Muslim Men and Women's Perception of Discrimination, Hate Crimes, and PTSD Symptoms Post 9/11

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Abstract

This study examined the relationship between race-based stress (racial harassment and discrimination) and PTSD in a sample of 102 New York Muslim men and women post-9/11 while controlling for gender. Bivariate, univariate, and stepwise regression analysis were used to analyze the data. Results of the study show that "feeling less safe" after the events of 9/11 emerged as the only significant predictor of PTSD ($F = 10.32$; $p < .05$). Gender discrepancies indicated that men and women differed in symptom expression and reactions. Whereas men were more likely to experience racial harassment, women were more likely to express fear of being in public places. Potential explanations, study limitations and implications are suggested.

Keywords

Muslim-Americans, racial harassment, Hate Crimes, discrimination, PTSD, gender, Events of 9/11

Background and Significance

The tragic events of 9/11 and the growth of the Arab and Muslim population have led to increased discrimination and harassment against the estimated 2.5 million to 4.4 million Muslims in the United States (Nimer, 2002), of which approximately 600,000 reside in New York State (Cristello & Minnite, 2002). Because Islam is a religion, Muslims may vary both in terms of race and ethnicity, but the three largest ethnic groups in the American Muslim population are Arab Americans (26.2%), South Asians (24.7%), and African Americans (23.8%; Bagby, Perl, Froehle, 2001; U.S. Department of State, 2001). This means that Muslims may be discriminated against because of their religion, race, or country of origin. According to a number of government and private reports, hate crimes against Arabs, Muslims, and people who look like Arabs increased 1,700% since 9/11 (American Civil Liberties Union, 2002; Council on American-Islamic Relations, 2005; Federal Bureau of Investigation [FBI], 2001; Ibish, 2003; Saad, 2006; Singh, 2002).

Recently, the literature positing a relationship between race-based stress and posttraumatic stress disorder (PTSD) has grown (Carter, 2007a; 2007b Bryant-Davis & Ocampo, 2005a; 2005b). Research on socially marginalized populations, such as African Americans, suggests that the experience of racism and/or discrimination can be a source of acute and chronic stress that may result in negative physical and mental health outcomes such as increased blood pressure, anxiety, depression, and symptoms of PTSD (Williams, Neighbors, & Jackson, 2003; Williams & Williams-Morris, 2000). After a thorough review of the literature on stress, trauma, and discrimination, Carter, 2007a; 2007b identified the need to better understand the emotional, psychological, and physical impact of racism and discrimination. He argued that "racial encounters," whether subtle or overt may lead to trauma (Carter, 2007a; 2007b). One study, for example, found that when a group of African American women perceived discrimination against them, they exhibited higher physiological stress reactions than their Caucasian counterparts (Guyll, Matthews, & Bromberger, 2001). Although the association between race-based stress and mental health outcomes has been established among African Americans, this has not been the case among immigrant populations such as Arab and Muslim Americans who are also targets of prejudice, discrimination, and hate crimes (Bryant-Davis, 2005b; Rausch, Auerbach, & Gramling, 2008).

Beyond studying Arab and Muslim Americans and their experience of prejudice and hate crimes, we were also interested in identifying differences in men's and women's responses to race-based stress. It is evident from the literature that women are at higher risk for PTSD (Gross & Graham-Bermann, 2006; Olff, Langeland, Draijer, & Gersons, 2007; Tolin & Foa, 2006). A meta-analysis of 25 years of research found that women are twice as likely as men to meet the

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criteria for PTSD even though they are less likely than men to experience potentially traumatic events (Tolin & Foa, 2006). Research also shows that men and women respond differently to stress, both as a result of biological differences and environmental and social factors (Girdler, Turner, Sherwood, & Light, 1990; Rausch et al., 2008). Men are more likely to exhibit aggression, hypervigilance, and drug use, and women are more likely to present higher levels of anxiety, depressive symptoms, subjective distress, dissociations, somatizations, and alcohol consumption. After an exhaustive review of the literature on gender and PTSD, Olff et al. (2007) and Tolin and Foa (2006) concluded that the evidence as to why these differences exist is not conclusive and that additional research in this area is needed. Notably, while controlling for a number of variables in their meta-analyses, the authors (Olff et al., 2007) did not control for race, religion, or ethnicity.

Given Muslim's increased exposure to race-based stress and the differential response to stress by men and women, this exploratory study examines the extent of discrimination, hate crimes, and other negative experiences on the lives of Muslim men post 9/11, using Carter, 2007a; 2007b race-based traumatic stress injury model (RBTSI). We wanted to study whether or not experiences of racial harassment and discrimination could predict PTSD symptoms in our study sample. In addition, because women seem to be at greater risk than men for PTSD and because there is a paucity of research on Muslim women's experiences (Chand & Moghadam, 2004; Hassouneh & Kulwicki, 2007), it is imperative to control for gender when studying race-based stress, which, among others, is a focus of this study.

Race-Based Traumatic Stress Injury Model

Carter, 2007a; 2007b RBSTI model was developed after a thorough review of the literature on stress, posttraumatic stress, and racial discrimination. According to the model, people who are targets of actual or perceived racism may experience emotional or physical pain or fear of incurring such harm. The model distinguishes between different types of discrimination: racial harassment (e.g., physical and verbal assaults, also known as hate crimes, profiling), racial discrimination (e.g., barring access, exclusion; sabotage), or discriminatory harassment (e.g., denial of promotions, isolation at work) as these may have differential effects on their targets (Carter, 2007a; 2007b).

These racial encounters may be interpersonal (e.g., verbal assaults) or institutional (e.g., racial stereotyping, using deficit models to "explain" the behavior of minority groups), and may be direct or subtle and ambiguous (e.g., "You are not like other Arabs"). According to Carter, 2007a; 2007b, they "can produce harm or injury when they have memorable impact or lasting effect or through cumulative or chronic exposure to the various types or classes of racism" (p. 88). This, Carter would argue, may explain why the severity and prevalence of PTSD has been reported to be higher among minorities and immigrants, especially among those with prior exposure to traumatic events such as wars, political persecution, torture, and natural disasters in their home countries (Gorman, 2001; Olff et al., 2007; Ozer, Best, Lipsey, & Weiss, 2003; Pantin, Schwartz, Prado, Feaster, & Szapocznik; 2003; Tolin & Foa, 2006; Zea, Diehl, & Porterfield,1996). This finding was not borne out, however, by a recent study conducted by Abu-Ras and Abu-Bader (2009), which found no significant relationship between PTSD and gender among a sample of 350 Arabs and Muslims.

Reactions to micro or macro aggressions may be expressed through trauma symptoms such as flashbacks/nightmares, loss of memory and concentration, hyperactivity, and depression (Davidson & Baum, 2001; Norris, Phifer, & Kaniasty, 2001; Ursano, McCaughey, & Fullerton, 2001). Behavioral responses may be debilitating (avoidance, intrusion, and arousal) or life-enhancing (spiritual, proactive, resilient; Carter, 2007a; 2007b). Mild reactions to race-based stress may include generalized anxiety, lack of sleep, irritability, worry, interpersonal strain, lack of concentration, and the worsening of old health problems, whereas severe reactions may include major depression, fear, anxiety disorders, and alcohol and drug abuse (Kessler, Mickelson, & Williams, 1999; Sellers & Shelton, 2003). It is important to note, however, that the model does not see these reactions as being pathological but rather as reasonable responses to racism.

