Hijab, Religiosity, and Psychological Wellbeing of Muslim Women in the United States

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Abstract

Within the emerging mental health research in Muslim populations, previous studies have reported conflicting findings regarding the connection between psychological wellbeing and explicit religiosity (e.g., visibility of Muslim women via hijab, headscarf, and loose-fitted clothing) for those living in predominantly non-Muslim countries. The purpose of the current study was to explore quantitatively, on a small scale, the relationship between hijab and psychological wellbeing of Muslim women in the United States. A total of 50 Muslim women (25 *muhajabbas* (women who wear hijab) and 25 non-*muhajabbas*) completed a battery of scales assessing their depressive and anxious symptoms, self-esteem, and various aspects of their religiosity. More frequent wearing of loose-fitted clothing was significantly associated with lower internalizing psychopathology (i.e., depression and anxiety) levels, whether participants regularly practiced hijab was not. Further, self-reported religiosity had strong negative correlations with internalizing psychopathology. Hierarchical linear regression analyses indicated that frequency of loose-fitted clothing and self-reported religiosity incrementally predicted internalizing psychopathology above and beyond age, migrant status, and hijab frequen-

cy. Overall, while variables were predictors of the internalizing psychopathology, none predicted self-esteem, highlighting a specific relationship with psychological wellbeing. Religiosity and loose-fitted clothing appear to be worthwhile variables for further investigation as potential resilience factors in Muslim women in the United States. Further implications of these results are discussed in terms of culturally sensitive support.

Hijab, Religiosity, and Psychological Wellbeing of Muslim Women in the United States

Although the practice of hijab spans across global Muslim cultures, little is known about how this religious hallmark might intersect with mental health. Since the practice of hijab often includes donning particular garments by Muslim women, in communities where Muslims are not the majority (e.g., the United States), hijab may identify women as Muslims. As such, hijab can transform an invisible religious minority into an identifiable minority, which can make Muslim women the targets of discrimination, harassment, and other forms of victimization. Therefore, understanding the association between the practice of hijab in the United States and mental health of Muslim women presents a unique and growing public health issue.

Muslim women in the United States must balance a religious directive to practice hijab with making their religious identity known—and potentially becoming the focus of anti-Muslim discrimination or victimization. Although hijab can be defined broadly, in the present study, we focused on two primary wardrobe-related aspects of hijab. First, we considered the head covering aspect of hijab. Hereafter, we refer to women who practice hijab as *muhajabbas*. Second, we considered looseness of clothing: Muslim women are advised to wear loose clothing that covers one's legs and arms (Rangoonwala et al., 2011). For Muslim women in the United States, such Islamic dress practice symbolizes not only religious identity, but also freedom from sexual objectification and pride in one's "tangible marker of difference" (Jasperse et al., 2012). To our knowledge, there is a lack of research linking hijab and other Islamic dress practices to psychological wellbeing in Muslim women in the United States, and we use this operationalization of Islamic dress to address this question empirically.

Associations of Hijab with Wellbeing

Negative associations. Evidence suggests that the visible identity of Muslim women may expose them to various modes of discrimination, harassment, and victimization. This is not to say that hijab itself confers risk; rather, the rec-

ognition of *muhajabbas* as Muslim by prejudiced individuals in the broader society makes them the focus of anti-Muslim sentiments and behaviors. Consistent with minority stress theory (Meyer, 1995, 2003), such negative experiences are associated with lower psychological wellbeing in minority groups (e.g., Rodriguez-Seijas et al., 2015). The perception of Muslim identity by the broader population has been linked with increased hate crimes (Abu-Ras & Abu-Bader, 2008) and negative outcomes in a variety of settings, including on university campuses (Rangoonwala et al., 2011), in the workplace (Ghumman & Jackson, 2010), and in recreational activities (Jiwani & Rail, 2010). It is noteworthy, however, that the practice of hijab is not a dichotomy (*muhajabba* vs. non-*muhajabba*), because women practice hijab in degrees. Indeed, the extent to which one practices hijab is itself associated with negative outcomes. For instance, higher frequency of hijab practice, and more conservative body coverings, have been associated with higher levels of perceived discrimination by Muslim women in western countries (Jasperse et al., 2012). As such, understanding the associations of hijab with minority stressors and negative outcomes requires a nuanced focus on its practice that goes beyond categorical conceptualizations (yes/no).

