of the interaction terms. Model 8 removes the resettlement interaction terms, and adds pre-resettlement traumas and Model 9 adds the pre-resettlement trauma x discrimination.

Results

Socio-demographic Characteristics

Table 1 reports percentages for categorical variables and means, standard deviations and ranges for continuous variables. The far-right column reports Pearson, Spearman, or point-biserial correlations and significance levels with the dependent variable (TBDI). A sample of 259 Afghans participated in this study. Our sample was on average 48.75 ($SD = 15.86$) years of age and more likely to be female (51.54%) with a majority possessing a high school diploma (29%) or lower (31%). Most were unemployed (58.7%), with moderate levels of English ability ($M = 2.03$, $SD = 1.29$), and length of residence in the U.S. ranging from less than a year to 30 years ($M = 1993$, $SD = 8.06$).

Table 1. Descriptive statistics: dependent, control, independent variables, and bivariate relationships with dependent variable ($N = 259$)

Variables		Statistics				Pearson 'r' or Point-Biserial 'r' with TBDI
		<i>n</i> (%)	<i>M</i>	<i>SD</i>	Range	
Talbieh Distress Inventory (TBDI)		251	1.208	0.993	0-4	—
Age in years		259	48.751	15.683	18-84	.131*
Gender						-.250***
	Male	126 (48.6)				
	Female ^a	133 (51.4)				
Education			1.321	1.169	0-3	-.206**
	Less than high school	83 (32.0)				
	High school diploma	75 (29.0)				
	AA, some college, technical degree in U.S.	36 (13.9)				
	Bachelor's Degree or Higher	65 (25.1)				
Employment status						
	Employed (or student)	107 (41.3)				-.273***
	Not Employed ^a	152 (58.7)				
English ability		259	2.034	1.294	0-4	-.299***
Year Arrived in U.S.		257	1993.51	8.064	1979-2008	.101
Perceived Discrimination		247	.6808	.5554	0-2	.266***
Intra-ethnic identity						.300***
	Very strong	103 (39.8)				
	Not very strong ^a	156 (60.2)				
Ethnic orientation						
	Assimilation ^b	20 (7.7)				.008
	Separation ^b	117 (45.2)				.176**
	Integration ^b	60 (23.2)				.028
	Attenuated integration ^b	62 (23.9)				-.235***
Civic engagement		259	1.270	1.112	0 - 4	-.087
Social support		259	2.371	.957	0 - 4	-.161*
Pre-resettlement traumas		254	5.572	2.435	0-11	.493***

Notes. ^a = reference category; ^b = reference is the other 3 ethnic orientations. ‡ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

Descriptive Analysis

With the exception of the ‘year of arrival’ variable, the other five controls (age, gender, education, employment, and English ability) have bivariate relationships with TBDI that are significant at $p < .05$ (two-tailed). Being male, more highly educated, employed, and possessing greater English competence are associated with lower levels of distress, while being older is associated with higher TBDI scores.

Average TBDI ($M = 1.21$, $SD = 0.99$) scores suggest that distress symptoms occur at moderately low levels. Apart from the control variables, we found that with the exception of ‘civic engagement,’ bivariate correlations between the moderator variables and TBDI are all significant at $p < .05$. An ‘attenuated integration’ ethnic orientation and greater social support were associated with lower distress levels, fitting informant's expectations. Contrary to expectations, a strong intra-ethnic identity was positively associated with levels of distress, confirming expectations, a ‘separation’ ethnic orientation and pre-resettlement traumas were positively associated with levels of distress. Our primary independent variable, perceived discrimination was positively associated with TBDI scores ($r = .266$, $p < .001$). Table 2 shows that participants most often reported concerns about harm toward them or their family members from non-Afghans after 9/11 and least often when reporting incidents of direct discrimination at work, seeking or jobs or housing, in school, and in other public situations.