As in other types of trauma, an important determinant of the intensity of psychological and biological stress responses and of mental health outcomes to race-based aggressions is the perception of an event as being negative, sudden, uncontrollable, or threatening (Folkman & Lazarus, 1991; Folkman, Lazarus, Gruen, & DeLongis, 1986; Piotrkowski & Brannen, 2002). Other significant factors determining reactions to traumatic events include character, beliefs, spirituality, coping methods, and the quality and availability of supportive services (Galea, Ahern, et al., 2002a; Galea, Resnick, et al., 2002b; Girolamo & McFarlane, 2001; Pantin et al., 2003; Schuster et al., 2001; Solomon & Smith, 1994).

Application of Carter's Model to Arabs and Muslims

Carter's (2007a; 2007b) model may be used to study the stress responses of Muslims living in the United States, many of whom have been exposed to both private and public racism before and after 9/11 and have experienced racial harassment, racial discrimination, and discriminatory harassment by the government and citizens of the United States. One limitation of this conceptual model as it applies to

Muslims and Arabs, however, is that it does not elaborate on the effects of hate crimes nor does it address the experience of women, as we do in our study.

Racial Harassment: Hate Crimes

Racial harassment involves private or public behaviors, policies, or strategies that are intended to convey or highlight the nondominant person's inferior status due to his or her group membership (Carter, 2007a; 2007b). Racial harassment can also result from "explicit and implicit institutional permission to commit acts of racism" (Carter, 2007a; 2007b, p. 77). According to Ahmad (2004a), biases underlying the violence perpetrated against "Muslim-looking people" after 9/11 were shared by many Americans and were manifested privately and publically in the form of racial discrimination and harassment. For example, according to a *USA Today* Gallup Poll (Saad, 2006), 40% of Americans admitted to being prejudiced toward Muslims, almost a quarter (22%) would not like to have a Muslim neighbor, 31% would feel nervous if they noticed a Muslim man on their flight, and 18% would feel nervous flying on the same plane with a Muslim woman. One study found that Arab Americans experienced higher prejudice encounters than African Americans, Asian Americans, and Hispanic Americans (Bushman & Bonacci, 2004).

As noted earlier, Carter's (2007a; 2007b) RBTSI model does not elaborate on the experience of hate crimes. Because of Arabs' and Muslims' high exposure to these violent acts, we expand on this explicit and extreme form of racial harassment. Hate crimes are "crimes that manifest evidence of prejudice based on race, religion, sexual orientation, or ethnicity, including, where appropriate, the crimes of murder, nonnegligent manslaughter, forcible rape, aggravated assault, simple assault, intimidation, arson, and destruction, damage or vandalism of property" (Bureau of Justice Administration, 1997, Public Law 101-275). Hate crimes perpetrated against Arabs/Muslims and those perceived to be Arabs included assault, murder, death threats, vandalism, and arson (Ibish, 2003). Within educational institutions, students experienced physical assaults, death threats, and blatant ethnic and religious bigotry from other students (Ibish, 2003; Singh, 2002).

Victims of hate crimes may experience the same difficulties and traumatic responses as victims of other crimes, ranging from mild to severe PTSD (Garcia & McDevitt, 1999; Hamm, 1994; Markesteyn, 1992; Seymour, Hook, & Grimes, 2002). However, the impact of this form of harassment may exceed that of common crime because of victims' perceived and actual vulnerability to repeated attacks to their person and community (Boeckmann & Turpin-Petrosino, 2002; Miethe & McCorkle, 1998; Seymour et al., 2002). This can result in heightened fear, hopelessness, and vigilance that may cause some to avoid their own group to protect themselves from further aggression (Abu-Ras & Abu-Bader, 2008; Seymour et al., 2002). This defensive maneuver separates victims from potential sources of social support, a factor potentially prolonging their recovery from trauma (Solomon & Smith, 1994). Moreover, it takes longer to transcend intentional man-made events than it does for natural disasters (Seymour et al., 2002).

Racial Discrimination

Racial discrimination is defined as "a class or type of avoidant racism" (Carter, 2007a, 2007b, p. 76) that may involve denying access to nondominant groups, whether on purpose or accidentally, and maximizing the distance between the dominant group and the marginalized group. This may be done through behaviors and policies or by ignoring or degrading the contributions of the nondominant culture (Carter, 2007a, 2007b). This form of racism against people appearing to be Muslim, as defined by Ahmad (2004a) "is traditionally deemed public, because of the direct involvement of state actors" (p. 1265). Racial discrimination was perpetrated by governmental policies and activities that targeted Arabs and Muslims. For example, discriminatory visa screening by ethnicity and national origin, and the monitoring of international students has made it more difficult for people of Muslim descent to gain entry into the United States (Eggen, 2003; Ibish, 2003). Moreover, the unlawful and indefinite incarcerations of presumed potential terrorists were exclusively Muslim. Last, more than 1,200 persons of almost exclusively Arab, Muslim, and South Asian heritage were secretly detained, more than 8,000 persons were investigated, and 20,800 were deported (Eggen, 2003).

Discriminatory Harassment

Discriminatory harassment refers to structural racism inflicted by various segments of society such as government, health/mental health care systems, and the corporate sector, after the targeted group member has entered the environment (Carter, 2007a, 2007b). Arab and Muslim Americans experienced discrimination and bias from individuals, corporations, the news and entertainment media, educational institutions, law enforcement agencies, and the government (Akram, 2002; Ibish, 2001). Discriminatory activities toward Arabs and Muslims post 9/11 included airport screenings, search and surveillance powers without sufficient review, guilt by association, investigations and deportations, and special alien registration (Ibish, 2003; Singh, 2002). Students of Arab and Muslim descent were prey to harassment and bias by teachers and administrators (Ahmad, 2004; Cainkar, 2004; Ibish, 2003; Singh, 2002).

Mental Health State of Arabs and Muslims Post 9/11

Persistent race-based stress encountered by Arabs and Muslims in the United States, many of whom migrated from countries with repressive authoritarian regimes marked by

violence and oppression (Singh, 2002), may place them at increased risk for PTSD and other negative mental health outcomes. In a recent study, Abu-Ras & Abu-Bader (2009) found that, post 9/11, 62% of Arab and Muslim participants scored between 16 and 48 on the Center for Epidemiologic Studies Depression scale, with 16 indicating clinical depressive symptoms and 60 being the highest score possible. In another example, a rare pilot study of Arab American women's experiences of discrimination, 87% of the sample of 30 reported trauma due to "general disaster," which overwhelmingly consisted of war and military occupation (Hassouneh & Kulwicki, 2007). Despite the small sample, this finding stands in marked contrast to findings from past trauma studies of the general population, where war experience is mostly absent from women's histories of trauma (Tolin & Foa, 2006).