In addition to overt forms of discrimination and harassment, *muhajabba* Muslims in the United States are particularly vulnerable to microaggressions. Nadal and colleagues (2012) define microaggressions as “subtle forms of discrimination (often unintentional and unconscious) that send negative and denigrating messages to members of marginalized racial groups” (p. 15–16). Some examples include using Islamophobic language to hurt someone’s feelings or staring at a *muhajabba* without realizing that the attention could be interpreted as hurtful. Such experiences can make *muhajabbas* feel “othered,” as if they are members of an out-group. They may come to believe there is a particular way of looking “American”—a standard they do not meet. In that study by Nadal and colleagues (2012), participants reported feelings of anger, sadness, frustration, and belittlement. In another qualitative study of Muslim women in Austin, Texas, *muhajabba* participants reported feeling like “weird” outsiders because others did not understand their motivations to cover (Read & Bartkowski, 2000).

In addition to hijab’s relation to interpersonal difficulties for Muslim women, the practice of hijab has also been linked to intrapersonal distress. That is, some women report personal difficulties associated with hijab. For example, wearing hijab may lead to increased self-consciousness about one’s own body (Rastmanesh et al., 2009). As such, the association between hijab and decreased psychological wellbeing may reflect multiple causal pathways—occurring externally to Muslim women as well as reflecting internal psychological processes, congruent with findings from other minority groups (e.g., Meyer, 2003).

Positive associations. Although hijab practice may be associated with increased

risk of negative outcomes, it may also serve as a protective or resilience factor. Key beneficial associations of hijab include formation identity and social support. For instance, Williams and Vashi (2007) argued that hijab enables second-generation Muslim women to combine their identities as Muslims and Americans and create a unique, intersecting identity. Simultaneously, hijab can allow these women to visibly identify with the wider Muslim community, especially during stressful situations, which may facilitate social support and communion; such support and other resources can serve as a buffer against minority stress experiences (Meyer, 2003). For example, Muslim American women who engage in Islamic dress standards show better adjustment in college environments by reaching out to other Muslim women on campus (Rangoonwala et al., 2011).

The practice of hijab has been associated with increased psychological wellbeing. For instance, individuals practicing hijab in a New Zealand sample reported greater life satisfaction and fewer symptoms of psychological distress (Jasperse et al., 2012). Hijab may also function as a buffer against negative media messages about beauty standards and sexual objectification. In a study from Britain, *muhajabbas* placed less importance on appearance and reported more positive body image (Swami et al., 2014). Additionally, *muhajabbas* in the United States reported lower experiences of sexual objectification and more opportunity to act freely in a sexist society (Tolaymat & Moradi, 2011).

Religiosity. Although there is a relative dearth of research focusing on associations of the hijab aspect of religiosity with psychological wellbeing, there is some indication that broader Muslim religiosity may relate to women's mental health. Results from a study of 499 Muslim Kuwaiti adolescents suggest that religiosity is linked to lower anxiety and to higher self-esteem and subjective wellbeing (Abdel-Khalek, 2011). Although causation cannot be inferred from these correlational studies, such findings suggest a potential association between level of religiosity—more general than hijab practice—and positive wellbeing. Because practicing hijab is one common means of expressing religiosity for Muslim women, it is crucial to build an understanding of how both religiosity generally, and hijab specifically, are linked to mental health.

The Present Study

The extant literature is equivocal on the overall association between hijab and psychological wellbeing, and it supports competing hypotheses for how hijab associates with risk and resilience in largely non-Muslim environments. Despite the 983% increase of publications in PsycINFO relevant to Muslim Americans between 2000 and 2010 (Amer & Bagasra, 2013), there is still a lack of research specifically on the relationship between hijab and the mental health of Muslim women in the United States. Additionally, in this growing literature, less than

one quarter of the studies (24.3%) employed quantitative research methods, such as standardized questionnaires, experiments, and analysis of quantitative data. Most of the rest of the publications were either not based on empirical data and relied on the authors' personal reflections (53.3%) or were qualitative studies like interviews and case studies (21.1%). While theoretical, reflective, and qualitative studies of the lived experiences of Muslim women in the United States are critical to understanding this population from societal and public health perspectives, this relative lack of quantitative studies is striking. Because Muslims represent a growing minority in the United States, ranging from 5 to 7 million people (Padela & Curlin, 2013), it is vital to study their mental health using multiple modalities, including quantitative methodologies.