Table 2. Perceived discrimination items and percent responses

Discrimination Items	%
After the tragic events of September 11, 2001, were you more concerned that non-Afghans might harm you or someone in your family?	
0 = No, not more concerned/Don't know	41.3
1 = Yes, somewhat more concerned	18.9
2 = Yes, much more concerned	39.8
After September 11, 2001, when going through security checks at an airport, were you ever pulled out of the line to ask you extra questions or check you and your luggage more thoroughly?	
0 = No/Don't know	51.5
1 = One or two times	33.2
2 = Three or more times	15.3
Discrimination is when someone harms another person simply because of the group he or she is part of. For example, if an employer does not hire an Afghan or a Muslim because the applicant is Afghan or Muslim, this is discrimination. Since living in the Bay Area, were you ever discriminated against because you are Afghan, when applying for a job or a promotion in your present job, seeking housing, in school, or some other way?	
0 = No/Don't know	82.1
1 = Yes, pretty sure	3.2
2 = Yes, definitely	14.7
Do you think that equally qualified Afghans have equal chances of getting jobs compared to other Americans?	
0 = Yes	57.5
1 = Not sure	9.1
2 = No	32.8

Multivariate Analyses

Hypothesis 1: Effect of Perceived Discrimination on Distress

Model 1 includes the five controls, which together explain 11.5% (adjusted R^2) of the variance in distress levels (TBDI). Greater English ability and being male both lower distress levels and are significant at $p < .05$. No other controls are significantly associated with TBDI scores. Perceived discrimination is added in Model 2, and is positively associated with TBDI, explaining an additional 9.5% of the variance ($\beta = .54, p < .001$), and confirming our first hypothesis. Model 3 adds the other four independent variables, three of which are associated with distress at $p < .05$, explaining a substantial additional 10.1% of the variance in TBDI. Based on standardized betas in Model 3, perceived discrimination is the most influential resettlement factor for explaining distress. Perceived discrimination's beta increases slightly (.54 to .56) indicating little mediation of the discrimination-distress relationship by the other independent variables.

Hypothesis 2: Moderating Effects of Post-Resettlement Factors

Model 3 shows that, with controls, greater social support reduces distress while civic engagement has no significant effect on distress levels. Having an 'integration' ethnic orientation, which we expected to reduce distress levels, is negatively, but not significantly associated with TBDI, while the 'attenuation' orientation reduces distress levels at $p < .05$. Also, as observed at the bivariate level, having a strong intra-ethnic identity is positively and significantly associated with distress ($p < .001$) and social support is associated with lower levels of distress at $p < .001$.

We then tested for the moderating effects of the resettlement factors (civic engagement, ethnic orientation, intra-ethnic identity, and social support) by adding interaction terms (e.g. discrimination x civic engagement) one at a time to Model 3. The discrimination x social support interaction and all four of the ethnic orientation interactions were not significant at $p < .10$ (models not shown). Regarding the ethnic orientation interactions, because ethnic orientation is a four-category dummy variable, we tried entering the interactions both one at a time and all at once, using 'separation' and then again using both 'separation' and 'assimilation' as the reference. None of the interactions were significant in any of these tests. Models 4 and 5 (Tables 3 and 4 respectively) report the two interactions that were significant at $p < .10$. Model 4 adds civic engagement X discrimination and the change in R^2 for this interaction term approached significance ($p = .079$).

Table 3. Discrimination and other resettlement factors explaining psychological distress (TBDI)

	Model 1		Model 2		Model 3		Model 4	
	B (SE)	β	B (SE)	β	B (SE)	β	B (SE)	β
(Constant)	1.68 (.28)		1.28 (.27)		1.58 (.32)		1.68 (.323)	
Age	.00 (.01)	.03	.00 (.00)	.03	.00 (.00)	.02	.00 (.00)	.03
Education	-.02 (.06)	-.03	-.01 (.05)	-.02	.05 (.06)	.06	.049 (.06)	.06
Employed	-.21 (.15)	-.11	-.18 (.15)	-.09	-.21 (.14)	-.11	-.23 (.14)	-.12‡
Gender (Male) ^a	-.32 (.14)	-.16*	-.35 (.13)	-.18**	-.39 (.12)	-.20**	-.38 (.12)	-.20**
English Ability	-.13 (.06)	-.18*	-.14 (.05)	-.20**	-.11 (.05)	-.15*	-.10 (.05)	-.14‡
Discrimination			.54 (.10)	.31***	.56 (.10)	.32***	.33 (.16)	.19*
Strong Intra- Ethnic Identity ^b					.44 (.13)	.22***	.41 (.13)	.20**
Integration ^c					-.22 (.14)	-.10	-.21 (.14)	-.09
Attenuation ^c					-.29 (.14)	-.13*	-.28 (.13)	-.12*
Civic Engagement					-.03 (.06)	-.04	-.13 (.80)	-.15‡
Social Support					-.20 (.06)	-.19***	-.20 (.06)	-.20***
Discrimination x Civic Engagement							.15 (.09)	.21‡
Discrimination x Social Support								
Discrimination x Intra-ethnic Identity								
Pre-resettlement Trauma								
Discrimination x Pre-resettlement Trauma								
R ²	.133***		.212***		.315***		.324***	
Adjusted R ²	.115***		.193***		.282***		.289***	
ΔR^2			.095***		.102***		.009‡ ^d	
F-statistic ΔR^2			28.666		6.957		3.106 ^d	

Notes: ‡ p < .10; *p < .05; ** p < .01; ***p < .001; References: ^a = female; ^b = not strong intra-ethnic identity; ^c = assimilation and separation. Explained variance^d = ΔR^2 for adding interaction term to Model 3.