Purpose of Study

The purpose of this study was threefold: (a) to examine whether the experience of discrimination, hate crimes, feelings of safety in the United States before and after 9/11, and any experiences of life changes, contribute to PTSD symptoms among New York City Muslim Americans post 9/11; (b) to characterize the symptoms of PTSD among this population post 9/11; and (c) to determine the degree to which there were differences in PTSD symptoms according to gender given past findings in the literature.

Method

Procedures

An invitation letter describing the purpose of the study was mailed to all the 145 mosques in New York City seeking their participation in this study. Of the total 145 mosques, 42 responded to further inquiry about the study, and only 22 of the 42 mosques agreed to participate. Flyers were then distributed to these 22 mosques with information describing the study and a telephone number to contact for those interested in participating. We received 102 responses indicating willingness to participate in the study.

An individual participant was eligible for the study if he or she met the following criteria: he or she (a) was a resident of New York City; (b) spoke the English language; (c) was 18 years or older; (d) agreed to sign the consent form; and (e) had been in the United States for more than 6 months. All interviews were conducted in English and at the mosque sites.

Measures

The cross-sectional questionnaire used in this study was part of a larger study, which was specifically designed by Abu-Ras, Gheith, and Cournos (2008) to elicit information regarding mental health issues and needs in the Muslim community following 9/11. Because of the lack of scales and standardized measures that are designed to address this particular population, most of the questions in this study were formulated based on the existing literature describing the experiences of the Arab and Muslim population, and no standardized measures were used, except the 13 items scale developed by Foa, Riggs, Dancu, and Rothbaum (1993). The face-to-face interview method was chosen as the best means of collecting data because of the high sensitivity of the topic. Because the interviews took place in mosques, and because men and women do not share space in a mosque, male assessors interviewed male participants and female assessors interviewed female participants. This arrangement was planned as such because gender-related issues are very sensitive to Muslims, especially in religious sites such as the mosque, and we wanted to minimize any inaccurate responses that could result from the discomfort of being interviewed by an assessor of the opposite gender.

The questionnaire included both closed and open-ended questions and consisted of three parts. The first part was specifically designed to collect sociodemographic information. The second part asked participants about the effect of 9/11 on their lives, specifically due to their experiences of discrimination, hate crimes and harassment, loss of employment, feeling safe in the United States before and after 9/11, and about the major changes in their lives and in their sense of self. The open-ended questions were designed to learn about the effect of 9/11 on their lives, their personal experiences with hate crimes and harassment, whether or not they knew others who experienced the same, and the participants' relationship to those people. All answers were coded based on the type of hate crime (physical/verbal assault, discrimination at work, harassment by law enforcement officials, and racial profiling), and the type of relationship they had with those in a similar situation (spouse, children, siblings, relatives, friends, and neighbors).

Perception of discrimination. The discrimination variable was measured by two questions: whether the participants' perception of discrimination increased or decreased after 9/11 and whether or not they lost their employment as a result of the 9/11 event. The "perceived discrimination" question was measured on a 6-point Likert-type scale.

Perception of major life changes and sense of self-worth. To determine major changes in participants' lives, six questions were asked. One question was aimed at measuring whether or not participants experienced a life change in general: If the answer was yes, we asked them to elaborate and describe these changes as they see them. The remaining five questions concerned changes in religious beliefs, coping skills, self-esteem, self-confidence, and self-knowledge. Specifically, participants were asked whether these life changes due to 9/11 have increased or decreased and whether this increased or decreased change has a positive or a negative meaning.

Perception of feeling safe. To assess safety, participants were asked two questions: "How safe they felt being in the United States before 9/11" and "How safe they feel being in the United States since 9/11." Questions were measured on a 6-point Likert-type scale.

Perception of PTSD symptoms. The third part of the questionnaire was designed to measure the dependent variable, PTSD, and to quantify its symptoms as reactions to the 9/11 attacks. Participants responded "yes" or "no" to 13 questions, chosen from a list of common responses to trauma adapted from Foa et al. (1993). The original of Foa et al.'s scale is 17 items measured on a 4-point Likert-type scale (0 = *not at all* to 3 = *very much*) with overall Cronbach's alpha of .85. In this study, the 13 items were slightly modified to address the specificity of the 9/11 events and to increase the clarity of the questions by asking participants "Since the 9/11 attacks have you experienced any of the following . . ."? The 13 items were designed to measure (a) physical or emotional symptoms such as increased arousal (feelings of anger and irritability, difficulty falling or staying asleep, fatigue and exhaustion, trouble concentrating, and problems with decision making); (b) avoidance (not leaving home) and feelings of numbness; and (c) severe emotional reactions, including fear and anxiety, guilt and shame, grief and depression (feeling down, hopeless or despairing, tearful), use of alcohol or other substances, and suicidal thoughts. The overall Cronbach's alpha of the modified 13-item scale used in this study is .63.

Statistical Analysis

A univariate and bivariate analysis was used to examine and present all descriptive data to characterize and to determine the correlations among variables for the overall data set. These included the independent *t* test and chi-square test. We used stepwise multiple linear regression analysis to estimate a model that best predicts PTSD symptoms among participants.

Results

Sample Characteristics

For this study, we recruited 102 English-speaking Muslims. Half of the participants were men, and half were women, ranging in ages from 18 to 68 years with a mean of 39.11 (*SD* = 11.59). Regarding their level of education, 36.3% ($n = 37$) reported having some college and 32.3% ($n = 33$) reported having a bachelor's and/or master's degree. Seventy-one participants (69.6%) were married with an average mean of 3.17 children. More than half (57.8%, $n = 59$), identified as Arab Muslims, whereas the remaining participants identified as South/East Asian (16.7%, $n = 17$), African American or Caribbean (14.7%, $n = 15$), and Caucasian or Latino (10.8%, $n = 11$). Most (87.3%, $n = 89$) participants were Sunni and most were born Muslims.

In terms of socioeconomic status, 54.4% ($n = 55$) of the participants were employed full-time at the time of the interview, and 9.8% ($n = 10$) were unemployed. The remaining participants identified as part-time employed, students, or homemakers, and only one participant refused to indicate his or her employment status. Regarding their household annual income, 30.2% ($n = 40$) reported an annual income above $40,000, 40.2% ($n = 41$) reported income between $20,000 and $40,000, and 18.9% ($n = 19$) reported an annual income of less than $20,000.

Regarding ethnicity, 29 males and 30 females identified as Arab Muslims, compared with 22 males and 21 females who identified as non-Arab Muslims. Although 32.3% ($n = 33$) of the women and 25.4% ($n = 26$) of the men considered themselves as religious to very religious, all the women (100%, $n = 51$) compared with only 25.4% ($n = 26$) of the men reported to fully or partially observe the Islamic dress code (see Table 1).

The independent *t* test was conducted to determine whether or not there were any differences between males and females on sociodemographic variables, including age, education, income, years in the United States, and number of children. The only variables found to show a difference between males and females were those of education and household income. Males had a higher level of education than females, with a significant level of .001 ($t = 3.025$; $p < .05$), and males also reported a higher annual income than females, with a significance level of .019 ($t = 2.10$; $p < .05$; see Table 2).