The purpose of the present study was to fill this gap in the literature by investigating the relationship between hijab and mental health in Muslim women. To our knowledge, no prior study has quantitatively compared the psychological wellbeing of *muhajabbas* and non- *muhajabbas* in the United States, in terms of levels of depression, anxiety, and self-esteem. This study had two hypotheses: (1) There is a relationship between hijab and psychological wellbeing. Given the mixed literature, we were unable to make a directional prediction for this hypothesis. (2) Higher frequency of loose-fitted clothing and religiosity will correlate with higher psychological wellbeing.

Method

Participants

Fifty Muslim women aged 18 to 31 years ($M = 20.9$, $SD = 2.7$) studying at a large Northeastern university participated in the study. Participants self-identified with the following ethnicities: Arab ($n = 3$: Egyptian), Asian ($n = 31$: Bengali, Indian, Pakistani), Black ($n = 4$: African-American, Ghanaian, Ivorian, Jamaican), multiethnic ($n = 5$: American-Bengali, Bengali-Indian, European-Indian, Guyanese-Indian, Pakistani-Indian), and other ethnicities not listed above ($n = 7$: Afghan, Guyanese, Haitian, Indonesian, Turkish). Approximately half of the participants ($n = 22$) were born in another country and had immigrated to the United States. At the time of immigration for these participants, the mean age was 11.3 years ($SD = 7.4$). Of the 22 immigrant women, the mean number of years lived in the United States was 10.1 years ($SD = 5.9$). A majority of the sample were undergraduate students (92%), single (92%), and identified with Sunni Islam (78%). Only one participant reported having converted to Islam¹.

1. Some Muslim converts prefer to identify themselves as *reverts* (vs. converts), because they believe all humans are born with an innate relationship with God and embracing Islam is a return to that original faith.

Procedure

Participants were recruited through word of mouth and the Muslim Student Association on campus. The only inclusion criterion was that the women self-identified as Muslims. Using the snowball sampling technique, participants were asked to provide other potential participants' contact information. After the researcher obtained informed consent, paper questionnaires were administered individually, requiring approximately 15 minutes to complete. Participants did not receive compensation for participating in the study. All study procedures were approved by the Stony Brook University Institutional Review Board.

Measures

Demographic information. Participants were asked to report the following information: age, marital status, race/ethnicity, highest level of education completed, country of birth, years lived in the United States, age at time of migration (if applicable), sect identification, and whether they were converts to Islam.

Depression. The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) was designed to assess depressive symptoms in the general population. Twenty items were measured on a scale ranging from (0) *none of the time* to (3) *most of the time*. Sample items included "I did not feel like eating; my appetite was poor" and "I enjoyed life." Ratings from positive items were reverse-scored, and item scores were summed to produce a total CES-D score. Higher scores indicated a higher amount of symptoms and frequency in the past week. Radloff (1977) reported that scores less than 16 have no clinical significance in regard to depression. Cronbach's alpha in this sample was $\alpha = .83$.

Anxiety. The Beck Anxiety Inventory (BAI; Beck et al., 1988) assesses anxiety severity using 21 items on a scale from (0) *nothing/it did not bother at all* to (3) *strong/I almost could not stand it*. Items included statements such as "restless" and "difficulty breathing." Item scores were summed to produce a total BAI score, with higher scores indicating more anxiety. Beck and colleagues (1988) reported that scores less than 7 represented minimal anxiety. Cronbach's alpha in this sample was $\alpha = .89$.

Self-esteem. The Rosenberg Self-esteem Scale (RSES; Rosenberg, 1965) is a 10-item Likert-type scale developed to assess self-esteem, defined as a favorable or unfavorable attitude towards oneself. Items were measured on a 4-point scale from (1) *strongly agree* to (4) *strongly disagree*. Sample items included "I feel that I am a person of worth, at least on an equal basis with others" and "I certainly feel useless at times." A total score was calculated by reversing the ratings of the five negative items and adding them to the ratings for the five

positive items. Higher scores indicated higher self-esteem. Rosenberg (1965) reported that scores from 15–25 represented normal range self-esteem. Test-retest reliability of the RSES is good ($r = .88$; Silber & Tippet, 1965), and Cronbach's alpha in this sample was $\alpha = .89$.