SFig 1 plots the civic engagement x discrimination interaction. Contrary to our expectations, discrimination increases predicted distress levels more for those with high levels of civic engagement than those with low levels of civic engagement. Moving from low to high discrimination increases one's predicted TBDI score by nearly 8/10 of a point on the four point TBDI scale for those with high levels of civic engagement, but only 4/10 of a point for those with low levels of civic engagement.

[Place SFig1 about here]

Model 3 shows that intra-ethnic identity is positively associated with distress (p < .001). Model 5 in Table 4 shows that the intra-ethnic identification x discrimination interaction is significant at p < .01 and SFig 2 shows that possessing a strong intra-ethnic identity *increases* the influence of discrimination on levels of distress. Among those who said their identification with one of several ethnic groups within Afghanistan was “very strong,” going from low to high discrimination increases predicted TBDI by over 9/10 of a point, compared to under 4/10 of a point for those who do not have a very strong intra-ethnic identity. Thus, we found both higher distress levels and greater vulnerability to discrimination for those with strong intra-ethnic identities (e.g. Pashtun, Tajik).

[Place SFig 2 about here]

Hypothesis 3: Moderating Effect of Pre-Migration Traumatic Experiences

Model 6 shown in Table 4 leaves off resettlement interaction terms and adds pre-resettlement trauma to Model 3. It shows that pre-resettlement trauma is strongly and positively associated with distress, explaining an additional 7.4% of the variance in TBDI, confirming hypothesis 3a. Based on standardized betas pre-resettlement trauma is the most influential factor in Model 7 and perceived discrimination is second most influential. Model 8 adds the ‘pre-resettlement trauma x discrimination’ interaction term showing that this interaction is statistically significant - the change in R^2 from Model 7 is significant at $p < .01$, and explains an additional 2.2% of the variance. This raises the variance in TBDI explained by Model 7 to 37.9%.

Table 4. Discrimination, resettlement factors, pre-resettlement traumas explaining psychological distress (TBDI)

	Model 5		Model 6		Model 7	
	B (SE)	β	B (SE)	β	B (SE)	β
(Constant)	1.84 (.33)		.69 (.35)		1.19 (.39)	
Age	.00 (.00)	.013	.00 (.00)	.04	.00 (.00)	.05
Education	.04 (.06)	.050	.06 (.06)	.07	.06 (.05)	.07
Employed	-.23 (.14)	-.117	-.20 (.14)	-.10	-.17 (.13)	-.08
Gender (Male) ^a	-.41 (.12)	-.210***	-.33 (.12)	-.17**	-.37 (.12)	-.19**
English Ability	-.11 (.05)	-.149*	-.04 (.05)	-.06	-.04 (.05)	-.05
Perceived Discrimination	.33 (.13)	.188**	.43 (.10)	.24***	-.25 (.26)	-.14
Strong Intra-ethnic Identity ^b	.07 (.19)	.034	.34 (.12)	.17**	.32 (.12)	.16**
Integration ^c	-.21 (.14)	-.093	-.20 (.13)	-.09	-.22 (.13)	-.10 [‡]
Attenuation ^c	-.31 (.13)	-.136*	-.23 (.13)	-.10 [‡]	-.25 (.13)	-.11*
Civic Engagement	-.05 (.06)	-.056	-.04 (.05)	-.04	-.06 (.05)	-.07
Social Support	-.21 (.06)	-.205***	-.17 (.06)	-.17**	-.19 (.06)	-.19***
Discrimination x Civic Engagement						
Discrimination x Intra-Ethnic Identity	.51 (.19)	.277**				
Pre-resettlement Trauma			.13 (.02)	.31***	.05 (.04)	.11
Discrimination x Pre-resettlement Trauma					.12 (.04)	.50**
R^2	.334***		.391***		.413***	
Adjusted R^2	.300***		.359***		.379***	
ΔR^2	.020** ^d		.074***		.022**	
F -statistic ΔR^2	6.818 ^d		27.561		8.421	

Notes: [‡] $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$; References: ^a = female; ^b = not strong intra-ethnic identity; ^c = assimilation and separation. Explained variance ^d = ΔR^2 for adding interaction term to Model 3.