Overall Effect of 9/11: Experience of Discrimination and Hate Crimes

Although none of the participants reported personal physical injuries as a direct result of the actual 9/11 attacks, some of them reported injury to family members or friends (14.7%, $n = 15$), the death of a friend or coworker (5.8%, $n = 6$), and the loss of jobs (14.7%, $n = 15$). Additionally, participants also endured ethnicity/race-based stress, with 16.7% ($n = 17$) reporting hate crime harassment and public physical and/or verbal attack, 12.7% ($n = 13$) reporting fear for their safety in public, 16.7% ($n = 17$) reporting being personally harassed by law enforcement agents and the U.S. Citizenship and Immigration Services (USCIS), and 62.8% ($n = 64$) reported knowing someone who was questioned and harassed by law enforcement agents, and even deported in some cases. For the post-9/11 period, the vast majority (97.1%, $n = 99$) of the participants reported experiencing moderate to extreme discrimination (see Table 3).

Table 1. Sociodemographic Characteristics of Participants (N = 102)

Variable	*N* (%)	Mean	*SD*
Gender			
Men	51 (50.0)		
Women	51 (50.0)		
Age (in years)		39.11	11.59
18-30	26 (25.5)		
31-40	28 (27.4)		
41-50	31 (30.4)		
51+	15 (14.7)		
Education			
Less than high school	14 (13.7)		
High school or GED	16 (15.7)		
Some college	37 (36.3)		
Bachelor's and/or master's	33 (32.3)		
Marital status			
Single	22 (21.6)		
Married	70 (68.6)		
Divorced	3 (2.9)		
Widowed	5 (4.9)		
Have children	76 (74.5)	3.17	1.49
Have siblings	10 (9.8)	5.6	3.2
Ethnicity/race			
Arab/Middle Eastern	59 (57.8)		
South/East Asia	17 (16.7)		
African American or Caribbean	15 (14.7)		
Caucasian or Latino	11 (10.8)		
Income		$55,000	
Less than $20,000	19 (18.6)		
$20,001-$40,000	41 (40.2)		
$40,001-$60,000	24 (23.5)		
$60,001+	16 (15.7)		
Employment			
Full-time	54 (52.9)		
Part-time	5 (4.9)		
Student	0 (9.8)		
Homemaker	21 (20.6)		
Unemployed	10 (9.8)		
Primary language			
Arabic	51 (50.0)		
English	20 (19.6)		
Other	29 (28.4)		
Knowledge of English			
Good to excellent	73 (71.6)		
Fair	23 (22.5)		
Poor	4 (3.9)		
Religious affiliation			
Sunni	89 (87.3)		
Shia	8 (7.8)		
Sufi and other	3 (2.9)		
Years been in the United States		19	11.10
1-10	23 (22.5)		
11-20	35 (34.3)		
21-30	26 (25.5)		
31+	16 (15.7)		
Religiosity level			
Very religious	16 (15.7)		
Religious	43 (42.2)		
Somewhat religious	40 (39.2)		
Not religious at all	3 (02.9)		
Observation of Islamic dress code			
Full	43 (42.2)		
Partial	34 (33.3)		
Rarely	22 (21.5)		

Table 2. Results of the Independent *t* Test: Demographic Variables

Variable	Mean	*SD*	Mean difference	*t*	*p*
Age					
Men	39.92	10.675	1.627	0.707	.240
Women	38.29	12.500			
Years in the United States					
Men	19.14	11.191	−0.314	1.430	.446
Women	19.45	10.932			
Education					
Men	4.12	1.275	0.863	3.025	.001
Women	3.25	1.565			
Annual income					
Men	2.69	1.211	0.478	2.100	.019
Women	2.22	1.064			

PTSD Symptoms Post 9/11

The vast majority of the participants reported posttraumatic symptoms as a result of 9/11. About 94% (n = 96) of participants reported physical or emotional symptoms, such as increased arousal, 94.1% (n = 96) reported anger as a reaction to the attacks; 68.6% (n = 70) reported difficulty falling or staying asleep; 79.4% (n = 81 reported fatigue and exhaustion; 70.6% (n = 72) had problems with concentration, and 48% (n = 49) had problems with decision making.

Fifty-two percent (n = 53) of respondents were reluctant to leave home, and the same percentage reported feelings of emotional numbness and being disconnected. Almost three quarters (73.5%, n = 75) reported feeling anxious or fearful, 59.8% (n = 61) reported feeling despair or hopelessness, 33.3% (n = 34) reported feeling guilt or shame, 19.6% (n = 20) reported having thoughts of death or suicide, and 91.2% (n = 93) reported sadness and tearfulness. One participant reported use of alcohol and drugs even though Muslims do not drink alcohol as a rule.

When we examined PTSD symptoms by ethnicity, we found that, overall, the events of 9/11 brought more anxiety to non-Arab Muslims (86% as opposed to 64.4% for Arab Muslims), whereas Arab Muslims were more likely than

Table 3. Summary on Discrimination and Feeling Safe Variables Before and After 9/11

Variable	Not at all, *N* (%)	Moderately, *N* (%)	Extremely, *N* (%)	Mean (*SD*)
Experience of Discrimination since 9/11				
Men	3 (5.9)	20 (39.2)	28 (54.9)	3.53 (1.270)
Women	0 (—)	18 (35.2)	33 (64.8)	3.76 (1.031)
Variable	Unsafe/Extremely unsafe, *N* (%)	Equally safe, *N* (%)	Safe/Extremely safe, *N* (%)	Mean (*SD*)
Feeling safe before 9/11				
Men	2 (3.9)	4 (7.8)	45 (88.3)	2.04 (0.979)
Women	1 (2.0)	2 (3.9)	48 (94.1)	1.92 (0.935)
Feeling safe since 9/11				
Men	42 (82.4)	0 (—)	9 (17.6)	5.41 (1.586)
Women	42 (82.4)	1 (20)	8 (15.6)	5.55 (1.514)

non-Arab Muslims to have difficulty concentrating and making decisions (78% vs. 60.5%, respectively).

Results of the chi-square test indicate some association between ethnicity and PTSD. For non-Arab participants, the two variables of anxiety and fear were significant ($\chi^2_{(def=1)} = 5.984$; $p < .05$), and for Arab Muslim participants, the variable of difficulty concentrating was significant ($\chi^2_{(def=1)} = 3.669$; $p < .05$).

Gender Differences: Safety, Hate Crimes, Discrimination, and Loss of Employment

Concerning safety issues before and after 9/11, the vast majority of both male participants (88.3, $n = 45$) and female participants (94.1%, $n = 48$) reported feeling "safe to extremely safe" before 9/11, whereas post 9/11, the same number and percentage of men and women participants (82.4%, $n = 42$) reported feeling "unsafe to extremely unsafe" in the United States—a complete and drastic change.

These frequencies would appear consistent with the fact that 70.6% ($n = 72$) of all participants reported one or more forms of hate crimes such as public verbal assaults (25%, $n = 18$), discrimination in their work employment (22%, $n = 16$), unprovoked interrogation by FBI and INS agents (19.4%, $n = 14$), and another 19.4% ($n = 14$) reported physical injuries as a result of physical attacks. The remainder of the sample reported racial profiling and being treated with disrespect even at prestigious corporations such as big departmental stores.