Hijab. Given the limited research on explicit religiosity and Muslim mental health, we utilized questions from previous studies in addition to one that we constructed. Hijab frequency was measured by asking “How frequently do you wear an Islamic headscarf (e.g., *abaya*, *burqa*, *chador*, *hijab*, *jilbab*, *khimar*, *niqab*, and/or other) excluding during prayer?” on a 5-point scale from (1) *never* to (5) *always* (Tolaymat & Moradi, 2011). For comparisons of women who wore hijab at least occasionally versus those who never did, this variable was dichotomized such that values of *never* were interpreted as non-*muhammad* ($n = 25$) and any other values were interpreted as *muhammad* ($n = 25$). Hijab conservativeness (i.e., the degree of body coverage) was evaluated using six visual depictions previously published (BBC News, n.d.) ranging from (1) *least conservative* (e.g., *shayla*) to (6) *most conservative* (e.g., *burqa*), with a *not applicable* option for non-*muhammad* participants (Tolaymat & Moradi, 2011). Since the concept of hijab does not necessarily involve just covering one's hair, arms, and legs, but also wearing loose-fitted clothing (Rangoonwala et al., 2011), we asked participants to respond to the following statement: “When I am in mixed-gender settings (e.g., work, school, mall), I wear loose-fitted clothes” on a 3-point scale from (1) *none of the time* to (3) *all the time*.

Religiosity. Self-reported religiosity was assessed with “How religious would you say you are?” on a scale ranging from (1) *not religious at all* to (4) *very religious* (Ai, Peterson, & Huang, 2003).

Statistical Analysis

Analyses were conducted in SPSS version 22. We began by evaluating zero-order Pearson-product moment correlations among variables in the total sample, and conducted independent samples *t*-tests to compare groups. Hierarchical multiple linear regressions were conducted to predict the psychological wellbeing of our participants from the independent variables. Hierarchical regressions included entering variables in sets, sequentially, to determine whether certain independent variables contributed incremental prediction over and above previously entered independent variables. To control for potential sources of confounding variance, we included sociodemographic covariates of age and native/immigrant status in the first two steps of the regression, such that any subsequently added variable would be required to predict incrementally above and beyond their effects. Given that religiosity was a potential driver of any associations among Islamic dress and wellbeing (e.g., higher religiosity might associate with more frequent hijab practice and higher wellbeing, and

thus account for part of any observed link between hijab and wellbeing), we included it in step three. Hijab frequency and loose-fitted clothing were added in steps four and five, respectively.

Results

Descriptive statistics and zero-order correlations among variables are presented in Table 1. Participants demonstrated high levels of psychological wellbeing overall, indicated by low levels of depression and anxiety and high levels of self-esteem compared to the previously established benchmarks noted above. Significant correlations were observed among clothing-related variables (hijab frequency and loose-fitted clothing; $r = .49, p < .01$) and among psychological wellbeing-related variables (depression, anxiety, and self-esteem; $r_s = -.42$ to $.70, p_s < .01$). Further, depression was significantly negatively related to frequency of loose-fitted clothing ($r = -.40, p < .01$) and negatively related to self-reported religiosity ($r = -.32, p < .05$), and anxiety was significantly negatively related to loose-fitted clothing ($r = -.34, p < .05$). Self-esteem did not demonstrate any significant zero-order relations with any religion-related variables.

TABLE 1. Correlations, Means, and Standard Deviations for Measures

Variable	1	2	3	4	5	6	7	8
1. Hijab frequency	–							
2. Loose-fitted clothing	.49**	–						
3. Self-reported religiosity	–.06	.20	–					
4. Years lived in USA	–.13	–.03	–.21	–				
5. Native/immigrant	.06	–.09	–.03	–.73**	–			
6. Depression	.03	–.40**	–.32*	.12	–.03	–		
7. Anxiety	.06	–.34*	–.27	.16	–.09	.70**	–	
8. Self-esteem	.07	.20	.08	.20	–.13	–.42**	–.18	–
<i>M</i>	3.58	2.24	2.88	–	–	11.82	6.70	25.48
<i>SD</i>	1.48	.59	.59	–	–	7.12	6.62	1.73

Note: * $p < .05$; ** $p < .01$.

