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Developing an Intergroup Anxiety toward Muslims Scale

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Developing an Intergroup Anxiety toward Muslims Scale

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Thesis submitted to the Eberly College at West Virginia University

in partial fulfillment of the requirements for the degree of

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Abstract

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Understanding intergroup relations and the anxiety that can result has become increasingly relevant to interactions between Muslim and non-Muslim individuals due to current tensions between Islamic groups and many Western nations (e.g., acts of terrorism in Madrid and London, the U.S. War on Terror). Furthermore, the anticipated increase in migration from the Middle East and North Africa to Western countries will undoubtedly lead to increased contact between Muslim and non-Muslim groups. In order to improve intergroup relations and reduce potential conflict between groups, it is important to understand factors that influence intergroup contact. One such factor is intergroup anxiety, or the discomfort and unease an individual feels when interacting with an unfamiliar out-group member. The goal of this research was to develop a measure that assesses levels of anxiety non-Muslims experience when thinking of interacting with Muslims. Two studies were conducted to assess the reliability and validity of the new measure. In Study 1, an exploratory factor analysis identified 16 items that reliably assessed intergroup anxiety toward Muslims with three subscales (e.g., Future Interactions, Comfort, and Settings). The scale demonstrated good convergent and discriminant validity across the two studies, such that participants who reported higher levels of intergroup anxiety toward Muslims also reported more negative attitudes toward Muslims, were more prejudiced toward Arabs, and experienced more general anxiety, intergroup anxiety, and social anxiety. Also, an independent samples *t*-test found the Intergroup Anxiety toward Muslims Scale to be reliable across samples and method of data collection. Overall, the measure was found to be a valid and reliable assessment of intergroup anxiety toward Muslims.

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Developing an Intergroup Anxiety toward Muslims Scale

There are about 1.6 billion Muslims in the world, which is approximately 23% of the world population (Pew Forum on Religion & Public Life, 2011). According to the Pew Research Center's Forum on Religion & Public Life (2011), the Muslim population is expected to increase globally by 35% over the next 20 years. Most of the Muslim population currently lives in the Middle East and North Africa (Pew Forum on Religion & Public Life, 2011). However, due to economic instability, high unemployment, and poor environmental conditions, many individuals in these geographic regions are expected to migrate to Western Nations (Fargues, 2008). Over the next 20 years, the Muslim population in Europe is expected to increase by 14 million (Pew Forum on Religion & Public Life, 2011). Within the United States, the Muslim population is expected to increase from 2.6 million to 6.2 million (Pew Research Hispanic Center, 2011). As such, Western societies will become increasingly more diverse, and the potential for interactions between Muslim and non-Muslim individuals will increase. However, this increased diversity may be riddled with conflict given the prevalence of anti-Islamic sentiment in many Western societies. Thus, there is a need to understand the factors that may influence the likelihood and success of interactions between Muslim and non-Muslim individuals.

One important determinant of intergroup contact and prejudice is intergroup anxiety, or the discomfort an individual may experience in mixed group interactions (Stephan & Stephan, 1985). Intergroup anxiety can lead to feelings of prejudice and negative stereotypes toward out-group members (Islam & Hewstone, 1993; Jasinskaja-Lahit, Mahonen, & Liebkind, 2011; Stephan et al., 2002), as well as avoidance of future interactions with out-group members (Ickes, 1984; Plant & Devine, 2003). There currently is no specific measure of intergroup anxiety experienced by non-Muslim individuals when interacting with Muslim individuals. Thus, the

purpose of the proposed research was to create a scale that measures different levels of intergroup anxiety when interacting with Muslims, in order to understand and ultimately improve intergroup interactions between Muslim and non-Muslim individuals.

Attitudes toward Muslims

Since the terrorist attacks on the World Trade Center buildings in New York City on September 11, 2001, attitudes toward the Islamic faith and its followers, Muslims, have become increasingly negative in Europe (Allen & Nielson, 2002) and the United States (Council on American-Islamic Relations, 2007). Moreover, Western hostility toward Muslims has maintained over the past decade with the occurrence of additional attacks committed by Islamic extremist groups, such as the Madrid train bombings in 2004, the 2005 London bombings, the Mumbai terrorist attacks in 2008, and the attacks on the U.S. Embassy in Libya in 2012. Although most followers of Islam are peaceful, Western media often makes generalizations of all Muslims as terrorists or militants (Kamalipour, 1995). This negative portrayal leads to antagonism that is evident in the ongoing controversies over building mosques in the United States, the banning of mosque minarets in Switzerland in 2009, and the prohibition of face veils in France.

Additionally, in the United States, much of the media portrayal of Muslims is negative. A content analysis of news stories by NPR, Fox News, and CNN between August 1 and September 30, 2010, indicated that Muslims were portrayed negatively in the majority of relevant stories (Cagle, Cox, Luoma, & Zaphiris, n.d.). For example, the CNN reports included multiple negative quotes from individuals against building a mosque near ground zero in New York City. The quotes focused on how the building of a mosque would be “a breeding ground for terrorists” and how the building would be “an insult to the families of people who were

murdered” (CNN articles, 2010 as reported by Cagle, Cox, Luoma, & Zaphiris, n.d.). Some articles did include positive statements about Muslims, but those statements were generally paired with a negative rebuttal. The president’s opinion was also included in articles by CNN and Fox News. For example, a Fox News report stated that the president felt “Muslims have the same right to practice their religion as everyone else” (Fox News articles, 2010 as reported by Cagle, Cox, Luoma, & Zaphiris, n.d.). This statement appeared with an opposing quote by a New York congressional representative who said, “President Obama is wrong. It is insensitive and uncaring for the Muslim community to build a mosque in the shadow of ground zero.” (Fox News articles, 2010, as reported by Cagle, Cox, Luoma, & Zaphiris, n.d.). These news articles portray Islam negatively, which may perpetuate negative stereotypes and prejudice toward Muslims.

After the attacks on September 11, 2001, the European Minority Center on Racism and Xenophobia predicted an increase in violence and prejudice against Muslims (Allen & Nielson, 2002). The Center began recording reports from Islamic organizations and individuals about specific incidents of racism or discrimination. A 2002 report indicated that Muslims felt more anti-Islamic sentiment since 9/11 (Allen & Nielson, 2002). Furthermore, Muslims reported increased hostility from non-Muslims including verbal harassment, intimidation, and vandalism. A follow-up study was conducted by Sheridan (2006) comparing Muslim individuals’ feelings of prejudice and discrimination pre and post 9/11. The study found that 82.6% of Muslims reported an increase in feelings of anti-Islamic sentiment in the United Kingdom. The study also found that 47% of Muslims reported an increase in others avoiding them or being afraid in their presence, and 48% noticed an increase in racial and religious stereotyping.

In North America, the Council on American-Islamic Relations (CAIR) records reports of civil rights violations and violence against Muslims. A report released by CAIR (2007) indicated that there were more than 2,500 civil rights complaints in 2006. This represented a 25% increase from 2005 regarding discrimination, violence, and threats against Muslims. The report also indicated that 39% of Americans felt at least some prejudice toward Muslims, and 22% of Americans did not want a Muslim to move next-door (USA Today/Gallup Poll, 2006, reported in the Council on American-Islamic Relations Report, 2007).

Beyond discrimination, the increase in negative attitudes and stereotypes toward Muslims may lead non-Muslims to feel uncomfortable when interacting with this group and less willing to enter into future interactions with Muslim individuals. This discomfort, known as intergroup anxiety, can lead to or perpetuate stereotypes, negative expectations for future intergroup interaction, and avoidance of outgroup members (Greenland, Xenias, & Maio, 2012; Stephan et al., 2002). Given the increasing numbers of Muslims immigrating to Western nations, it is essential to develop methods to assess concern about interacting with Muslims in order to overcome these negative expectations and promote positive intergroup interactions.

Intergroup Anxiety

Intergroup anxiety is the nervousness or worry individuals may feel when they are about to interact or are interacting with an out-group member (Britt, Boniecki, Vescio, Biernat, & Brown, 1996; Stephan & Stephan, 1985). That is, when interacting with an individual who does not belong to one's own group (e.g., a Muslim conversing with a Jew), a person may experience anxiety about appearing prejudiced, being negatively evaluated by the interaction partner or others for interacting with the out-group member, or feeling embarrassed due to lack of knowledge about the out-group. Furthermore, this anxiety can include somatic symptoms, such

as stomachaches, sweaty hands, and shaking. Intergroup anxiety may lead to various behavioral, cognitive, and affective consequences from the person. For instance, a person may avoid future contact with out-group members, be overly self-aware in intergroup situations, or have increased emotional memories of the situation. As such, intergroup anxiety can lead to more difficult, often more negative, interactions with out-group members and bring about feelings of prejudice toward out-group members. Furthermore, the negative interaction with an out-group member can lead to future stereotyping and avoidance of other out-group members (Jasinskaja-Lahit, Mahonen, & Liebkind, 2011; Plant & Devine, 2003; Stephan & Stephan, 1996).

Stephan and Stephan (1985) proposed that three factors lead to the development of intergroup anxiety: lack of intergroup contact, prejudicial beliefs, and situational factors. However, not all three factors must be present for intergroup anxiety to develop. A person only needs to experience one of these components to develop feelings of anxiety when interacting with out-group members. These antecedents increase the likelihood that an individual will experience intergroup anxiety when preparing to interact or while interacting with an out-group member.

Lack of Contact. When people have little contact with out-group members, they often rely on social or cultural stereotypes about specific out-groups to form expectations about how an interaction with an out-group member would proceed. For example, if a person grows up in a predominately White neighborhood, they may have little interaction with other racial or ethnic group members. Because of little out-group experience, the person may depend on in-group stereotypes and attitudes toward out-group members to navigate a possible out-group interaction (Britt et al., 1996; Stephan & Stephan 1985, 1996). If a group holds negative stereotypes toward another group, then interactions between the groups can be highly anxiety provoking. For

example, a White individual may believe a stereotype, that all Black people think White people are racist. In an interaction between the individual and a Black person, the White person may experience anxiety due to fear that they will be judged as racist.

Furthermore, lack of contact with out-groups can cause a person to feel nervous in these intergroup interactions, because of uncertainty regarding the use of social cues and rules by out-group members (Plant & Devine, 2003). For example, a common stereotype about Muslim men is that they believe women are not equal to men. Therefore, in an intergroup interaction between a Christian woman and a Muslim man, the Christian woman may feel uncomfortable. This discomfort could be due to her uncertainty regarding social rules for the interaction, such as appropriate methods of interaction between a man and woman. In a sense, intergroup anxiety due to lack of contact is similar to culture shock, in that each group has their own norms regarding how to appropriately interact. Although many of the group norms may overlap, the social rules that differ between groups stand out, and individuals may feel nervous about not knowing or understanding another group's norms or acting in an inappropriate manner (Stephan & Stephan, 1985).