SFig 3 plots the pre-resettlement ‘trauma x discrimination’ interaction. Moving from low to high discrimination raises predicted distress levels more for respondents who experienced high levels of pre-resettlement trauma (over 7/10 of a point on the TBDI scale) than those who experienced low pre-resettlement trauma (just over 1/10 of a point). It may be that the vulnerability caused by previous traumas and stressors intensifies the negative emotional effects of experiencing discrimination or feeling targeted, or previous trauma decreases one’s ability to cope with such assaults.

[Place SFig 3 about here]

When then ran tests that combined the pre-resettlement and resettlement interactions and found that with neither of the resettlement interactions (civic engagement, intra-ethnic identity) were significant at $p < .10$ with the discrimination x pre-resettlement trauma term in the model. Thus, Model 7 is our full model. Removing civic engagement, the sole non-significant explanatory factor, from Model 7 produces a model (not shown) that explains nearly the same

amount of variance (37.8%).

In Model 7 we see that gender is the only control variable significantly related to TBDI at $p < .05$, and this model underlines the robust relationships social support, strong intra-ethnic identity, and ‘attenuation’ ethnic orientation has with TBDI. Note that perceived discrimination continues to be quite influential, but in Models 7 the main discrimination term is not significant. Thus, perceived discrimination’s association with TBDI is carried substantially through the significant ($p < .01$) discrimination x pre-resettlement trauma interaction term. The influence of discrimination on distress levels is greater for those who have experienced more pre-resettlement traumas, confirming our third hypothesis. This is reflected in the minimal influence discrimination has on TBDI for those with low pre-resettlement trauma in SFig 3.

Discussion

This cross-sectional study examined the effect of perceived discrimination on the mental health of current and former Afghan refugees residing in northern California. Overall, we found that both psychological distress and perceived discriminatory experiences occurred at low to moderate rates. However, discrimination did show a significant positive association with psychological distress, as hypothesized. This finding fits several studies of other refugee groups [18, 22-23].

Our measure of discrimination captured the degree of unfair treatment and marginalization that Afghans perceive, which is concerning given that such acts may further hinder opportunities in social and economic spheres, already known to play a significant role in determining the mental health of Afghan refugees [5]. Importantly, perceived discrimination has a stronger mental health impact on individuals with higher pre-resettlement traumatic experiences in our sample (confirming our third hypothesis), an interplay of variables that is largely understudied in previous research, but here, speaking directly for the vulnerability of this population.

The predicament that Afghans find themselves in may indeed be exacerbated by host society resentment over their presence as exemplified by their perceived fears of hate crimes targeting Muslim communities after 9/11, the most prevalent form of perceived discrimination we measured. The occurrence of this type of discrimination has been documented among refugees of Arab-Muslim descent in the U.S. by Kira et al. [29] who suggests that such discriminatory acts, and the fears they foster, hinder adjustment and integration in a new host society. We expected that civically integrated Afghans would report lower levels of distress, but our data found no direct relationship between civic engagement and distress. Similarly, we expected civic engagement would buffer the negative effects of discrimination, but instead (SFig 1) the negative effects of discrimination are *greater* among those who are more civically engaged. Although, this pattern is only marginally significant ($p < .10$) and cross-sectional data cannot confirm causal direction, it may be evidence that discrimination targeting refugees is part of a mechanism that acts as a brake on greater civic involvement. In effect, avoiding civic and political engagement becomes a coping strategy in the context of widespread Islamophobia.

This seems to pose a dilemma for Afghans, at least for those in this sample, where seemingly positive acculturation-related behaviors provide no protective effect, nor does social support from their own families and friends. While helpful in mitigating day-to-day stress, our analysis shows that social support is essentially exhausted in the presence of (higher) discrimination – a pattern aligning with results from several tests of other ethnic minority groups

in the U.S. [25]. This also parallels results from a sample of young adult 1st- and 2nd-generation Afghan-Americans where Author et al. [17] suggests that their social networks may emphasize loss and vulnerability. Or it may be that support networks emphasize *individual* coping and striving to succeed more than *collective* challenges to discriminatory experiences. An example of this attitude was a male in his early 40s who, in a focus group of mostly young adult Afghan males, disparaged other Afghans in the Bay Area who complain about discrimination or difficulties getting established, emphasizing their privileged position in the Afghan diaspora and comparing them with a tone of ridicule to Afghans living precariously in Afghanistan. Similar mechanisms may be operating here, and, among this much older, less acculturated 1st-generation sample.