In terms of *muhajabbas* versus non-*muhajabbas*, respectively, means for the three psychological wellbeing variables were: depression (12.40 vs. 11.24), anxiety (7.44 vs. 5.96), and self-esteem (25.68 vs. 25.28). Although the mean for anxiety in *muhajabbas* slightly exceeded the previously reported benchmark for mild anxiety, the absolute mean differences of all three variables were small. Indeed, independent samples *t*-tests indicated these differences were not

significantly different from zero for depression ($t[48] = -.57, p = .15$), anxiety ($t[48] = -.79, p = .21$), or self-esteem ($t[48] = -.82, p = .06$).

Prediction of Psychological Wellbeing

We conducted hierarchical multiple linear regressions to predict each of the three dependent variables (depression, anxiety, and self-esteem) separately. Unstandardized regression coefficients, R^2 , adjusted R^2 , and change in R^2 values are presented in Table 2.

Depression. Hierarchical regression analysis indicated that self-reported religiosity incrementally predicted depression above and beyond age and nativity status ($p < .05$); the inclusion of hijab frequency did not incrementally predict above and beyond this level; and the inclusion of loose-fitted clothing incrementally predicted above and beyond the other four variables ($p < .01$). The final five-predictor model accounted for 27.4% of the variance in depression in this sample ($p < .05$), and only the partial regression coefficient for loose-fitted clothing was significantly different from zero ($b = -6.003; p < .01$). Adjusted R^2 , penalizing for our modest sample size and $k = 5$ predictors, indicated 19.2% of depression variance was accounted for by this model, highlighting a robust prediction effect potentially generalizable to other samples.

Anxiety. Hierarchical regression analysis indicated that self-reported religiosity incrementally predicted anxiety above and beyond age and nativity status ($p < .05$); the inclusion of hijab frequency did not incrementally predict above and beyond this level; and the inclusion of loose-fitted clothing incrementally predicted above and beyond the other four variables ($p < .01$). The final five-predictor model accounted for 24.5% of the variance in anxiety in this sample ($p < .05$), and only the partial regression coefficient for loose-fitted clothing was significantly different from zero ($b = -5.27; p < .01$). Adjusted R^2 indicated 15.9% of anxiety variance was accounted for by this model, again highlighting a robust prediction effect.

Self-esteem. Hierarchical regression analysis indicated that none of our five sequential regression models significantly predicted variance in self-esteem, nor did any individual predictor at any step. The final five-predictor model accounted for 9.1% of the variance in self-esteem in this sample (non-significant). Adjusted R^2 showed notable shrinkage with a final value that was negative, indicating that model did not robustly predict self-esteem.

TABLE 2. Hierarchical Linear Regression Analysis Predicting Psychological Wellbeing Variables

Predicting Depression	<i>b</i>	<i>R</i> ²	Change in <i>R</i> ²	Adjusted <i>R</i> ²
1. Age	-.246	.008	—	-.012
2. Age	-.257	.008	—	-.034
Native/immigrant	.137			
3. Age	-.045	.103	.095*	.045
Native/immigrant	-.425			
Self-reported religiosity	-3.793*			
4. Age	-.040*	.103	—	.024
Native/immigrant	-.446			
Self-reported religiosity	-3.788*			
Hijab frequency	.067			
5. Age	.029	.274*	.171**	.192
Native/immigrant	-1.408			
Self-reported religiosity	-2.492			
Hijab frequency	1.317			
Loose-fitted clothing	-6.003**			
Predicting Anxiety	<i>b</i>	<i>R</i> ²	Change in <i>R</i> ²	Adjusted <i>R</i> ²
1. Age	-.091	.001	—	-.019
2. Age	-.003	.008	.007	-.034
Native/immigrant	-1.162			
3. Age	.179	.088	.081*	.029
Native/immigrant	-1.644			
Self-reported religiosity	-3.249			
4. Age	.195	.092	.003	.011
Native/immigrant	-1.726			
Self-reported religiosity	-3.227			
Hijab frequency	.265			
5. Age	.256	.245*	.153**	.159
Native/immigrant	-2.570			
Self-reported religiosity	-2.090			
Hijab frequency	1.363			
Loose-fitted clothing	-5.270**			
Predicting Self-esteem	<i>b</i>	<i>R</i> ²	Change in <i>R</i> ²	Adjusted <i>R</i> ²
1. Age	-.132	.041	—	.021
2. Age	-.117	.044	.003	.003
Native/immigrant	-.203			
3. Age	-.136	.057	.013	-.004
Native/immigrant	-.152			
Self-reported religiosity	.343			
4. Age	-.131	.062	.005	-.022
Native/immigrant	-.176			
Self-reported religiosity	.350			
Hijab frequency	.080			
5. Age	-.138	.091	.029	-.012
Native/immigrant	-.079			
Self-reported religiosity	.219			
Hijab frequency	-.046			
Loose-fitted clothing	.607			