Examining the overall experiences of hate crimes by gender, there appears to be a significant relationship between gender and hate crimes ($\chi^2 = 12.089$; $p < .05$), with more women reporting hate crimes (86.3%, $n = 44$) than men (54.9%, $n = 28$). Also, there appears to be a significant relationship between job loss and gender ($\chi^2_{(def=1)} = 3.83$; $p < .05$), with more men (10.8%, $n = 11$) reporting job loss post 9/11 than women (3.9%, $n = 4$). Although more men (70.6%, $n = 36$) reported harassment by law enforcement than women (54.9%, $n = 28$) the chi-square test did not show any significant relationship between harassment and gender ($\chi^2_{(def=1)} = 2.684$; $p = .076$; see Table 4).

Gender Differences: Life Changes and Sense of Self

Overall, participants reported that the effects of 9/11 negatively changed their perception of their lives in general but brought more positive changes in their sense of self. For example, the majority (70.6%, $n = 72$) of the participants reported that 9/11-related experiences negatively changed their lives in general. At the same time, all (100%, $n = 102$) participants reported a positive change in their religious beliefs, 91.2% ($n = 93$) reported a positive change in their coping skills, 76.4% ($n = 78$) reported a positive change in their self-esteem, 83.3% ($n = 85$) reported a positive change in their self-confidence, and 92.1% ($n = 94$) reported a positive change in their self-knowledge.

Comparing the frequencies of both genders in terms of overall life changes after 9/11, more women (86.2%, $n = 44$) than men (54.9%, $n = 28$) reported being negatively affected. Although the majority of both men and women reported a similar but positive increase in their religious beliefs, coping skills, and self-knowledge, there were some differences between men and women. For example, one third of women (33.4%, $n = 17$) reported a decreased change in self-esteem as compared with only 13.7% ($n = 7$) of men, and 23.5% ($n = 12$) of women reported a decreased change in self-confidence compared with only 9.8% ($n = 5$) of men (see Table 5).

The chi-square test was conducted to examine the association between gender and the six variables related to changes in their sense of self post 9/11. The only variables

Table 4. Chi-Square Test: Experience of Discrimination, Harassment and Hate Crimes by Sex

Variable	No, *N* (%)	Yes, *N* (%)	Total, *N* (%)	χ^2	*t*
Have you personally been harassed?				1.765	.092
Men	40 (09.2)	11 (10.8)	51 (50.0)		
Women	45 (04.1)	6 (05.9)	51 (50.0)		
Total	85 (03.3)	17 (16.7)	102 (100)		
Have you known of someone who has been harassed?				2.684	.076
Men	15 (14.7)	36 (35.3)	51 (50.0)		
Women	23 (22.5)	28 (27.5)	51 (50.0)		
Total	38 (37.2)	64 (62.8)	102 (100)		
Have you personally experienced any hate crime incidents?				12.089	.000
Men	23 (22.5)	28 (27.5)	51 (50.0)		
Women	7 (06.9)	44 (43.1)	51 (50.0)		
Total	30 (29.4)	72 (70.6)	102 (100)		
Did you lose your job because of discrimination post 9/11?				3.830	.046
Men	40 (39.9)	11 (10.8)	51 (50.0)		
Women	47 (46.1)	4 (03.9)	51 (50.0)		
Total	87 (86.0)	15 (14.7)	102 (100)		

Table 5. Chi-Square Test: Impact of 9/11 on Participants' Life and Sense of Self by Gender

Did the Events of 9/11 Increase/Decrease Change in Your	Negative Change, *N* (%)	Positive Change, *N* (%)	Total, *N* (%)	χ^2	*t*
Life in general				12.089	.000
Men	28 (22.5)	23 (27.5)	51 (50.0)		
Women	44 (06.9)	07 (43.1)	51 (50.0)		
Total	30 (29.4)	72 (70.6)	102 (100)		
Religious beliefs				—	—
Men	0 (—)	51 (50.0)	51 (50.0)		
Women	0 (—)	51 (50.0)	51 (50.0)		
Total	0 (—)	102 (100)	102 (100)		
Coping skills				1.097	.244
Men	3 (02.9)	48 (47.1)	51 (50.0)		
Women	6 (05.9)	45 (44.1)	51 (50.0)		
Total	9 (08.8)	93 (91.2)	102 (100)		
Self-esteem				5.499	.017
Men	7 (06.9)	44 (43.1)	51 (50.0)		
Women	17 (16.7)	34 (33.3)	51 (50.0)		
Total	24 (23.6)	78 (76.4)	102 (100)		
Self-confidence				3.459	.049
Men	5 (04.9)	46 (45.1)	51 (50.0)		
Women	12 (11.8)	39 (38.2)	51 (50.0)		
Total	17 (16.7)	85 (83.3)	102 (100)		
Self-knowledge				2.170	.135
Men	2 (02.0)	49 (48.0)	51 (50.0)		
Women	6 (05.9)	45 (44.1)	51 (50.0)		
Total	8 (07.9)	94 (92.1)	102 (100)		

indicating a strong association with gender were "life change in general" ($\chi^2_{(def=1)} = 12.089$; $p < .05$), self-esteem ($\chi^2_{(def=100)} = 5.449$; $p < .05$), and self-confidence ($\chi^2_{(def=100)} = 3.459$; $p < .05$). Overall, the events of 9/11 had a more negative impact on female participants' sense of self than on that of male participants.

Gender Differences: PTSD Symptoms

Symptoms of posttraumatic stress were analyzed by gender (Table 6). Out of the total 13 items of stress symptoms, men reported a slightly higher frequency than women on 6 items (anger/irritability, hopelessness, guilt or shame, feelings of

Table 6. Group Statistics: Symptoms of Posttraumatic Stress by Sex

Did the Events of 9/11 Cause You Any of the Following?	Yes, *N* (%)	No, *N* (%)
1. Difficulty falling or staying asleep		
Men	34 (66.7)	17 (33.3)
Women	36 (70.6)	15 (29.4)
2. Fatigue/exhaustion		
Men	48 (94.1)	3 (5.9)
Women	33 (64.7)	18 (35.3)
3. Sadness/tearfulness		
Men	45 (88.2)	6 (11.8)
Women	48 (94.1)	3 (5.9)
4. Irritability, anger		
Men	49 (96.1)	2 (3.9)
Women	47 (92.2)	4 (7.8)
5. Feelings of anxiety or fearfulness		
Men	36 (70.6)	15 (29.4)
Women	39 (76.5)	12 (23.5)
6. Despair, hopelessness		
Men	31 (60.8)	20 (39.2)
Women	30 (58.8)	21 (41.2)
7. Feelings of guilt or shame		
Men	19 (38.0)	31 (62.0)
Women	15 (29.4)	36 (70.6)
8. Feelings of emotional numbness, disconnectedness		
Men	28 (54.9)	23 (45.1)
Women	25 (49.0)	26 (51.0)
9. Excessive use of drug, alcohol or prescription drugs		
Men	0 (100)	0
Women	1 (2)	50 (98.0)
10. Reluctance to leave home		
Men	13 (25.5)	38 (74.5)
Women	40 (78.4)	11 (21.6)
11. Thoughts of death/suicide		
Men	13 (25.5)	38 (74.5)
Women	7 (13.7)	44 (86.3)
12. Problems with concentration		
Men	38 (74.0)	13 (25.0)
Women	34 (66.7)	17 (33.3)
13. Problems with decision making		
Men	25 (49.0)	26 (51.0)
Women	24 (47.1)	27 (52.9)