Previous contact with out-group members also influences individuals' expectations about future intergroup interactions and the outcome of any such interactions (Islam & Hewstone, 1993). If a person expects an interaction with an out-group member to go poorly, the person will generally experience higher levels of intergroup anxiety (Greenland, Xenias, & Maio, 2012). Consequently, the individual's memories of his or her affective responses during the interaction will be increased (Stephan & Stephan 1985). That is, if a person has a negative interaction with an out-group member, he or she will remember the interaction more negatively, whereas if the interaction is positive, the person will remember it more positively (Stephan & Stephan, 1985).

In the case of a negative interaction, this exaggerated negative memory can perpetuate intergroup anxiety and bring about adverse outcomes. Specifically, a person may misattribute their anxiety as general dislike of the group, which may lead to negative stereotypes and avoidance (Amodio & Hamilton, 2012; Shapiro, Baldwin, Williams & Trawalter, 2011; Shelton & Richeson, 2005; Shelton, Richeson, & Vorauer, 2006).

However, when an individual expects the situation to go poorly and instead has a positive interaction, he or she will have more memories of that positive interaction (Stephan & Stephan, 1985). These positive interactions can help allay worries of expected negative interactions, as individuals feel more confident in their ability to interact with these out-group members (Binder et al., 2009; Pettigrew & Tropp, 2008; Plant & Devine, 2003). After repeated positive interaction with out-group members, individuals learn the social norms for the intergroup interaction (Jasomskaja-Lahit, Mahonen, & Liebkind, 2011; Stephan et al., 2002). This habituation leads to less intergroup anxiety when in contact with this group. Furthermore, habituation to one unfamiliar out-group can be transferred to another out-group (Vezzali & Giovannini, 2012). For example, Italians exposed to multiple interactions with immigrants became less anxious in future interactions with this group. This reduction in anxiety transferred to other situations with other out-groups. The Italians experienced lower levels of anxiety with disabled and homosexual individuals even if they had little previous contact with these groups (Vezzali & Giovannini, 2012). Thus, through intergroup contact, individuals may learn how to interact with specific out-group members, but these skills may be more general and transfer to other groups.

Prejudicial Beliefs. Individuals' attitudes toward out-group members can also impact the level of intergroup anxiety a person experiences. Negative attitudes, stereotypes, and

prejudicial beliefs tend to be associated with higher levels of intergroup anxiety (Finchilescu, 2010). The dislike and desire to avoid inherent in prejudicial attitudes evoke anxiety when interacting with out-group members. In addition to personal prejudicial attitudes toward an out-group, meta-stereotypes, or negative attitudes individuals believe the out-group holds toward their own group, can heighten intergroup anxiety (Vorauer, Main, O'Connell, 1998). For instance, an American traveling to European countries may expect the Europeans to believe he or she is loud and arrogant. The Europeans may or may not evaluate the American in this way; however, the American fears he or she will be judged negatively. When individuals experience meta-stereotypes, they feel more anxious in intergroup interaction (e.g., Finchilescu, 2010). Therefore, feelings of prejudice toward an out-group or thoughts of the out-group being prejudiced against one's own group can produce anxiety in intergroup interactions.

Both types of prejudicial beliefs (i.e., personal and meta-stereotypes) lead individuals to form negative expectations about interacting with out-group members (Britt et al., 1996), and those who expect an interaction to go poorly with an out-group member tend to experience higher levels of intergroup anxiety (Plant & Devine, 2003). Individuals with higher levels of intergroup anxiety are more likely to avoid future interactions with out-group members (Plant & Devine, 2003), and are more likely to misattribute their feelings of anxiety as feelings of dislike for these individuals (Amodio & Hamilton, 2012; Britt et al., 1996; Pearson, West, Dovidio, Powers, Buck, & Henning, 2008). For instance, Pearson and colleagues (2008) examined anxious intragroup and intergroup interactions. Participants were told to converse with a person of either majority or minority racial status. Conversations occurred normally or with a one second delay in response time to induce anxiety. The researchers hypothesized that in interracial interactions the pause in conversation would cause the participant to perceive anxiety in either

the conversation partner or themselves, whereas those in same race groups would not feel increased anxiety due to the pause. Participants in delayed intergroup conversations felt more anxiety than those in delayed intragroup conversations. Furthermore, participants with higher anxiety did not want future interactions with the out-group members to occur. Unfortunately, avoidance reduces the likelihood of dispelling negative stereotypes or learning how to feel comfortable in an interaction with out-group members (Stephan et al., 2002). The outcome is that individuals with higher feelings of intergroup anxiety tend to experience more prejudice toward the out-group (Islam & Hewstone, 1993; Stephan & Stephan, 1996). These behaviors and attitudes become a negative cycle; those with prejudicial beliefs or fears experience more intergroup anxiety and avoid future interaction with out-group members, which perpetuates negative attitudes and continued avoidance. The negative cycle does not break, until the person has a positive interaction with an out-group member or their attitudes toward these individuals change.

Intergroup anxiety can also stem from people worrying that they will appear prejudiced or judgmental toward an out-group member (Greenland, Xenias, & Maio, 2012). That is, people may feel vulnerable in intergroup interactions because they fear self-embarrassment or that their actions will be interpreted as prejudicial by the out-group member (Stephan & Stephan, 1985). These beliefs can cause an increase in the levels of intergroup anxiety a person experiences. Shelton, West, and Trail (2010) found that participants with a fear of appearing prejudiced toward their out-group roommates felt more anxiety when interacting with their roommate. Interestingly, the out-group roommate noticed their roommate's anxiety, as evidenced by lower likability ratings of the high anxiety roommates. This, in turn, can cause individuals to feel anxious in future interactions because they fear they will be negatively evaluated (Shelton &

Richeson, 2005; Shelton, West, & Trail, 2010; Vorauer & Kumhyr, 2001). Thus, these poor interactions can perpetuate or lead to increased anxiety for both groups.

Situational Factors. The situation in which contact occurs can also impact the level of intergroup anxiety a person feels. Britt et al. (1996) conducted a study measuring intergroup anxiety in participants led to believe they were about to discuss a racially sensitive topic with an out-group or in-group member. The researchers found that those primed for an intergroup interaction had higher levels of anxiety, were more nervous about the upcoming interaction, and expected the interaction to go poorly, whereas those who expected to discuss a racially sensitive topic with in-group members felt lower levels of anxiety. This research indicates that when discussing sensitive topics, group membership of the conversation partner (i.e., in-group or out-group) impacts levels of anxiety, such that those interacting with out-group members experienced more anxiety than when discussing the same topic with in-group members.

In a similar study conducted by Amodio and Hamilton (2012), White participants were told that they were about to discuss discrimination and who it affects with either a Black or White interaction partner. The researchers then administered a state affect measure. Those who were primed for an interracial interaction endorsed significantly higher levels of anxiety on the state affect checklist. Additionally, with the use of an implicit measure in which positive and negative adjectives were paired with images of in-group and out-group members, the researchers found evidence that those experiencing higher levels of intergroup anxiety had more negative out-group attitudes. That is, individuals who reported higher levels of intergroup anxiety paired more negative words with out-group members than with in-group members (Amodio & Hamilton, 2012). Again, the discussion topic or the reason for an interaction with an out-group member may influence the level of anxiety experienced by an individual.

The previous studies indicate that the context of the situation (e.g., who the participant is conversing with), the content of the situation (e.g., racially sensitive topics), and potential for physical interaction impact how much anxiety is experienced by the individual. Moreover, it appears that higher levels of anxiety lead to increased prejudice (Amodio & Hamilton, 2012).

Measurement of Intergroup Anxiety

Self-report studies examining the construct of intergroup anxiety began in the mid-1980s with Stephan and Stephan's (1985) influential study and creation of the Intergroup Anxiety Scale. This scale assesses anxiety about interacting with any out-group member, not specific to a particular group. The scale consists of ten items, for which individuals rate how they feel (e.g., distressed, accepted, happy, etc.) when interacting with out-group members compared to interacting with in-group members. In their original study, Stephan and Stephan found that Hispanics felt more anxiety when interacting with Whites than an in-group member. They also found that less contact, increased feelings of dissimilarity between groups, and stereotyping were correlated with intergroup anxiety.

Although the Stephan & Stephan (1985) intergroup anxiety measure is the current gold standard for measuring intergroup anxiety, there are some shortcomings with this scale. First, the measure only examines emotional responses toward an out-group (e.g., happy, accepted, confident) rather than assessing how individuals would behave in intergroup situations or thoughts that might occur during intergroup interactions. Second, the measure is too general. Participants are simply asked to state how they would feel interacting with an 'out-group' member, not a member of a specific group. Not all out-groups are the same. Prejudicial attitudes and stereotypical beliefs vary by out-group (e.g., Chandra, 1967; Choi & Lahey, 2006; Esses & Zanna, 1995; Puhl, Schwartz, & Brownell, 2005; Spencer-Rogers & McGovern, 2002).

Additionally, depending on where an individual resides, he or she may not have much contact with certain out-group members, but not all out-groups. As stated before, less contact with specific out-group members can increase stereotypical beliefs and attitudes toward a group. As such, level of intergroup anxiety will most likely vary by group. Also, when presented with the term 'out-group,' participants may think of a specific group, and this group may not be the same for each participant. Due to different attitudes and beliefs elicited in interactions with different out-group members, as well as different experiences and levels of contact with specific out-groups, it is essential to specify in the scale a target out-group. If the specific out-group is not identified in the scale, participants may think of other out-group members, which could influence the interpretation of the results. That is, some participants may think of out-group members they greatly dislike, and other participants may think of out-group members with whom they are comfortable. As a variety of out-group members could be thought of when completing the general intergroup anxiety measure, the researchers cannot be certain what the results indicate.

Later studies have developed and adapted scales that assess intergroup anxiety elicited in response to specific groups, such as Blacks (Plant & Devine, 2003), immigrants (Vezzali & Giovanni, 2012), and Native Americans (Corenblum & Stephan, 2001). These scales improved upon the general intergroup anxiety measure. For example, Britt, Boniecki, Vescio, Biernat, and Brown (1996) created a measure that examines intergroup anxiety when interacting with Black individuals. Not only is this measure specific to a target out-group, it also includes items that examine anxiety in specific situations (i.e., discussing racially sensitive topics). Although the Stephan and Stephan scale is a good measure of emotion in intergroup interactions, it does not examine anxious behavioral responses to intergroup interaction. The Britt et al. measure has items that were created to examine general and situational intergroup anxiety elicited when

interacting with Black individuals. This measure is well validated, and the items are very specific to the stereotypes and attitudes individuals hold toward Black individuals. Thus, this measure provides a better assessment of anxiety elicited in individuals when thinking of interacting with this group and is a better predictor of difficulty that may arise during intergroup interactions with Black individuals.