Note: *b* is the unstandardized regression coefficient. Significance levels are indicated for all variables (except adjusted *R*²) at: * $p < .05$; ** $p < .01$.

Discussion

This study investigated the psychological wellbeing of Muslim women living in the United States in terms of their practice of Islamic standards of dress and religiosity. Previous research has produced equivocal results regarding hijab's positive and negative associations with wellbeing. We hypothesized that there would be a relationship between hijab, loose-fitted clothing, and religiosity variables and psychological wellbeing variables.

Consistent with our hypotheses, loose-fitted clothing and self-reported religiosity were negatively associated with both anxious and depressive symptoms; no such association was seen with self-esteem. However, hijab frequency was uncorrelated with all psychological wellbeing variables, and there were no clear differences in the mental health variables between *muhajabba* and non-*muhajabba* women. While the latter finding may reflect low statistical power owing to our sample size of 50, the magnitude of correlational associations of hijab frequency with mental health variables were trivial (i.e., $r_s = .03$ to $.07$), suggesting effect sizes near zero.

At the zero-order level and in multivariable models, participants who more frequently wore loose-fitted clothing reported significantly fewer depressive and anxious symptoms, even after controlling for all other predictors, yielding a relatively high degree of variance accounted for in both variables (27.4% and 24.5%, respectively). Self-reported religiosity, on the other hand, predicted only depression significantly, and failed to do so in multiple regression models. Although loose-fitted clothing related significantly to hijab frequency, it was notable that the latter was not significantly related to psychological wellbeing, in contrast to previous findings (Jasperse et al., 2012). Of further note, all zero-order associations and multivariable models failed to predict self-esteem.

Overall, these results suggest that wearing loose-fitted clothing may represent a potent protective factor against anxious and depressive symptoms, in isolation or in multivariable contexts. This finding somewhat runs counter to previous studies (Rastmanesh et al., 2009). The direction of effect can perhaps be interpreted in the context of previous research suggesting that, because loose-fitted clothing hides the body figure, Muslim women who wear loose-fitted clothing may not feel the need to conform to the beauty standards of the western media, feel less like sexualized objects, and have fewer distressing body image concerns (Swami et al., 2014; Tolaymat & Moradi, 2011). However, causal attributions cannot be inferred from such cross-sectional data, highlighting the need for further study of pathways linking these constructs.

The finding that self-reported religiosity correlated most strongly with depression and anxiety, and contributed to incremental prediction in multivariable models above and beyond other variables, is noteworthy. This suggests that more important than the relationship between (1) *muhajabba* or non-

muhabba and (2) psychological wellbeing may be the relationship between (1) religiosity and (2) psychological wellbeing. Indeed, self-reported religiosity was weakly correlated with hijab frequency, which indicates that being more religious is not necessarily associated with wearing hijab more frequently. Rather, it is crucial to note that higher religiosity was linked with lower anxious and depressive symptoms. This finding highlights the possibility that regardless of hijab, religiosity may be a buffer against psychological distress (Abdel-Khalek, 2011). Again, no significant associations were seen between these variables and self-esteem.