numbness, problems with concentration, and problems with decision making). Women reported a slightly higher frequency than men on 4 items (difficulty falling or staying asleep, feelings of sadness or tearful, feelings of anxiety, use of drugs). For example, 67% ($n = 34$) of men reported difficulty falling or staying asleep as compared with 71% ($n = 36$) of women. Likewise, 61% ($n = 31$) of men reported despair or hopelessness as compared with 59% ($n = 30$) female participants. Only 3 items showed a wide discrepancy between men and women in frequencies: "feeling fatigue/exhaustion," "reluctance to leave home," and "thoughts of suicide." When asked if the events of 9/11 caused any feelings of fatigue/exhaustion, the vast majority of male participants (94.1%, $n = 48$) responded affirmatively compared with only about two thirds (64.7%, $n = 33$) of female participants. However, more than three times as many females (78.4%, $n = 40$) than males (25.5%, $n = 13$) reported a reluctance to leave home. Conversely, when asked if the events of 9/11 caused thoughts of death or suicide, nearly double the number of male participants (25.5%, $n = 13$) than female participants (13.7%, $n = 7$) responded positively.

The chi-square test was conducted to examine whether or not there is an association between gender and these three items (feelings of fatigue/exhaustion, reluctance to leave home, and thoughts of suicide). The results in Table 7 show significant associations between gender and the feeling of fatigue/exhaustion ($\chi^2 = 13.49$; $p < .05$), with more males being symptomatic, and between gender and reluctance to leave home ($\chi^2 = 28.63$; $p < .05$), with more females being symptomatic. No significant association was found between gender and death/suicidal thoughts.

Relationship Between PTSD Symptoms, Discrimination, and Hate Crimes

A stepwise multiple linear regression analysis was used to estimate a model that best predicts PTSD symptoms among participants. The independent variables were scanned, including all variables that significantly increased the multiple correlations. The seven dependent variables were feeling less safe in the United States after 9/11, experiencing discrimination, experiencing hate crimes, experiencing major life changes, gender, level of education, and income. All independent variables were entered at once using stepwise regression analysis (Table 8).

The results revealed that out of the 7 possible factors that could predict PTSD, the factor of feeling less safe since the 9/11 event emerged as the only significant predictor of PTSD ($F = 10.32$; $p < .05$), accounting for 30.6% of the variance in PTSD.

Discussion

Muslims were dually affected by the attacks of 9/11. Not only were they emotionally stunned and wounded like the rest of the world, but, unlike other communities, they became targets of discrimination and harassment within the first 9 weeks following 9/11 (Eggen, 2003; Singh, 2002). Given mounting evidence on race-based stress and PTSD symptoms (Carter, 2007a, 2007b), we conducted this study to examine the relationship between race-based stressors such as discrimination and harassment, and PTSD symptoms in a sample of 102 Muslim males and females in New York City.

Table 7. Chi-Square Test: PTSD Symptoms by Gender

Did the Events of 9/11 Cause You Any of the Following?	No, *N* (%)	Yes, *N* (%)	Total, *N* (%)	χ^2	*t*
Sleeping problem				0.182	.416
Male	17 (16.7)	34 (33.3)	51 (50.0)		
Female	15 (14.7)	36 (35.3)	51 (50.0)		
Total	32 (31.4)	70 (68.6)	102 (100)		
Fatigue				13.49	.000
Male	3 (02.9)	48 (47.0)	51 (50.0)		
Female	18 (17.6)	33 (32.2)	51 (50.0)		
Total	21 (23.5)	81 (79.5)	102 (100)		
Sadness				1.097	.224
Male	06 (05.9)	45 (44.1)	51 (50.0)		
Female	03 (02.9)	48 (47.1)	51 (50.0)		
Total	09 (08.8)	93 (91.2)	102 (100)		
Anger				0.708	.339
Male	02 (02.0)	49 (48.0)	51 (50.0)		
Female	04 (03.9)	47 (46.1)	51 (50.0)		
Total	06 (05.9)	96 (94.1)	102 (100)		
Anxiety				1.550	.461
Male	15 (14.7)	36 (35.3)	51 (50.0)		
Female	12 (11.8)	39 (38.2)	51 (50.0)		
Total	27 (26.5)	75 (73.5)	102 (100)		
Hopelessness				0.041	.500
Male	20 (19.6)	31 (30.4)	51 (50.0)		
Female	21 (20.6)	30 (29.4)	51 (50.0)		
Total	41 (40.2)	61 (59.8)	102 (100)		
Guilt				0.834	.241
Male	31 (30.7)	19 (18.8)	51 (50.0)		
Female	36 (35.6)	15 (14.9)	51 (50.0)		
Total	67 (66.3)	34 (33.7)	102 (100)		
Numbness				0.353	.346
Male	23 (22.5)	28 (27.5)	51 (50.0)		
Female	26 (25.5)	25 (24.5)	51 (50.0)		
Total	49 (48.0)	53 (52.0)	102 (100)		
Use of drugs				1.010	.500
Male	51 (00.0)	00 (00.0)	51 (50.0)		
Female	50 (49.0)	01 (01.0)	51 (50.0)		
Total	101 (99.0)	01 (01.0)	102 (100)		
Reluctance				28.63	.000
Male	38 (37.3)	13 (12.7)	51 (50.0)		
Female	11 (10.8)	40 (39.2)	51 (50.0)		
Total	49 (48.1)	53 (51.9)	102 (100)		
Suicidal thoughts				2.239	.106
Male	38 (37.3)	13 (12.7)	51 (50.0)		
Female	44 (43.1)	7 (06.9)	51 (50.0)		
Total	82 (80.4)	20 (19.6)	102 (100)		
Concentration				0.758	.257
Male	13 (12.7)	38 (37.3)	51 (50.0)		
Female	17 (16.7)	34 (33.3)	51 (50.0)		
Total	30 (29.4)	72 (70.6)	102 (100)		
Decision making				0.039	.500
Male	26 (25.5)	25 (24.5)	51 (50.0)		
Female	27 (26.5)	24 (23.5)	51 (50.0)		
Total	53 (52.0)	49 (48.0)	102 (100)		

Table 8. Stepwise Multiple Regression Analysis on PTSD With Feeling Less Safe Since 9/11 Events

Step	Variable	*F*	*df*	*R*	R^2	R^2_{ch}	Significance
1 Feeling less safe, since 9/11	10.320	1	.306	.92	.094	.002	

Because research shows that women are at higher risk for PTSD (Gross & Graham-Bermann, 2006; Olff et al., 2007; Tolin & Foa, 2006), we tried to quantify these gender differences as they relate to variables associated with PTSD.