Although there are several measures of intergroup anxiety, there is currently no measure of intergroup anxiety that assesses the various behaviors and emotions elicited when thinking of, or while interacting with, a Muslim individual. There are existing measures of prejudice toward Muslims, such as Lee and colleagues (2009) Islamophobia Scale. Although anxiety may be one aspect of Islamophobia, there are several other emotions, such as disgust, anger, suspicion, and hostility toward Islam and Muslims, and cognitions (e.g., stereotypes) associated with prejudice (Bleich, 2011). Intergroup anxiety toward Muslims is a more specific construct than general prejudice, or Islamophobia. That is, intergroup anxiety focuses specifically on anxiety individuals may experience when interacting with an outgroup member (Stephan & Stephan, 1985). Furthermore, intergroup anxiety mediates the relation between intergroup contact and prejudice reduction (e.g., Voci & Hewstone, 2003). In other words, those with less out-group contact tend to experience higher levels of intergroup anxiety, which leads to more prejudice toward out-groups. Given the important role of intergroup anxiety in reducing prejudice, it is necessary to develop scales that uniquely assess intergroup anxiety toward specific groups.

Because of current tensions between Islamic groups and Western nations, as well as immigration trends, it is likely that Muslims and non-Muslim Westerners will have continued conflict and increased everyday interactions. It is therefore, relevant and important to create a

measure that specifically examines the intergroup anxiety elicited when non-Muslims interact with Muslims in order to create ways to reduce this anxiety.

Statement of the problem

Understanding intergroup relations and the anxiety that can result from intergroup interaction has become increasingly relevant to interactions between Muslims and non-Muslim individuals due to current tensions between Islamic groups and many Western nations (e.g., acts of terrorism in Madrid and London, the U.S. War on Terror) (Savelkoul, Scheepers, van der Veld, & Hagendoorn, 2012). Furthermore, the anticipated increase in migration from the Middle East and North Africa to Western countries undoubtedly will lead to increased contact between groups. As these groups will inevitably have increasing levels of interaction, it is important to understand mechanisms that elicit anxiety between them. Current measures of intergroup anxiety examine emotions when interacting with an ambiguous out-group member or behavioral and affective responses to out-group members of specific racial groups. There is currently no measure that examines anxiety about interacting with Muslims in North America. The current studies aimed to fill this gap by developing a measure of intergroup anxiety toward Muslims. Specifically, the created measure examines levels of anxiety non-Muslims experience when thinking of interacting with Muslims. The creation of this tool should assist future research in understanding fear and prejudice toward this group.

Study 1

The purpose of this study was to develop a valid self-report measure that assesses the level of intergroup anxiety experienced by non-Muslims when thinking about interacting with Muslims. To do this, items designed by the researcher to measure intergroup anxiety toward Muslims were administered to undergraduate students. Factor analysis and reliability analyses

were conducted to extract consistent items for a scale measuring intergroup anxiety toward Muslims. Other measures were included in the study to test the convergent and discriminant validity of the new measure. Specifically, the General Intergroup Anxiety scale (Stephan & Stephan, 1985), items assessing attitudes toward Muslims and Arabs on a feeling thermometer scale (see Converse & Presser, 1986), the Islamophobia Scale (Lee, Gibbons, Thompson, & Timani, 2009), and the Beck Anxiety Inventory (Beck, Epstein, Brown, & Steer, 1998) were used to demonstrate convergent validity. Items not relating to Muslims or Arabs on the feeling thermometer were used to demonstrate discriminant validity.

Method

Participants

There were 489 participants who completed Study 1. Seven participants (1.4% of the sample) were excluded from the analyses due to inconsistent responding (e.g., participants who entered the same number for each item throughout the entire survey). Also, as the purpose of the study was to develop a measure of intergroup anxiety experienced by Western non-Muslims toward Muslims, students who identified as Muslim ($n = 6$, 1.3% of the sample) were not included in the final data analysis. As such, data from 476 (73.5% female; $M_{\text{age}} = 20.29$, $SD = 7.60$)¹ undergraduate students at West Virginia University were used to assess the IATMS. All participants were 18 years or older. The remaining participants' religious affiliation were as follows: 35.7% Protestant, 29.8% Catholic, 14.7% not religious, 0.6 Buddhist, and 0.2% Hindu. Participants were recruited through the Psychology Department's online SONA system, as well as through flyers posted around the WVU campus. The project was advertised to students as a study examining personal beliefs and attitudes toward different social groups. Students received extra credit in psychology courses for their participation.

Measures

Intergroup Anxiety toward Muslims Scale (IATMS). Initially, 74 items were created as potential questions to include in the measure. These items were adapted from previously validated scales of intergroup anxiety, which measure general intergroup anxiety (Stephan & Stephan, 1985) and intergroup anxiety toward African Americans (Britt et al., 1996; Plant & Devine, 2003). Items from these scales were revised to assess anxiety about interacting with Muslims (e.g., “I would feel uncomfortable sitting next to a Muslim on the bus”), fear of negative evaluation from in-group and out-group members about interacting with Muslims (e.g., “I think some of my friends would be upset with me if I were friends with a Muslim”), and expectations about interacting with Muslims (e.g., “I do not know what to expect when interacting with Muslims”). To determine which items would be best for the final measure, a focus group of undergraduate students, graduate students, and faculty members rated each item as strong, mediocre, or weak. The average score for each item was created; items that were rated as mediocre or strong were used to create the Intergroup Anxiety toward Muslims Scale.

The final measure consisted of 38 items regarding interaction with Muslim individuals. Participants rated the extent to which they agreed with each item on a scale from 1 (highly disagree) to 10 (highly agree). Some items were reverse scored, so that higher scores indicate higher levels of intergroup anxiety toward Muslims.

General Intergroup Anxiety (GIA; Stephan & Stephan, 1985). This 10-item scale assesses general intergroup anxiety ($\alpha = .86$; Stephan & Stephan, 1985). Each item states, “If you were the only member of your ethnic group and you were interacting with people from a different racial or ethnic group (e.g., talking with them, working on a project with them), how would you feel compared to occasions when you are interacting with people from your own

ethnic group?” (p. 171). Following this statement, participants rated their levels of different emotions (e.g., “suspicious”, “happy”, “accepted”) on a 10-point scale from *not at all* to *extremely*. The GIA scale was included in the study to assess convergent validity. It was expected that those higher in general intergroup anxiety would also report higher levels of intergroup anxiety toward Muslims.

Feeling Thermometer Scale (FT; Converse & Presser, 1986). This measure is commonly used to assess attitudes toward different groups and to estimate prejudice levels (Dasgupta & Greenwald, 2001; Gawronski, Peters, Brochu, & Strack, 2008; Wittenbrink, Judd, & Park, 2001). Participants ranked their attitudes toward specific groups (e.g., liberals) on a scale from 0 to 100. Scores above 50 indicate that the participant had a favorable attitude toward a group. Scores below 50 indicate that the participant had an unfavorable attitude toward a group. In the current study, participants’ attitudes toward a variety of groups (e.g., Christians, immigrants), including Muslims and Arabs, were assessed to determine the extent to which scores on the IATMS are associated with self-reported liking of Muslims versus other groups. Attitudes toward Arabs were also examined, because this group is often confused with Muslims (Ahluwalia & Pelletiere, 2010; Arab American Institute; Ballinger, 2011; Joshi, 2006). It was hypothesized that those who had higher levels of intergroup anxiety on the IATMS would rate Muslims and Arabs lower on the Feeling Thermometer Scale, demonstrating convergent validity. Items not related to attitudes toward Muslims or Arabs should not correlate, or be weakly correlated, with the IATMS. These items were used to demonstrate discriminant validity.

Islamophobia Scale (Lee, Gibbons, Thompson, & Timani, 2009). This is a 16-item scale consisting of two factors relating to Islamophobia. The first factor, labeled the Affective-Behavioral subscale (I-AB), reflects feelings and behaviors toward Muslims (“If possible, I

would avoid going to a place where a Muslim would be”). The second factor, labeled the Cognitive subscale (I-CG), assesses beliefs about the Islamic faith (“Islam is Anti-American”). Items are rated from 1 (strongly disagree) to 5 (strongly agree). Both subscales have strong internal consistency ($\alpha = .92$ for I-AB and $\alpha = .94$ for I-CG; Lee et al., 2009). The subscales are moderately correlated ($r = .66, p < .01$; Lee et al., 2009). This measure was included to examine convergent validity. It was expected that those higher in intergroup anxiety toward Muslims would also have higher levels of Islamophobia.

Motivation to Control Prejudice Reactions (MCPR; Dunton & Fazio, 1997). This scale measures the extent to which individuals are concerned about appearing prejudiced and attempting to control prejudiced behaviors. The MCPR scale is a 17-item measure. Participants rated the extent to which they agreed or disagreed with a statement on a seven-point scale from +3 (*strongly agree*) to -3 (*strongly disagree*). This measure has two subscales: restraint to avoid dispute ($\alpha = .66$) and concern with acting prejudiced ($\alpha = .81$) (Mack, Johnson, Green, Parisi, & Thomas, 2002). The MCPR scale was included in the current study in order to control for individuals’ tendencies to respond in a non-prejudiced or egalitarian way to questions regarding attitudes toward Muslims or intergroup anxiety.

Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988). This is a 21-item measure that assesses anxiety severity ($\alpha = .93$). The BAI measures both cognitive (e.g., fear of dying, inability to relax; $\alpha = .87$) and physiological symptoms (e.g., feeling dizzy, sweaty palms; $\alpha = .85$) of anxiety (Beck, Epstein, Brown, & Steer, 1988). Participants rank items on a scale from 0 (*Not at all*) to 3 (*Severely - I could barely stand it*). Summed scores create a range of responses from 0 to 63. Scores between 22 and 35 signify moderate levels of anxiety. Scores of 36 and above denote severe anxiety symptoms (Eack, Singer, & Greeno, 2008). The BAI was

included in this study to assess participants' general anxiety levels. Individuals with higher levels of anxiety may experience elevated levels of intergroup anxiety. This measure was used to assess convergent validity. It was hypothesized that higher scores on the BAI would correlate with higher scores on the IATMS; however, the BAI should not correlate as strongly with the IATMS as the GIA.

Family and Friend Attitudes Measure. Eight items were used to assess the attitudes of the participants' family and friends toward out-group members. These items were used to evaluate family and friend influence on the participant's level of intergroup anxiety toward Muslims. Previous research (Jasinskaja-Lahti, Mahonen, & Liebkind, 2011; Mahonen, Jasinskaja-Lahti, & Liebkind, 2011) has found that family and friend attitudes can have an influence on attitudes toward out-group members. The items included in this study were adapted from Mahonen et al. (2011). These items were included to investigate whether responses on the IATMS correlate with attitudes exhibited by family and friends.