Psychological Wellbeing Versus Internalizing Psychopathology

A unique and notable finding of our study is the specific associations seen between our independent variables and psychological wellbeing. Indeed, wellbeing here was operationalized as anxiety, depression, and self-esteem, in an effort to capture the breadth of this construct. Our independent variables predicted anxiety and depression but not self-esteem, although the RSES itself showed significant associations with depression. Given the high correlation between anxiety and depression in this study, and the very similar prediction of these variables by independent variables, our results highlight the question of whether it is psychopathology in general that associates with our religion-related variables, or whether it is something common to anxiety and depression specifically. The former explanation will require subsequent research with non-internalizing disorders. This latter explanation is congruent with recent structural psychopathology and comorbidity research, which indicates that anxiety and depression are closely related due to their saturation by a latent transdiagnostic psychopathology and comorbidity factor, called internalizing (negative emotionality; for reviews, see Eaton, South, & Krueger, 2010; Eaton, Rodriguez-Seijas, Carragher, & Krueger, 2015; Krueger & Markon, 2006). Internalizing thus accounts for shared variance among mood and anxiety disorders, but appears not to include self-esteem. Thus, a reasonable hypothesis to account for the similar associations of our independent variables to both depression and anxiety is that risk and resilience conferred by these predictors may function at the transdiagnostic factor level, consistent with previous research (e.g., Eaton, 2014; Rodriguez-Seijas et al., 2015). In other words, variables such as loose-fitted clothing may be associated with latent internalizing levels, which are then manifested as lower levels of observed depression and anxiety. While the current study had only two indicators of internalizing, and thus could not model this transdiagnostic factor in a factor analytic context,

subsequent research should examine how religiosity- and clothing-related variables associate with psychopathology through direct pathways as well as indirect pathways (i.e., mediated by transdiagnostic internalizing). Such approaches have been informative in various minority groups previously, and they can produce integrative models that account for diffuse effects of predictors on multiple correlated negative mental health outcomes.

Limitations

The present study consists of some limitations. First, our sample size of 50 was relatively modest, particularly for group-level comparisons of *muhajabbas* versus non-*muhajabbas*. As such, for group-level comparisons, statistical power is a potential concern. Even with this caveat, it is noteworthy that many significant and sizeable associations were found among our study variables—even in adjusted R^2 values of multivariable models that penalize for smaller sample sizes. As such, we recommend that group comparison findings be considered in light of statistical power concerns, whereas the results of analyses of associations (correlations and regressions) produced more easily interpretable findings in terms of magnitude and significance. Second, all of our participants were college students and are thus not representative of the diversity of Muslim women in the United States. Additional study, and particularly national and representative data, will be required to tease apart the complex associations of these variables in a fully generalizable way. Finally, the study was conducted on a Northeastern campus where diversity is prevalent in the student population and Muslim students may feel more accepted.

Further study on the intersection between religiosity, hijab, and mental wellbeing remains a critical direction for future research. Heterogeneity is often overlooked in research with Muslims in America (Amer & Bagasra, 2013). Since the intersection between cultural and religious practices may lead to significant variability, variables such as race/ethnicity, immigrant status, Islamic sect (Shi'a, Sunni, etc.), and whether participants' conversions to Islam are notable considerations for future research. It would be noteworthy to also inquire about socioeconomic status and community integration, and to examine how these variables relate to, and potentially moderate the effects of, other religiosity-related variables. Additionally, the current study collected data from participants on a single occasion. Longitudinal research is vital in teasing out environmental influences on Muslim mental health (Driscoll & Wierzbicki, 2012).

Implications and Future Directions

Self-reported religiosity, not hijab frequency, may serve as a potential buffer against psychological distress. Further research should focus on qualitative accounts to understand women's thought processes linking their decision to wear hijab or not, and thus making their religious identity visible or invisible to others, with general religiosity and mental health (Hopkins & Greenwood, 2013). The United States is unique in that it creates a shared living space for Muslims, both natives and immigrants, where they identify with gender norms and practices that are cultural and not religious (Ali, 2011). Therefore, the reasons to wear hijab and loose-fitted clothing or not—motivated religiously or culturally—are crucial to recognize in order to better understand the connections of these religiosity variables to mental health.

Conclusion

Previous research suggests that Islamic dress practices of hijab and wearing loose-fitted clothing may relate to psychological wellbeing in majority non-Muslim countries. We found that hijab, defined as both a categorical and a continuous frequency variable, failed to relate to wellbeing, although loose-fitted clothing and religiosity did. These effects were not related to all measured aspects of wellbeing, however: these findings were specific to internalizing disorders (not to self-esteem). This highlights the need for a nuanced understanding of the likely complex associations among these variables in understanding risk and resilience for Muslim women in the United States.

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