Although we did not purposely sample participants who had been victims of racial harassment, our sample, like participants in other studies, had experienced public and private hate crimes, discrimination, and harassment that led many to experience PTSD symptoms (Abu-Ras & Abu-Bader, 2008, 2009; Ahmad, 2004; Cainkar, 2004; Chand, Moghadam, Morton, & Johnson, 2004; Eggen, 2003; Moradi & Hasan, 2004; Singh, 2002). The vast majority of participants scored high on all 13 items of a PTSD scale, exhibiting high rates of physical, emotional, and behavioral symptoms of PTSD. A notable, but surprising, finding of this study is that race-based stressors, including discrimination, hate crimes, and harassment did not predict PTSD symptoms. This finding is inconsistent with Carter's (2007a, 2007b) RBSI model and findings from other studies suggesting that the cumulative effects of different forms of hate crimes and discrimination were strongly predictive of PTSD symptoms (Carter, 2007a, 2007b; Galea Resnik, et al. (2002); Girolamo & McFarlane, 2001; Pantin et al., 2003; Schuster et al., 2001; Solomon & Smith, 1994). In our study, the only variable strongly predictive of PTSD symptoms was the sense of feeling less safe in the United States after 9/11; the vast majority of participants reported a significant drop in their rating of their sense of safety after 9/11 regardless of gender. This is consistent with Abu-Ras & Abu-Bader's (2008) and Rudolph and Diaz's (2003) finding that safety was the single biggest concern identified by study participants in the Muslim and Mexican American communities they studied, respectively.

We did find, however, that ethnicity was associated with only some PTSD symptoms such as anxiety and difficulty concentrating. When we examined the ethnic subdivisions of Arab and non-Arab Muslims as they relate to PTSD symptoms, we found that non-Arab Muslims reported more anxiety and fear, whereas Arab Muslims reported more difficulty with concentration. It may be that, post 9/11, non-Arab Muslims would likely suffer from anxiety and fear that they would be associated with Arab Muslims.

When we examined the experience of those whose ethnicities resemble that of Arabs, we clearly see the intersectionality of ethnicity and religion. Perpetrator Americans were targeting people they perceived to be Muslim, although many of the victims were, in fact, not Muslims. According to a report by the American Arab Anti-Discrimination Committee (2002), Latinos were attacked, as were Christian Arabs, and even Greeks because they resemble the Muslim Arab terrorists of 9/11. In at least two tragic cases, Sikh men were killed because they were thought to be Muslims. And not only were mosques targeted, but Sikh temples and even an Assyrian Christian church were vandalized. Religion, then, apparently is embodied with physical markers of race/ethnicity (e.g., skin and hair) and culture (dress, foreign language, accent) trigger perceptions of Muslim "religious" identity. Religion also seems to be defined by perception, because those who were *perceived* to be Muslims were the ones targeted for hate crimes. Paradoxically, as primary as religion is as a catalyst for discrimination, it becomes secondary to ethnicity for the victims of its abuse. In other words, even though they are targeted because of their (perceived) religion, they think they are targeted because of their ethnicity.

As suggested by the literature, we found statistically significant differences between men and women on some of the 13 items on the PTSD scale. For example, men were more likely to report "feeling fatigue/ exhaustion" and women were more likely to express a "reluctance to leave home," the latter being consistent with Torabi and Seo's (2004) findings. When asked about the type of changes they experienced, women in our sample reported greater fear of being in public places, fear of backlash, and fear of racial profiling, and men reported fear of increased harassment by law enforcement and FBI agents. All the Muslim women in this study wore headscarves/*hijab*, which identifies them as Muslim in public places and may make them easier targets for harassment.

Although avoidance and isolation from the community, common behavioral reactions among targets of hate crimes and discrimination serve to protect Muslims against repeated assault (Abu-Ras & Abu-Bader, 2008; Carter, 2007a, 2007b; Seymour et al., 2002), it also separates them from potential sources of social support that can facilitate healing from trauma. Because more females perceived life changes more negatively, they also tended to report lower self-esteem and self-confidence than male participants.

Another interesting finding is that even though the majority of participants reported negative life changes after 9/11, men were less likely to do so than women. It may be that women felt more vulnerable than men. Their perception of threat could be a significant predictor of negative responses to trauma given the intersection of their multiple identities:

(a) their gender status as women, who generally face more discrimination in access to educational, financial, health, and social resources (Bianchi, Casper, & Peltola, 1996); (b) their cultural identity that is shaped by structural social and cultural constraints provided by gender socialization and patriarchal processes, that also justify certain types of discrimination (Essers & Benschop, 2009); (c) their status as immigrants and minorities in a Western country and the resulting social and economic marginalization; (d) their language barriers, which often result in loss of power, influence, and control over their family members (Predelli, 2004); (e) their religious identity, which results in their separation from men and the wider society; and finally; (f) their Islamic dress code (Haddad, 2007) that symbolizes modesty and physical integrity, and identifies them from non-Muslims, marking them as targets for hate crimes, discrimination, and possible violations of their bodily integrity (e.g., forcefully pulling off their head scarf, as some of the participants in this study have indicated). The intersection of these multiple and complex identities and the potential sources of discrimination in each identity is likely to increase their negative responses to trauma by using *avoidance* as a primary reaction to trauma. Avoidance may also be interpreted as a coping mechanism in dealing with trauma and as a protective factor from any future public humiliations and violations.

Fatigue/exhaustion was the most common response for the majority of men, even though they were more likely than women to experience harassment by individuals and law enforcement agents and to report loss of employment as a result of discrimination. For Muslim men who may bear the economic burden for a large family and act in the public sphere and on other family members' behalf, this loss can be devastating, and would likely take a physical toll. Because of the stigma and shame attached to mental illness, it is very common that men in particular show their stress in physical somatization such as fatigue and exhaustion (Raguram, Weiss, Channabasavanna, & Devins, 1996).

It is surprising to find that despite the experience of private and public racial violence, including discrimination, hate crimes, and harassment, these negative experiences did not predict 9/11–related PTSD symptoms. This finding is not consistent with previous studies (Galea Resnik, et al. (2002); Kira et al., 2008; Pantin et al., 2003; Schuster et al., 2001; Solomon & Smith, 1994) who found that cumulative effects of numerous events, such as the experience of different forms of hate crimes and discrimination, that may have occurred throughout the person's lifetime, were strongly predictive of PTSD symptoms. The only variable that was a strong predictor of PTSD symptoms was the sense of feeling less safe being in the United States since 9/11. This is consistent with Abu-Ras and Abu-Bader's (2008) finding that safety was the single biggest concern identified by the study participants. Rudolph and Diaz's (2003) study of the Mexican community and Kinzie, Boehnlein, Riley, and Sparr's (2002) study of Bosnian and Somalian patients with PTSD, in which both studies show similar findings regarding the greatest deterioration in participants' subjective sense of safety and security. A close examination of their sense of safety before and after 9/11 showed that the vast majority of participants reported a significant drop in their rating of their sense of safety before and after 9/11 across both gender.

The lack of connection between PTSD and discrimination, which contradicts research findings, may highlight the different impact that discrimination has on different cultural groups and different genders. Although the findings may suggest that discrimination is nontraumatic, and may invalidate the realities of many underprivileged groups, it may also suggest that awareness and perception of discrimination may be different for immigrants than for natives, specifically when these results are based on scales (PTSD) designed for U.S. Western populations but are less sensitive to racial or religious-based trauma. In addition, the trait and state of the PTSD symptom scale used in this study are more emotionally based reactions than behaviorally based symptoms or physically based somatization, with the latter, perhaps, being more effective when used with this particular population.