Personal Contact Inventory (Levin, Van Laar, & Foote, 2006). This measure asked participants to rate how much contact they have had with various racial and religious groups in a variety of settings (e.g., home, school). It was anticipated that those with more contact with out-group members would have less intergroup anxiety toward Muslims.

Demographics. Participants were asked to report their age, sex, religious affiliation, political identification, sexual orientation, racial composition of high school and neighborhood, income, highest level of education attained, major, and parental income.

Procedure

The study was conducted online through the SONA system. Thus, participants were able to complete the study from any computer and location of their choosing. Participants read and

acknowledged an online consent form before completing a series of questionnaires. After participants electronically signed the consent form, they completed the above measures in the following order: the Intergroup Anxiety toward Muslims Scale, the General Intergroup Anxiety Scale (Stephan & Stephan, 1985), the Feeling Thermometer Scale, the Islamophobia Scale (Lee et al., 2009), Beck Anxiety Inventory (Beck et al., 1998), Family and Peer Attitudes Measure, Personal Contact Inventory, the Motivation to Control Prejudice Reactions Scale (Dunton & Fazio, 1997), and Demographics (see Appendix A for all measures). Participants were able to skip any questions that they did not wish to answer and were able to end the study at any point without penalty. After participants completed the measures, they were thanked for their participation, and given extra credit.

Results

First, the data were examined for missing data and normality. With missing data, statistical tests excluded cases pairwise. For each measure missing data ranged from 1.7% - 9.2%. The BAI ($M = 34.8$, $SD = 9.54$, skew = 1.25, kurtosis = 1.48) and the third factor of the IATMS ($M = 2.35$, $SD = 1.51$, skew = 1.36, kurtosis = 1.99) were not normally distributed. As such, these scales were log transformed to normalize the distribution before conducting the primary analyses (BAI: $M = 1.53$, $SD = .11$, skew = .64, kurtosis = -.19; IATMS3: $M = .29$, $SD = .26$, skew = .36, kurtosis = -1.00). All other measures met assumptions of normality. Mean, standard deviation, and Cronbach's alpha for each measure are reported in Table 1.

Scale Development

A factor analysis with varimax rotation was conducted to assess the structure of the IATMS and determine how many dimensions the scale appeared to measure. The Kaiser-Meyer-Olkin measure of sampling adequacy was .94, above the recommended value of .5 (Field, 2013),

and Bartlett's test of sphericity was significant ($\chi^2(703) = 8991.91, p < .001$). These results indicated the items were appropriate for a factor analysis. The scree plot (see Figure 1) indicated a three factor solution. Each factor had an eigenvalue greater than 3. Together, the three factors accounted for 33.67% of the variance.

The rotated matrix was used to examine the item factor loadings and determine what the factors represented. The first factor accounted for 11.94% of the variance and seemed to represent anxiety about future interactions with items such as "I wouldn't consider myself a racist, but because I don't know how to act around Muslims I fear they may think I am racist." The second factor accounted for 11.39% of the variance and seemed to represent comfort interacting with Muslims with items such as "I feel comfortable interacting with Muslims." Finally, the third factor accounted for 10.34% of the variance and seemed to represent specific interaction settings with Muslims with items such as "I would feel anxious alone in a doctor's waiting room with a Muslim." Based on the factor loadings, factor one will be referred to as the Future Interactions subscale, factor two as the Comfort subscale, and factor three as the Setting subscale.

Only items with factor loadings greater than .450 and that did not cross load on multiple factors were retained in the final scale (see Table 2). Thus, the final scale consisted of 16 items and was highly reliable ($\alpha = .89$). The Future Interactions subscale consisted of 4 items ($\alpha = .86$); the Comfort subscale had 7 items ($\alpha = .84$); and the Setting subscale had 5 items ($\alpha = .80$). The subscales also correlated moderately with one another ($r_s = .48 - .51$).

Measure Validity

Covariates. The Motivation to Control Prejudice Reactions scale (MCPR; Dunton & Fazio, 1997) was included in the study as a potential covariate. Due to the socially sensitive

nature of the prejudice-related measures, individuals may not have responded honestly to the questions. The concern subscale of the MCPR was significantly correlated with responses on the IATMS full scale ($r(438) = -.20, p = .001$), the Comfort subscale ($r(438) = -.20, p = .001$), and the Setting subscale ($r(438) = -.23, p = .001$). Concern was not significantly correlated with the Future Interactions subscale of the IATMS, $r(438) = -.04, p = .39$. Concern was also significantly associated with GIA ($r(431) = -.18, p = .001$), Islamophobia ($r(411) = -.25, p = .001$), and the Feeling Thermometer Scale items (e.g., Muslims: $r(435) = .22, p = .001$; Arabs: $r(435) = .21, p = .001$). Overall, participants who exhibited more concern about appearing prejudiced reported less prejudiced attitudes and less intergroup anxiety. The MCPR restraint subscale did not correlate with any of the aforementioned measures ($ps > .10$). Because of these correlations, concern was included as a covariate in all subsequent analyses.

Demographic variables were assessed for correlations with the primary variables of interest. Controlling for these variables did not influence the direction or significance of the results. As such, these demographic variables were not controlled for in the reported analyses.

Convergent Validity. Partial correlations, controlling for concern, between the Intergroup Anxiety toward Muslims Scale, the General Intergroup Anxiety (Stephan & Stephan, 1985), the Feeling Thermometer Scale, the Beck Anxiety Inventory (Beck et al., 1998), and the Islamophobia Scale (Lee et al., 2009) were conducted to evaluate convergent validity (see Table 3). The IATMS full scale, as well as each of the subscales, were positively correlated with the GIA scale. That is, participants who reported more anxiety about interacting specifically with Muslims also reported more general anxiety about interacting with other out-group members.

The Beck Anxiety Inventory was positively correlated with the full scale IATMS, as well as the Future Interactions and Comfort subscales. Participants who indicated higher levels of

anxiety on the BAI exhibited higher scores on the IATMS full scale. Particularly, participants with higher anxiety levels reported less comfort in intergroup interactions with Muslims and higher levels of anxiety about future interactions with Muslims. However, the BAI was not significantly correlated with the Setting subscale of the IATMS. That is, there was no correlation between anxiety in specific settings with Muslims and the BAI. The BAI examines levels of anxiety people generally feel, whereas the IATMS Setting subscale identifies specific situations that may cause a person anxiety. The BAI is not location specific which may explain the non-significant correlation with the Setting subscale. Although the BAI was significantly associated with the IATMS ($r = .17, p < .01$), the strength of the correlation was less than the correlation between the IATMS and the GIA ($r = .64, p < .001$). Thus, the IATMS is not simply assessing general anxiety, but is measuring intergroup anxiety specifically.

Two items on the Feeling Thermometer Scale were used to assess convergent validity (e.g., Muslims and Arabs). Both items were negatively correlated with the IATMS full scale, as well as all three subscales. Namely, participants who rated Muslims or Arabs more positively on the feeling thermometer scale reported less intergroup anxiety toward Muslims. Of note, the strength of the correlations with the IATMS did not differ between the Muslim item and the Arab item ($r = -.61, p = .001$; $r = -.59, p = .001$, respectively), highlighting that these groups are viewed very similarly. The Islamophobia Scale also correlated positively with the full scale IATMS, as well as all three IATMS subscales. Participants who indicated higher levels of Islamophobia also experienced higher levels of intergroup anxiety toward Muslims.

Discriminant Validity. To assess discriminant validity, partial correlations, controlling for concern, were conducted between the IATMS and the additional items on the Feeling Thermometer (excluding the Muslims and Arabs items) (see Table 4). Overall, many of the

items correlated significantly with the IATMS full scale and subscales. However, the majority of these correlations were moderate or weak ($r_s = -.16 - -.52$). Several correlations were also non-significant. Stronger correlations were found with immigrants and the different racial/ethnic group items (e.g., Asians, Hispanics). Individuals may perceive Arabs and Muslims as immigrants; therefore, attitudes toward Muslims and Arabs may overlap with attitudes toward immigrants. It is also likely that individuals who experience higher intergroup anxiety or prejudice toward one racial or ethnic group may experience intergroup anxiety or prejudice with another ethnic group. That is, those who rate Muslims lower on the feeling thermometer may be more likely to rate other out-groups more negatively. Therefore, the moderate correlations between the IATMS and other racial or ethnic groups may be a side effect of general intergroup anxiety toward out-group members. Of note, however, the IATMS was most strongly correlated with the Muslim and Arab items ($r_s = -.61$ and $-.59$, respectively). This suggests that the IATMS is assessing intergroup anxiety toward Muslims and Arabs more than intergroup anxiety toward other groups. Overall, the weaker correlations between the IATMS and the other feeling thermometer items compared to the Muslim and Arab item demonstrate the scale's discriminant validity.

Additional Analyses

Partial correlations, controlling for concern, were conducted between the Family and Friend Attitudes Measure, the Personal Contact Inventory, and the IATMS to assess the relations between these measures (see Table 5). The Family and Friend Attitudes scale correlated negatively with the IATMS full scale and subscales. Participants who had family and friends that were less accepting and had less integration with out-group members, tended to have higher levels of intergroup anxiety toward Muslims. The Personal Contact Inventory correlated

negatively with the IATMS full scale and subscales, such that more reported contact with out-groups was associated with lower levels of intergroup anxiety toward Muslims.

Discussion

The purpose of this study was to develop an Intergroup Anxiety toward Muslims Scale. Based on an exploratory factor analysis, a 16-item scale with three subscales was created. The first factor seemed to represent anxiety about future interactions with Muslims; the second factor included items regarding comfort in interactions with Muslims; and the third factor included items about specific settings. Overall, the scale exhibited good psychometric properties. The full scale was highly internally reliable ($\alpha = .89$), as were each of the subscales (Future Interactions: $\alpha = .86$; Comfort: $\alpha = .84$; Setting: $\alpha = .80$). The subscales also correlated positively with one another ($r_s = .48 - .51$). However, the strength of the subscale correlations suggests that the subscales are assessing different aspects of intergroup anxiety. For instance, if the scales were strongly correlated it would be likely that they were assessing the same construct. However, because the correlations are moderate, it is likely that each subscale is measuring a different dimension of intergroup anxiety toward Muslims.

To assess convergent validity of the scale, the IATMS was correlated with the BAI, GIA, the Islamophobia scale, and the Muslims and Arab items on the feeling thermometer. The GIA and BAI are well established measures of intergroup anxiety and anxiety, respectively. Positive correlations with the IATMS and these measures indicate the scale is assessing anxiety. However, the stronger correlation between IATMS and GIA compared to the correlation between IATMS and BIA indicates that the scale is assessing anxiety related to intergroup interactions in particular.