Afghans may in essence be exercising *forbearance coping* where personal problems are concealed to avoid burdening others, which is common in collectivistic cultures [30]. Further, it is possible that Afghans may engage in forbearance coping because they have relatively undeveloped or marginalized cultural repertoires of challenging discrimination in comparison to other stigmatized groups. For example, Lamont shows that African-Americans have widely available scripts of response that buffer the effects of discrimination by promoting narratives of “we-ness,” a shared tradition of resilience in the context of continued discrimination, which helps individuals make sense of their experience, and an identity defined in opposition to that of whites [31]. Cultural repertoires that emphasize the privileged position of U.S. Afghans, which reinforce strong ‘neoliberal’ repertoires emphasizing individualism in the U.S. [32], may limit the development of similar buffering scripts for Afghans. Future research is needed to explore the coping styles and cultural scripts Afghans use, to better understand existing and potential sources of resilience against discriminatory experiences for this, and other Muslim refugee groups.

Perhaps welcoming links within ethnic communities or religious congregations can buffer the effects of discrimination [33]. The many social services agencies serving Afghans in Alameda County, where we recruited participants for this study, could facilitate this. Weine [34] though suggests that in addition to improving refugee community bonds, building social bridges between refugee and non-refugee communities is necessary for promoting integration, and to avoid having strongly bonded but disconnected communities. In relation to this, previous research has argued that strong ethnic identity (likely found in bonded communities) sometimes increases the negative influence of discrimination [23], because discrimination is perceived as assaulting a core part of the self. This interpretation fits our findings that strong intra-ethnic identity amplifies the distress-discrimination pathway and that an attenuated ethnic orientation (not strong in either Afghan or American) is most protective. It is also possible that strong intra-ethnic identities reflect strong ties with Afghans in Afghanistan and involvement with the ongoing strife in Afghanistan. Such identifications might both reflect social networks that emphasize loss and vulnerability, given conditions in Afghanistan, and contribute to a strategy of forbearance that minimizes the impact of discrimination faced by Afghans in the U.S. Therefore, it is questionable whether strong ethnic ties in general are helpful in combating the stress associated with discrimination, when they may be a marker for increased marginalization and/or ties to co-ethnics whose life conditions make struggles in the host society pale by comparison.

Future research is underway by the authors of this study to examine a wider range of types of discrimination, stigmatization, and ‘assaults on the self’ experienced by Afghans; the strength and meanings of various ethnic and religious identifications; and the range of culturally supported responses to discrimination and stigma they engage in, how these influence well-being

and perceptions of being marginalized, and influence patterns of political and civic engagement and pathways to radicalization among young Afghans in particular. Our findings here are suggestive, but we believe that complex social ecological models and measures of discrimination, ethnic and religious identity, cultural resources, acculturation processes, and mode of incorporation are needed to more fully register the influence of discrimination and stigmatization on Muslim refugees, and better understand individual and social sources of resilience that foster integration and buffer against discrimination and stigmatization,

There are limitations to this study. First, the cross-sectional design does not allow for causal inferences; therefore, findings reported here should be interpreted with caution. Secondly, when compared to 2005-2009 ACS sample, our sample was underrepresented in terms of higher education and Afghans who arrived in the U.S. before age 13 (1.5-generation), while overrepresented in terms of individuals 60-69 years of age and reliance on government assistance for basic needs. A major strength of this study is the use of measures (e.g. perceived discrimination) developed through inductive techniques based on insights from affected Afghans and community leaders, possibly providing a higher degree of accuracy than measures developed and validated for other (non-refugee) populations.

Conclusions

Our approach has led us to conclude that perceived discrimination does indeed pose a significant threat to the mental health of current and former Afghan refugees. Discrimination may further exacerbate other ongoing post-resettlement stressors, while posing even more harm to traumatized Afghans. Because factors related to acculturation, group identification, and social support demonstrated little to no positive affect on buffering the discrimination-distress pathway, Edge and Newbold (2013) suggest deeper insights into such moderation effects could be drawn through longitudinal analyses. Future research is warranted to uncover how Afghans cope with this type of stress, and to identify resiliency assets within communities that could inform interventions with this population.

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