It is important to consider the nature of the traumatic event that this study addresses. The trauma associated with 9/11 is unique in that everyone was affected by it, but the Muslim community was especially affected in that it became instantly associated with the terrorists. With the negative portrayal of Islam by the media, Muslims became suspicious and fearful of outsiders, and further traumatized by 9/11.

Perhaps surprisingly, participants did not experience only negative changes. The vast majority also reported positive changes in their religious beliefs, their coping skills, and their self-knowledge. There are several possible explanations for this increase in religious beliefs. The intensification of religious beliefs and the development of stronger coping skills are life-enhancing responses to traumatic events that many other Americans and Muslims also reported; an increase in spiritual experiences and coping after 9/11 are ways of mediating trauma (Abu-Ras et al., 2008; Abu-Ras & Abu-Bader, 2008; Torabi & Seo, 2004). In addition, religion and spirituality are considered a central component of many Muslim Americans' identity and lives (Abudabbeh, 1996; Al-Krenawi, 1996), with many first turning to God when seeking comfort in dealing with emotional hardships and mental health issues (Abu-Ras et al., 2008; Abu-Ras & Abu-Bader, 2008). Finally, that all participants were recruited from mosques, suggests that this was a religious sample to begin with, as evidenced by the 97% who indicated that they were somewhat religious to very religious.

An increase in self-esteem, self-confidence, and self-knowledge, especially among male participants, may reflect

a reluctance to express what may be perceived within the Muslim community as a weakness: the admission that one's self-esteem or self-confidence is suffering. This is true particularly of men who are conditioned to show strength only and to deny vulnerability. They may indicate that they feel angry, as evidenced by the 96% of male participants who responded as such, but they would not want to show that this anger may have negatively affected their self-esteem and self-confidence. They need to show strength to their families who rely on them and to themselves who need to forge ahead and work. This is especially true of immigrants who have very little support system and must be extremely self-reliant. Their coping skills would be expected to be very high, as they are dealing with a survival issue. Not only do we need to consider their immigrant status but also the social support that is available, or unavailable to them, as well as the social services that would be accessible to them.

Limitations

The findings of this study should be interpreted in light of the following limitations. This study cannot be generalized based on the limitations of the sample size as well as the method of recruitment as our sample size was low. When we tried to assess PTSD symptoms, using Foa et al.'s scales (1993), which are mainly based on U.S. norms and values, we found that existing scales appear inadequate for the experience of ongoing trauma. Current PTSD scales should be modified to reflect the unique situation of different populations such as religious or immigrant groups and to make them more sensitive to racially based trauma. PTSD scales need to take into account cultural or religious contexts, and that we cannot apply one standard to all victims of trauma. In summary, this study highlights that PTSD occurs in a context and that the subjective interpretation of meanings are closely related to a person's cultural and religious background.

Our low rate of response may be attributable to three factors: (a) Many staff members in New York City mosques do not speak English, and once it was determined that responding to this letter was optional, the letter may have been disregarded. (b) The invitation letter may not have reached all the mosques. (c) And most important, the Muslim community in the United States is very insular and difficult to research. Many Muslims, on immigrating to the United States, already harbor deep suspicions and mistrust of outsiders because of various factors in their home country, such as their minority status or unpopular political allegiance. The events of 9/11 and the backlash many of them suffered compound these attitudes and prevent many of them from revealing themselves to one another. In light of both this heightened fear of outsiders as well as the dearth of research related to mental health issues of Muslim-Americans, even a study based on a small sample can have much value added and should not be underestimated and/or minimized.

That the study was conducted only in English, excludes non-English-speaking Muslims, and the participants were recruited from mosques, which also excludes other potential participants who might have different experiences and/or different sociodemographic backgrounds. In addition, the questionnaire was specifically designed by Abu-Ras et al., 2008, to examine the impact of 9/11 among the New York City Muslim community. It is part of a larger study (Abu-Ras & Abu-Bader, in press), which focused on trauma and mental health needs. Because previous traumas were not accounted for, the validity of self-reports before and after 9/11 must also be questioned.

Most studies on PTSD and reactions to trauma have extensively used U.S. measures, test, and assessment procedures and exported these methods based on U.S. norms and values to other cultures. These measures did not take into consideration the cultural differences that also could affect reliability and validity of these measures. To avoid this problem, we designed our questions based on literatures that specifically described Muslim situations post 9/11. The measures used in this study were not previously tested and therefore the statistics calculated from the sample are subject to different measurement errors such as interviewer error, measurement instrument bias, nonresponse bias, response bias, and social desirability bias. Although there are now scales to measure cumulative trauma (Kira et al., 2008) and backlash against Muslims (Kira, Hammad, & Mohanesh, 2005), these were not available immediately following 9/11.

Our findings may not be as one might predict because we may not have been measuring for symptoms associated with ongoing trauma. According to Kira et al. (2008, p. 77), "different types of exposure to trauma yield different configuration and different intensities of symptoms. For example, the literature shows that cumulative trauma (CT) can result in "inducing memory, executive functions, and cognitive deficits, as well as seizure disorders" (Kira et al., 2008, p. 64). CT can also negatively affect the endocrine and immune systems, which can lead to a number of cardiovascular and related health problems.

Future studies on Muslims should not only measure psychological symptoms but also physical symptoms. Given the stigma associated with the expression of mental health problems, Muslims may be more apt to show trauma on the physical level. Kira et al.'s (2008) Cumulative Trauma Scale enables measurement of the effects of different types and doses of trauma. Finally, differential trauma experiences may have "diluted" the findings, as the sample while Muslim, was diverse in terms of nationality. Future studies should better control for nationality, sect, and immigration status, for example.

In light of all the above, there is need for future research that might shed light on both the limitations and contributions of the current study among men and women that includes a larger and more representative sample.

Implications

This ongoing trauma experienced by Muslims and perhaps other religious groups or immigrants may very well undermine their ability to seek and receive help. When we try to assess their PTSD symptoms, using Foa et al.'s (1993) scale, which is mainly based on U.S. norms and values, it becomes clear that the existing scales appear inadequate for such an experience of ongoing trauma. We suggest that current PTSD scales be modified to reflect the unique situation of different populations such as religious or immigrant groups and to make them more sensitive to racially based trauma. The PTSD scales need to reflect that PTSD may occur in a cultural or religious context and that we cannot apply one standard to all victims of trauma. In summary, this study highlights that PTSD occurs in a context and that the subjective interpretation of meanings are closely related to a person's cultural and religious background.

Our study has implications for both research and practice. First, it highlights the importance of looking at differences between men and women's reactions to stress/racial violence. The fear of retaliation had a greater impact on women than actual experiences of harassment did on men. This suggests that even Muslim women who have not been victims of racial harassment may be in need of therapeutic intervention or preventive services. When doing research and in practice, we need to look at differences between subethnic groups, because non-Arabs responded differently to post-9/11 stressors. More research needs to be conducted to explore the relationship between day-to-day race-based stresses among different subgroups of Muslims, and the cumulative impact of racial harassment over time.

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