The Islamophobia scale is a measure that assesses general attitudes toward Islam and Muslims. The IATMS strong positive correlation with the Islamophobia scale suggests the IATMS is a good measure of anxiety felt specifically with Muslims and a good predictor of prejudice toward Muslims. Moreover, the IATMS correlated strongly with both the GIA and the Islamophobia scale ($r = .64, p < .001$; $r = .57, p < .001$, respectively). However, the GIA and Islamophobia scale did not correlate with one another as strongly ($r = .45, p < .001$). The stronger correlation between the IATMS and the Islamophobia scale indicates the IATMS is a better predictor of prejudice toward Muslims than general intergroup anxiety.

Finally, the IATMS correlated most strongly with the Muslim and Arab items on the feeling thermometer scale. That is, those with higher levels of intergroup anxiety toward Muslims tended to rate Muslims and Arabs lower on the feeling thermometer. These strong negative correlations continue to validate that the IATMS is assessing anxiety toward Muslims. Taken together, the correlations with the BAI, GIA, Islamophobia scale and feeling thermometer items indicate that the IATMS has good convergent validity with measures that assess intergroup anxiety and prejudice toward Muslims.

To demonstrate discriminant validity, correlations between items on the Feeling Thermometer Scale that were not associated with Muslims or Arabs and the IATMS were conducted. Several of the feeling thermometer items (e.g., Republican Party, fraternities and sororities) were not significantly correlated with the IATMS. However, there were many items on the feeling thermometer (e.g., Immigrants, Jews, lawyers) that did significantly correlate with the IATMS. Although significant, many of these correlations were weak, especially in comparison to the Muslim and Arab items. There are two possible explanations for the significant correlations. First, the sample size was quite large which could have inflated the

significance levels. That is, with a large sample size, even weak relations often meet conventional levels of statistical significance (Field, 2013). Second, the IATMS likely overlaps partially with intergroup anxiety and prejudice toward other groups. Those who experience anxiety and prejudice toward Muslims are likely to have negative evaluations of other racial and religious out-groups (e.g., Allport, 1954). Overall, the weaker correlations between the IATMS and the other feeling thermometer items compared to the Muslim and Arab items demonstrate the discriminant validity of the scale.

Study 1 showed that the IATMS is a good measure of intergroup anxiety toward Muslims. That is, the scale showed good convergent validity with other measures of intergroup anxiety and attitudes toward Muslims, as well as discriminant validity. To expand on these findings, Study 2 was conducted to further validate that the IATMS in an independent sample.

Study 2

The purpose of this study was to further validate the Intergroup Anxiety toward Muslims Scale (IATMS). In Study 1, 16 items were found to reliably assess intergroup anxiety toward Muslims. The items from Study 1 were administered to a second group of participants in Study 2. Discriminant and convergent validity were assessed with different measures than those administered in Study 1. The Affect Misattribution Procedure (AMP; Payne, Cheng, Govorun, & Stewart, 2005), the Prejudiced Attitudes toward Arabs Scale (Bushman & Bonacci, 2004), the Feeling Thermometer, Social Interaction Anxiety Scale (Mattick & Clarke, 1998), and a Resource Allocation Task (adapted from Tajfel & Turner, 1986) were used to assess convergent validity. Scores toward non-Muslims on the AMP and the Feeling Thermometer, as well as responses to non-Islamic groups on the Resource Allocation Task, were used to demonstrate

discriminant validity. Cross validation between Study 1 and Study 2 was also conducted to assess the reliability of the Intergroup Anxiety toward Muslims Scale across groups.

Study 2 extended the findings of Study 1 by incorporating two indirect measures of attitudes and prejudice toward Muslims. First, the AMP is an implicit measure of attitudes toward target stimuli. That is, participants are not directly asked to report their attitudes toward a given target. Rather, through a computer task in which participants are primed with the target stimulus and then asked to categorize a novel stimulus (e.g., Chinese ideograph) as pleasant or unpleasant, participants' attitudes toward the target stimulus can be inferred (Payne, Cheng, Govorun, & Stewart, 2005). Second, the Resource Allocation Task is a measure of bias in which participants are asked to distribute funds to various campus organizations. The Allocation Task is an indirect measure of bias and discrimination, in that participants do not explicitly state their attitudes toward out-groups. Rather, how the participants distribute resources indicates their attitudes toward these groups. The inclusion of implicit and indirect measures in this study, such as the AMP and Resource Allocation Task, assessed attitudes that are not influenced by response bias. Fear of appearing prejudiced may cause participants to feel uncomfortable voicing negative attitudes toward Muslims. These measures were used to determine if the IATMS is associated with automatically activated attitudes toward Muslims. It was expected that those who score higher on the IATMS would exhibit more negative attitudes toward Muslims on the AMP and allocate fewer funds to a Muslim student association.

Method

Participants

There were 205 participants who completed Study 2. Three participants (1.4%) were excluded from the analyses due to inconsistent responding (e.g., participants who entered the

same number for each item throughout the entire survey). As in Study 1, students who identified as Muslim ($n = 6$, 2.8% of sample) were not included in the final data analysis. As such, 196 undergraduate students at West Virginia University (68.9% female; $M_{\text{age}} = 19.67$, $SD = 1.76$)¹ were used to assess the IATMS in Study 2. All participants were 18 years or older. The remaining participants' religious affiliation were as follows: 33.2% Protestant, 29.1% Catholic, 14.8% not religious, 4.6% Agnostic, 4.1% Atheist, 3.6% Jewish, 1% Hindu, 0.5% Buddhist, and 9.2% Other. Participants were recruited through the Psychology Department's online SONA system as well as through flyers posted around the WVU campus. Participants who had participated in Study 1 were not eligible to participate in Study 2. As such, participants in each study were different individuals. Students received extra credit in psychology courses for their participation.

Measures

Affective Misattribution Procedure (AMP; Payne, Cheng, Govorun, & Stewart, 2005). This computer task is an implicit measure of attitudes. That is, instead of directly asking participants to report their attitudes, which could be influenced by motivational factors, their responses are obtained behaviorally. The behavioral responses participants give are used to assess automatically activated attitudes toward a target object. In the AMP, participants are presented with a target stimulus (e.g., a picture of an infant or a spider) on a computer screen for 75ms. Then, participants are presented with a novel stimulus (e.g., a Chinese ideograph) for 100ms. Next, participants are asked to rate the novel stimulus as pleasant or unpleasant. The initial target stimulus is intended to elicit either a positive or negative response from the participant, whereas the novel stimulus is expected to elicit no emotional response. However, the initial (emotion eliciting) stimulus impacts participants' responses to the novel stimulus.

When preceded by a positive image, individuals tend to rate the novel stimulus as pleasant, whereas when preceded by a negative image, participants tend to rate the novel stimulus as unpleasant (Payne, Cheng, Govorun, & Stewart, 2005). The automatically activated attitude toward the initial stimulus influences the participant's rating of the novel stimulus.

The AMP has been used to assess various types of attitudes, such as political attitudes (Payne et al., 2005), moral judgment (Hofman & Baumert, 2010), attitudes toward drinking (Payne, Govorun, & Arbuckle, 2008), attitudes toward smoking (Payne, Clernon, & Dobbins, 2007), and racial attitudes (Payne et al., 2005). The AMP has strong internal consistency ($\alpha = .88$; Payne, Cheng, Govorun, & Stewart, 2005). Of particular note, participants are unable to control their responses or prevent the target stimulus from influencing their responses to the novel stimulus (Payne, Cheng, Govorun, & Stewart, 2005). Self-reported attempts to control responses are not related to actual responses on the AMP. Even when informed beforehand that the target stimulus may influence responses to the novel stimulus and instructed to prevent the target stimulus from affecting their responses, participants were unable to alter their responses (Payne et al., 2005). The AMP is ideal for the current study because it measures automatically activated attitudes toward a stimulus without the threat of participants responding in a socially desirable way.

In the current study, the AMP was used to assess attitudes toward Arab Muslims. Due to current events involving Arab Muslim organizations and countries, non-Muslim Westerners often think of Muslims as Arab, and vice versa (Ahmed, 2010; French, Franz, Phelan, & Blaine, 2012; Park, Felix, & Lee, 2007). Additionally, because there are no physical criteria that can be used to identify a person as Muslim, stereotyped images of Muslims (i.e., Arab Muslims) were used in the AMP (Ahluwalia & Pelletiere, 2010; Arab American Institute; Ballinger, 2011;

Joshi, 2006). Therefore, participants were presented with face primes that varied by race or ethnicity (i.e., eight Arab Muslims, eight White, eight Black, and eight Asian; see Appendix B for examples of stimuli). Half of the images were female faces and the other half were male faces. In addition to the facial primes, participants were presented with a neutral prime (i.e., gray square). The gray square was used as a control condition to compare against responses elicited by the different racial groups. Each prime was presented twice for a total of 80 trials. Each face or neutral prime was presented for 75ms followed by a unique novel stimulus (e.g., 1 of 80 different Chinese ideographs) for 100ms. Participants were asked to rate the novel, Chinese ideographs as pleasant or unpleasant. The proportion of pleasant responses to each target group (e.g., Arab Muslim, White, neutral) was calculated. Thus, higher numbers indicate more positive attitudes toward the target group. It was hypothesized that participants with higher levels of intergroup anxiety toward Muslims would rate those who appear Arab Muslim more negatively than other groups (e.g., Whites).

Resource Allocation (adapted from Tajfel & Turner, 1986). Participants were presented with a vignette informing them that they needed to allocate funds to various organizations on campus. The student organizations included a diverse range of programs, including the Muslim Student Association. Previous research has shown that when participants are presented with this task they often give more resources to groups they find more similar to themselves and prefer (e.g., Hertel & Kerr, 2001; Tajfel & Turner, 1986). Participant responses, thus, indicate levels of discrimination and bias. It was expected that those with higher levels of intergroup anxiety toward Muslims would allocate fewer funds to the Muslim Student Association.

Cultural Sensitivity Presentation Bias Scale (CSPBS; Lee et al., 2009). This 10-item scale was created to measure social desirability in cultural situations ($\alpha = .69$; Lee et al., 2009). An example item from the measure is “I am always sensitive to the needs of non-English speaking people.” Participants respond either “True” or “False” to each item. More responses of “True” on this measure indicate higher levels of presentation bias related to cultural sensitive. That is, individuals who score higher are attempting to appear particularly sensitive to the needs of culturally different out-group members. The CSPBS scale was included in the current study in order to control for individuals’ tendencies to respond in a non-prejudiced or egalitarian way to questions regarding attitudes toward culturally different out-group members. It was suspected that those who are especially biased toward appearing culturally sensitive would score lower on the Intergroup Anxiety toward Muslims Scale and the Feeling Thermometer. Thus, the CSPBS was included as a potential covariate in the primary analyses.

Intergroup Anxiety toward Muslims Scale (IATMS). A factor analysis conducted in Study 1 indicated good internal consistency with all 16 items ($\alpha = .89$), as well as three subscales: Future Interactions ($\alpha = .86$), Comfort ($\alpha = .84$), and Settings ($\alpha = .80$)². The Future Interactions subscale (4 items) included items about attitudes toward future interactions with Muslims (e.g., “I wouldn't consider myself a racist, but because I don't know how to act around Muslims I fear they may think I am racist”). The Comfort subscale (7 items) included items that noted comfort individuals experienced in interactions with Muslims (e.g., I could easily talk, one on one, with a Muslim at a party”). The Setting subscale (5 items) included items that identified specific locations people felt anxiety with Muslims (e.g., “I wouldn't feel comfortable sitting next to a Muslim on the bus”). The participants rated the items on a 1 (highly disagree) to 5

(highly agree) scale. Some items were reverse scored, so that higher scores indicate higher levels of intergroup anxiety toward Muslims.

Prejudiced Attitudes toward Arabs Scale (PATAS; Bushman & Bonacci, 2004).

This scale consists of eleven items that were modified from the Anti-Semitism Scale (Levinson & Sanford, 1944). Items chosen from the Anti-Semitism Scale were those that could generalize to other groups. Specifically, Bushman and Bonacci (2004) modified the items to reflect stereotypes and prejudice toward Arabs (e.g., a major fault of Arab-Americans is their conceit, overbearing pride, and their idea that they are a chosen ethnic group). Participants indicate the extent to which they agree with each item on a scale from 1 (strongly disagree) to 10 (strongly agree). The PATAS has high internal consistency ($\alpha = .93$; Bushman & Bonacci, 2004).

Although some Arabs are not Islamic, they are often assumed to be Muslim, and there is considerable overlap in the stereotypes associated with each group (Ahluwalia & Pelletiere, 2010; Arab American Institute; Ballinger, 2011; Joshi, 2006). Studies have shown that individuals may misattribute their anxiety toward an out-group as prejudice toward the group (Britt et al., 1996; Stephan et al., 2002). The PATAS is included in the study to examine the correlation between prejudice toward Arabs and intergroup anxiety toward Muslims. It was hypothesized that individuals with higher levels of prejudice toward Arabs would also indicate higher levels of intergroup anxiety toward Muslims.

Social Interaction Anxiety Scale (SIAS; Mattick & Clark, 1998). The scale was created to assess anxiety levels elicited in social interactions. The scale consists of 19 items (e.g., "I have difficulty making eye contact with others"). Participants were told to rate how much each item describes them on a five point scale from 0 (*Not at All*) to 4 (*Extremely*). The measure showed good internal consistency with a large sample including community members,

undergraduates, and participants diagnosed with anxiety disorders ($\alpha = .94$; Mattick & Clark, 1998). Test-retest reliability was high after 12 weeks ($r = .92$). The SIAS also correlated with similar measures assessing anxiety such as the Social Avoidance and Distress Scale ($r = .74$) as well as the Fear of Negative Evaluation Scale ($r = .66$). The SIAS was included in this study to assess convergent validity. It was expected that higher scores on the SIAS would correlate with higher scores on the IATMS.

Feeling Thermometer Scale (FT; Converse & Presser, 1986). The same items from Study 1 were used to assess attitudes toward different groups and to estimate prejudice levels.

Family and Friend Attitudes Measure. The same items from Study 1 were used to assess family and peer attitudes.

Personal Contact Inventory. The same items were used, as in Study 1, to assess personal contact with out-group members.

Demographics. Participants were asked to report their age, sex, religious affiliation, political identification, sexual orientation, racial composition of high school and neighborhood, income, highest level of education attained, major, and parental income.

Procedure

Participants completed the study in groups of up to five. However, each participant was seated at a private workstation, and participants were not able to interact with one another. All sessions were completed in research laboratory space in the Life Science Building. Before beginning the study, participants completed a paper consent form. Participants first completed the Affective Misattribution Procedure. Participants were told that the purpose of the computer task was to assess how people make simple but quick judgments (i.e., classifying Chinese ideographs as pleasant or unpleasant). They were told that the faces or gray slides preceding the

Chinese ideographs served as warning signals for the presentation of a new Chinese ideographs and that they should avoid using the faces or neutral slides to influence their responses to the Chinese ideographs. After the AMP, participants completed the questionnaires in the following order: the Intergroup Anxiety toward Muslims Scale, Prejudiced Attitudes toward Arabs Scale, Cultural Sensitivity Presentation Bias Scale, the Social Interaction Anxiety Scale, the Feeling Thermometer, the Family and Friend Attitudes Measure, the Personal Contact Inventory, and Demographic items (see Appendix A for all measures). Once participants completed the computer measures, they completed the Resource Allocation Task on paper. Afterward, participants were thanked for their participation, as well as given extra credit.

Results

The data were examined for missing data and normality. For missing data, statistical tests excluded cases pairwise. For each measure missing data ranged from 0 - .5%, except for the Resource Allocation Task Items which ranged from 11.7% - 13.8% missing data. The Prejudiced Attitudes toward Arabs Scale ($M = 3.57$, $SD = 1.83$, skew = .75, kurtosis = .37), the Social Interaction Anxiety Scale ($M = 1.98$, $SD = .69$, skew = .82, kurtosis = -.01), the Future Interactions subscale ($M = 3.92$, $SD = 2.24$, skew = .62, kurtosis = -.37), and the Setting subscale ($M = 2.75$, $SD = 1.73$, skew = 1.23, kurtosis = 1.66) were not normally distributed. As such, these scales were log transformed to normalize the distribution before conducting the primary analyses (PATAS: $M = .49$, $SD = .24$, skew = -.32, kurtosis = -.70; SIAS: $M = .27$, $SD = .15$, skew = .20, kurtosis = -.67; Future Interactions: $M = 1.90$, $SD = .57$, skew = .11, kurtosis = -.86; Setting: $M = .31$, $SD = .27$, skew = .08, kurtosis = -1.10). All other measures met assumptions

of normality. Mean, standard deviation, and Cronbach's alpha for each measure are reported in Table 6.

Measure Validity

Covariates. The Cultural Sensitivity Presentation Bias Scale (CSBPS; Lee et al., 2009) was included as a potential covariate. It was expected that those attempting to appear less biased toward culturally diverse groups would score lower on the IATMS; however, their score may be due to their desire to appear culturally sensitive to out-groups. The CSBPS was significantly correlated with responses on the IATMS full scale ($r(196) = -.40, p = .001$), the Future Interactions subscale ($r(196) = -.32, p = .001$), the Comfort subscale ($r(196) = -.42, p = .001$), and the Setting subscale ($r(196) = -.30, p = .001$). The CSBPS was also significantly associated with the PATAS ($r(196) = -.37, p = .001$), the Family and Friend measure ($r(196) = -.32, p = .001$), and the Feeling Thermometer Scale items (e.g., Muslims: $r(196) = -.50, p = .001$; Arabs: $r(196) = -.51, p = .001$). Participants who were higher in cultural sensitivity presentation bias tended to report less intergroup anxiety and prejudice toward Muslims and Arabs. Because of these correlations, the CSBPS was included as a covariate in all subsequent analyses.

Demographic variables were assessed for correlations with the primary variables of interest. Controlling for these variables did not influence the direction or significance of the results. As such, these demographic variables were not controlled for in the reported analyses.

Convergent Validity. Partial correlations, controlling for CSBPS, were calculated among the Intergroup Anxiety toward Muslim Scale, the Prejudiced Attitudes toward Arabs Scale, attitudes toward Muslims based on the AMP scores, the Resource Allocation measure, the items related to Muslims and Arabs on the Feeling Thermometer, and the Social Interaction Anxiety Scale to evaluate convergent validity (see Table 7).

The IATMS full scale, as well as each of the subscales, were positively correlated with the Prejudiced Attitudes toward Arabs measure. That is, participants who reported more prejudice toward Arabs indicated more anxiety about interacting with Muslims. This result aligns with previous research on misidentifying beliefs about Muslims as attitudes toward Arabs in general (Ahluwalia & Pelletiere, 2010; Arab American Institute; Ballinger, 2011; Joshi, 2006). Two items on the Feeling Thermometer Scale were used to assess convergent validity (e.g., Muslims and Arabs). Both items were negatively correlated with the IATMS full scale, as well as with each of the subscales. Namely, participants who rated Muslims or Arabs more positively on the feeling thermometer scale reported less intergroup anxiety toward Muslims. Again, both items correlating with the IATMS full scale (Muslims: $r = -.58, p = .001$; Arabs: $r = -.47, p = .001$) indicates the similarity between these groups. Furthermore, the IATMS full scale and subscales all negatively correlated with AMP scores for Arabic faces. That is, those who indicated more intergroup anxiety toward Muslims were more likely to rate the Chinese ideographs as unpleasant after seeing Arabic faces during the AMP task. The PATAS, FT items (e.g., Muslim, Arab), and the AMP scores all indicate that those with higher levels of intergroup anxiety toward Muslims indicate more negative attitudes toward Arabs and Muslims.

The Social Interaction Anxiety Sensitivity scale correlated positively with the full scale IATMS, as well as the Future and Comfort subscales. Generally, those with more social anxiety experienced higher levels of intergroup anxiety toward Muslims. The SIAS did not correlate with the Setting subscale ($p > .10$). The Setting subscale consists of specific situations in which one might interact with a Muslim, whereas the SIAS scale assesses general social anxiety. Thus, the specificity of the Setting subscale may explain the lack of a significant association with the SIAS scale.

The IATMS full scale and subscales did not correlate with the Muslim Student Association item on the Resource Allocation Task ($ps > .20$). That is, people who experienced higher levels of intergroup anxiety toward Muslims did not allocate more or less funding to the Muslim Student Association. The non-significant results could be due to the less socially desirable nature of overt discriminatory practices (Pearson, Dovidio, & Gaertner, 2009). Therefore, although individuals may experience anxiety toward these groups, they may take precautions to behave in a non-discriminatory manner.

Discriminant Validity. To assess discriminant validity, partial correlations, controlling for CSPBS, were conducted between the IATMS and the additional items on the Feeling Thermometer (excluding the Muslims and Arabs items), attitudes toward the non-Arab groups in the AMP, and monetary allotments given to non-Islamic groups on the Resource Allocation Task. Overall, the IATMS full scale and subscales correlated weakly or non-significantly with the FT items (see Table 8). Of primary interest, the IATMS did not correlate as strongly with any of the other FT items ($r_s = -.31 - .17$) as compared to the Muslim ($r = -.58$) and Arab ($r = -.47$) items. Thus, demonstrating discriminant validity. As in Study 1, the significant correlations between the IATMS and some of the other FT items are not necessarily unexpected. For example, the immigrants item negatively correlated with the IATMS full scale ($r = -.14$), as in Study 1. Individuals may perceive Arabs and Muslims as immigrants; therefore, attitudes toward Muslims and Arabs may overlap with attitudes toward immigrants. Additionally, individuals who are prejudiced toward one group (e.g., Muslims or Arabs) tend to be prejudiced toward other groups (e.g., African Americans, Hispanics/Latinos) (Allport, 1954). Thus, some of the correlations between the IATMS and other FT items may stem from a general tendency to be prejudiced toward out-groups and higher in intergroup anxiety toward these groups. Overall, the

majority of the items on the feeling thermometer did not correlate with the IATMS full scale or the IATMS subscales.

Similar to the feeling thermometer items, some of the AMP items did not correlate with the IATMS (see Table 9). Specifically, attitudes toward Caucasians and Asians were not correlated with the IATMS full scale or the subscales ($ps > .09$). However, the IATMS did correlate with attitudes toward African Americans ($r = -.18, p = .01$). As noted with the feeling thermometer, individuals who experience prejudicial attitudes toward one group, often experience similar attitudes toward other out-groups. Also, the correlation with African Americans was weaker than the correlation between the IATMS and the Arab score on the AMP. Overall, the weak or non-significant relations between the IATMS and the additional items on the Feeling Thermometer Scale and AMP indicate that the IATMS has good discriminant validity.

Partial correlations were conducted with the IATMS and the Resource Allocation items (see Table 10). The IATMS correlated negatively with the Queer Student Union and positively with the Veterans of WVU. The negative correlation with the Queer Student Union and the IATMS may indicate general negative attitudes toward out-group members. However, the IATMS did not significantly correlate with other out-groups organizations (e.g., International Student Organization). The positive correlation with the Veterans of WVU organization may be due to support of U.S. military action in Islamic nations. Such that, those with more intergroup anxiety toward Muslims may approve of military interventions in Islamic nations. Overall, these correlations were unexpected as they should not correlate with intergroup anxiety experienced with Muslims. As such, the RA results were found to be inconclusive and were not used to assess discriminant validity.

Cross-Group Validation

An independent samples *t*-test was completed to compare the scores of Intergroup Anxiety toward Muslims Scale in Study 1 with Study 2. On average, participants in Study 1 ($M = 3.46$, $SD = 1.54$) did not have significantly different scores than those in Study 2 ($M = 3.56$, $SD = 1.70$), $t(680) = -.80$, $p = .42$. *T*-tests were conducted with each of the subscales. Again, all were found to be non-significant ($ps > .26$). These results indicate that the IATMS is reliable across two different groups of students and with two different data collection methods (i.e., online and in lab, respectively).

Additional Analyses

Partial correlations, controlling for CSPBS, were conducted between the Family and Friend Attitudes Measure, the Personal Contact Inventory, and the IATMS to assess the relation between these measures (see Table 9). The Family and Friend Attitudes measure correlated negatively with the IATMS full scale and subscales. Participants who had family and friends who were less accepting and had less integration with out-group members, tended to have higher levels of intergroup anxiety toward Muslims. The Personal Contact Inventory correlated negatively with the IATMS full scale and subscales, such that more reported contact with out-groups was associated with lower levels of intergroup anxiety toward Muslims.

Discussion

Study 2 was intended to further validate the Intergroup Anxiety toward Muslims Scale. Similar to Study 1, the IATMS showed good psychometric properties. The overall scale was highly reliable ($\alpha = .90$), as were each of the subscales (Future Interactions: $\alpha = .85$; Comfort: $\alpha = .84$; Setting: $\alpha = .79$). Again, the subscales correlated positively with one another. However,

the correlations were moderately correlated ($r_s = .60 - .65$). These moderate correlations indicate that although the subscales are similar, they are assessing different aspects of anxiety.

To assess convergent validity, correlations between the IATMS and several different measures (i.e., the PATAS, the Arabic AMP item, and the SIAS), as well as the Muslim and Arab items on the feeling thermometer again, were examined. The PATAS is a measure of prejudiced attitudes toward Arabs. Due to the current media attention on many Arab Muslim countries, individuals often think of Muslims as Arab. Due to this belief, individuals may hold similar attitudes toward both Muslims and Arabs, as confirmed by the findings in Study 1. As expected, those with more negative attitudes toward Arabs expressed higher levels of intergroup anxiety toward Muslims. Additionally, the Arab score on the AMP was negatively correlated with the IATMS full scale and subscales. That is, participants who indicated more intergroup anxiety with Muslims often labeled Chinese ideographs that followed images of Arabs as unpleasant. Participants' scores on the feeling thermometer items (e.g., Muslim and Arab), correlated negatively with the IATMS. Such that, participants with higher levels of intergroup anxiety toward Muslims reported more negative attitudes toward Arabs and Muslims. The associations between the IATMS and the PATAS, the Arab and Muslim items on the feeling thermometer, and the Arab score on the AMP indicate that intergroup anxiety toward Muslims is related to attitudes toward Arabs, which are linked to attitudes toward Muslims in general. Overall, these findings suggest that the IATMS has good convergent validity with measures that relate to attitudes toward Muslims.

The IATMS full scale, future interaction subscale, and comfort subscale correlated positively with the Social Interaction Anxiety Scale. The SIAS measures general anxiety in social interactions. Individuals who reported higher scores of intergroup anxiety toward

Muslims were more likely to experience increased levels of anxiety in general social interactions. The correlations between this measure and the IATMS indicate that those with higher levels of intergroup anxiety toward Muslims, do indeed, experience increased levels of social anxiety. However, the SIAS did not correlate with the Setting subscale. The SIAS focuses on cognitions individuals may experience when in an anxiety provoking social situation. The Setting subscale focuses on specific locations where individuals may experience anxiety about interacting with a Muslim. Therefore, the Setting subscale may not be measuring the same aspects of anxiety as the SIAS, which may account for the non-significant results.

The Resource Allocation Task item, the Muslim Student Association, did not correlate with the IATMS full scale or subscales. It was hypothesized that those who reported higher levels of intergroup anxiety toward Muslims would allocate fewer funds to this student organization. However, there was no correlation. This result could be due to participants attempting to behave in a socially appropriate manner, as more overt forms of discrimination are viewed negatively in U.S. culture (Pearson, Dovidio, & Gaertner, 2009).

To demonstrate discriminant validity, correlations between items on the Feeling Thermometer Scale, AMP, and Resource Allocation Task that were not associated with Muslims or Arabs were examined. The IATMS correlated with many items on the feeling thermometer. However, although significant, many of the correlations indicated a weak relation. Moreover, the correlations between the IATMS full scale was strongest with the Muslim ($r = -.58$) and Arab ($r = -.47$) items. This indicates, that the IATMS is most related to attitudes toward Arabs and Muslims. The IATMS did not correlate with the AMP neutral, Asian, or Caucasian images, indicating good discriminant validity. The IATMS did weakly correlate with the AMP African American images ($r = -.17$). As noted in Study 1, the associations with the FT and AMP items

unrelated to Muslims or Arabs are most likely a consequence of general intergroup anxiety and dislike of out-group members. Such that, those who experience anxiety and prejudice toward Muslims are likely to have negative evaluations of other racial and religious out-groups (Allport, 1954). Overall, these results show the IATMS has good discriminant validity.

The IATMS did not correlate with any additional items on the Resource Allocation Task, except for the Queer Student Union ($r = -.23$) and Veterans of WVU ($r = .18$). That is, participants higher in intergroup anxiety toward Muslims allocated more funds to the Veterans of WVU and fewer funds to the Queer Student Union. In the past 25 years, the United States has placed military troops in several Arabic countries that are predominantly Islamic (e.g., Iraq and Afghanistan). Therefore, participants who experience more intergroup anxiety toward Muslims may be more likely to support U.S. troops and related organizations that may have had direct contact with Muslims. In regards to the Queer Student Union, as noted before, those who experience anxiety with one out-group may experience anxiety with others. Therefore, those who allocate fewer funds to the Queer Student Union were more likely to report higher levels of intergroup anxiety toward Muslims. However, there were not significant correlations between the IATMS and other out-group organizations (e.g., Hip-hop Club, International Student Organization). It is unclear what might explain this difference. It is possible that participants may have felt that they needed to allocate funding to all 20 student organizations; a visual inspection of the data showed that the majority of participants allotted at least some funding to all organizations. As such, the funds were distributed in small amounts, reducing variability. The mean percentage range of funds allotted to each organization was small (Hip Hop Club: $M = 3.45$; Veterans of WVU: $M = 8.58$). Due to these inconsistent correlations, the results from the

Resource Allocation Task were inconclusive and did not demonstrate discriminant validity with the IATMS.

Finally, an independent *t*-test was conducted comparing the IATMS scores from participants in Study 1 to those in Study 2. The results indicated no differences between mean scores of the IATMS full scale or subscales. This further validates the IATMS as a reliable measure of intergroup anxiety toward Muslims. Also, data collection was completed in two different manners. Study 1 was conducted with the use of the online SONA system; participants were able to complete the measures in their homes. Study 2 was conducted in the lab; participants completed measures on a lab computer with a researcher present. As no differences in scores were found between participants, the Intergroup Anxiety toward Muslims Scale is reliable across settings.

General Discussion

The purpose of these studies was to create a reliable and valid measure that assesses intergroup anxiety toward Muslims. Previous measures of intergroup anxiety are available, but they are not specific to this group. As more individuals from Islamic countries immigrate to the United States and Western European countries, increased interaction between Muslims and non-Muslims can be expected. Due to hostile relations between these nations and Muslim extremists, it is important to further understand intergroup interactions with Muslims, and the anxiety that can result from it. As such, the current scale was created and tested for discriminant and convergent validity, as well as reliability, in two independent samples.

The primary goal of the first study was to create the Intergroup Anxiety toward Muslims Scale (IATMS). Initially, 76 items were developed by the researcher as potential measure items. This list of items was cut down to 38 based on evaluations by a focus group of undergraduate

students, graduate students, and faculty members. After collecting participants' responses to all 38 items in Study 1, an exploratory factor analysis indicated a three factor solution, with 16 items that uniquely loaded on one of the three factors (i.e., Future Interactions, Comfort, and Settings). The full scale and subscales were highly reliable in both studies.

Across both studies, convergent validity was assessed by examining whether the Intergroup Anxiety toward Muslims Scale correlated with measures of anxiety and prejudice toward Muslims, as well as Arabs, a group often confused with Muslims. Overall, the IATMS was positively associated with several forms of anxiety; the measures used included the Beck Anxiety Inventory, the Social Interaction Anxiety Scale, and the General Intergroup Anxiety measure. Importantly though, the IATMS was most strongly associated with the General Intergroup Anxiety measure as compared to the Social Interaction Anxiety Scale, and the Beck Anxiety Inventory. Thus, the IATMS was found to be a good assessment of intergroup anxiety specifically.

The IATMS also correlated with several measures of attitudes toward Muslims and Arabs (i.e., the Islamophobia Scale, the feeling thermometer items, the AMP score for Arab Muslims, and the Prejudiced Attitudes toward Arabs Scale). Across all measures, individuals who reported higher levels of intergroup anxiety toward Muslims, also reported more prejudice toward Muslims and Arabs. These findings are important as they demonstrate that the IATMS reliably predicts prejudice toward Muslims. Conceptually, intergroup anxiety is a key construct in determining prejudice and intergroup contact (Turner, Hewstone, Voci, & Vonofakou, 2008; Voci & Hewstone, 2003). Furthermore, this association was found with both explicit, self-report measures and an implicit measure (i.e., the AMP). The use of an implicit measure allows for the assessment of attitudes without the influence of participants responding in a socially desirable

way. The significant correlation between the IATMS and attitudes toward Arab Muslims on the AMP, highlights the utility of the IATMS to predict not only explicit, but also implicit bias against Arab Muslims.

As an aside, the results from both studies also demonstrate the similarity in attitudes toward Muslims and Arabs. The consistency in findings across measures indicates that beliefs and attitudes toward Muslims often overlap with attitudes toward Arabs in this USA sample of undergraduates. Moreover, this overlap was found with both explicit and implicit measures. These findings are not surprising as previous research has found similar overlap in attitudes between Muslims and Arabs (Ahluwalia & Pelletiere, 2010; Arab American Institute; Ballinger, 2011; Joshi, 2006). However, the results highlight a possible future area of research and education to better distinguish these groups and overcome misconceptions.

Also of note, the IATMS was more strongly associated with attitudes toward Muslims than the other assessments of intergroup or social anxiety. As such, the IATMS was a better predictor of prejudice toward Muslims than the General Intergroup Anxiety measure. This highlights the importance of developing an intergroup anxiety measure for this specific group. General measures of intergroup anxiety may not have the precision or specificity to assess anxiety toward Muslims. The current gold standard for assessing intergroup anxiety is the General Intergroup Anxiety measure (Stephan & Stephan, 1985). However, this measure only assesses emotions elicited when thinking of an interaction and does not identify a specific out-group. As such, it is important to create a measure that is specific to anxiety individuals may experience with Muslims.

The Resource Allocation Task was used in Study 2 to assess bias and discrimination toward a Muslim Student Association. However, this resource allocation item did not correlate

with the IATMS. Students may have been attempting to respond in a socially desirable way, by providing similar levels of funding across organizations. However, apart from the resource allocation task, evidence of convergent validity was very consistent. Thus, taken together, the Intergroup Anxiety toward Muslims Scale exhibited strong convergent validity across both studies.

To assess discriminant validity, correlations between the IATMS and items that were not related to Muslims or Arabs on the Feeling Thermometer Scale, the Affect Misattribution Procedure, and the Resource Allocation Task were examined. The Feeling Thermometer and AMP indicated that the IATMS showed adequate discriminant validity. That is, the IATMS was not significantly correlated, or only weakly correlated, with feeling thermometer items that should be unrelated to attitudes toward Muslims or Arabs. There were some moderate correlations between the IATMS and feeling thermometer items that were racially or religiously oriented. It is likely that these associations were found because people who experience prejudice toward one out-group often experience prejudice toward other out-group members (Allport, 1954). However, the IATMS correlated most strongly with the Arab and Muslim items on the feeling thermometer, as compared to all other items, in both studies. Similar results were found with the AMP items. That is, there was a weak correlation between the IATMS and attitudes toward African Americans. Similar to the feeling thermometer, this result is likely due to attitudes that generalize across groups. Again, the IATMS correlated most strongly with attitudes toward Arab Muslims.

The results from the Resource Allocation Scale were inconclusive (i.e., there was no clear pattern of results between the items and the IATMS). This may have been due to the large number of items on the measure. That is, participants were asked to administer a percentage of

funding to 20 different student organizations. Due to the large number of organizations and low amount of funding, many students applied similar levels of funding to each student organization. Participants may not have completed such a task before, and may not have understood how to divide the funding among the different student organizations. Students may have felt they needed to allocate funding to each organization.

In addition to assessing convergent and discriminant validity, the IATMS scores were compared between the two study samples. Overall, the two groups did not differ in their levels of intergroup anxiety toward Muslims, which indicates that the IATMS assessed the same aspects of intergroup anxiety over the two time points and across two different groups of participants. In other words, the IATMS seems to be measuring the same construct. In the current studies, two different college samples from the same university were recruited, so similar levels of intergroup anxiety across the groups would be expected, which was found. This comparison also demonstrated that the IATMS could be reliably administered through different methods. Participants in the Study 1 completed the measure online through SONA, whereas the participants in Study 2 completed the measure in the lab. These results showed that the IATMS was reliable across groups recruited from the same population, time, and means of administration.

Limitations and Future Directions

There are some limitations to the current studies. First, participants were all college students. As such, the unique university environment could influence participant responses and limit variability in the data. Namely, participants may have had more exposure to out-group members than those in a community sample. Furthermore, students may have discussed issues

related to prejudice and anxiety in a variety of classes. Exposure to these different groups, as well as class discussions, may reduce prejudice and anxiety toward out-group members. With future research, it is important to test the IATMS on a community sample to determine if the scale is generalizable to other groups.

Similarly, the majority of the participants in Study 1 and Study 2 were female. As such, there may be a bias in responding that may be different in a more heterogeneous sample. Future research should attempt to include more males to confirm that the IATMS is a good assessment of intergroup anxiety toward Muslims in males.

Additionally, there were not enough Muslim participants in the sample to compare their scores to the scores of the non-Muslim participants. Administering the IATMS to a group of Muslims would help determine if the IATMS is truly assessing anxiety toward this group. That is, Muslim participants would be expected to have lower levels of intergroup anxiety toward Muslims than a sample of non-Muslim participants. Comparing the scores between the two groups would further validate that the measure is assessing anxiety elicited in interactions with Muslims.

The results from the Resource Allocation Task in Study 2 were inconclusive. Specifically, there were no correlations among the expected items (i.e., Muslim Student Association) and weak associations with items that were unrelated to attitudes toward Muslims (i.e., Queer Student Union). As such, the current studies did not demonstrate the ability of the IATMS to predict discriminatory behavior (e.g., allotting less money to an Islamic group). Thus, this is a weakness of the study because it cannot be determined if explicit discriminatory behaviors occur with individuals experiencing intergroup anxiety toward Muslims. Future

studies should reduce the number of student organizations used in this measure, or use different behavioral measures.

Finally, a confirmatory factor analysis is needed to ensure that the 16 items from Study 1 are the best predictors of intergroup anxiety toward Muslims and to confirm the three factor solution. In addition to the confirmatory factor analysis, more measures of discriminant validity should be included. As anxiety and depression are often related, it may be good to assess the relation between the IATMS and a depression measure. Another behavioral task could be implemented to assess how well the IATMS correlates with overt behaviors toward Muslims. Additionally, it would be beneficial to include additional measures of attitudes toward Muslims. Also, test-retest reliability should be assessed. Instead of comparing two different samples, a single group of participants should complete the IATMS at two different times to ensure stability in scores.

Conclusion

Overall, the Intergroup Anxiety toward Muslims Scale that was created has good psychometric properties. The results indicate that this measure is a better assessment of intergroup anxiety toward Muslims than current measures of intergroup anxiety. Furthermore, the strong associations between the IATMS and the measures of attitudes toward Muslims ensure that the scale is measuring anxiety toward Muslims. This research adds to the literature by providing a measure that adequately assesses the anxiety a non-Muslim experiences when interacting or thinking of interacting with a Muslim individual. However, future work still needs to be done to assess the validity and reliability of this measure across groups.

References

- A Nation of Immigrants | Pew Hispanic Center. (n.d.). *Pew Hispanic Center - Chronicling Latinos Diverse Experiences in a Changing America*. Retrieved March 15, 2013, from <http://www.pewhispanic.org/2013/01/29/a-nation-of-immigrants/>
- Ahluwalia, M. K., & Pelletiere, L. (2010). Sikh men post-9/11: Misidentification, discrimination, and coping. *Asian American Journal of Psychology, 1*(4), 303–314. doi:10.1037/a0022156
- Ahmed, A. M. (2010). Muslim discrimination : Evidence from two lost-letter experiments. *Journal of Applied Social Psychology, 40*(4), 888–898.
- Allen, C., & Nielsen, J. (2002). *Summary Report on Islamophobia in the EU after 11 September 2001* (pp. 1–62). Vienna.
- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, Mass: Addison-Wesley.
- Amodio, D., & Hamilton, H. (2012). Intergroup anxiety effects on implicit racial evaluation and stereotyping. *Emotion, 12*, 1 - 8.
- Ballinger, D. A. (2013). “So, you’re a Muslim? (not that there's anything wrong with that)”. *Journal of Physical Education, Recreation & Dance, (March)*, 37–41.
- Beck, A T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical psychology, 56*(6), 893–7. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/3204199>
- Bleich, E. (2011). What is Islamophobia and how much is there? Theorizing and measuring an emerging comparative concept. *American Behavioral Scientist, 55*(12), 1581-1600.
- Binder, J., Zagefka, H., Brown, R., Funke, F., Kessler, T., Mummendey, A., Maquil, A., et al. (2009). Does contact reduce prejudice or does prejudice reduce contact? A longitudinal test

- of the contact hypothesis among majority and minority groups in three European countries. *Journal of Personality and Social Psychology*, 96(4), 843–56. doi:10.1037/a0013470
- Britt, T., Boniecki, K., Vescio, T., Biernat, M., & Brown, L. (1996). Intergroup anxiety: A person X situation approach. *Personality and Social Psychology Bulletin*, 22, 1177-1188.
- Bushman, B. J., & Bonacci, A. M. (2004). You've got mail : Using e-mail to examine the effect of prejudiced attitudes on discrimination against Arabs q. *Journal of Experimental Social Psychology*, 40, 753–759. doi:10.1016/j.jesp.2004.02.001
- Cagle, A., Cox, L., Luoma, K., & Zaphiris, A. (n.d.). Content analysis of the portrayal of Muslims in American media. *Human Communication*, 14(1), 1-16.
- Chandra, S. (1967). Stereotypes of university students toward different ethnic groups. *The Journal of Social Psychology*, 71(1), 87–94. doi:10.1080/00224545.1967.9919769
- Choi, Y., & Lahey, B. B. (2006). Testing the model minority stereotype: Youth behaviors across racial and ethnic groups. *The Social Service Review*, 80(3), 419–452. doi:10.1086/505288
- Converse, J. M., & Presser, S. (1986). *Survey questions: Handcrafting the standardized questionnaire* (Vol. 63). Sage.
- Corenblum, B., & Stephan, W. (2001). White fears and native apprehensions: An integrated threat theory approach to intergroup attitudes. *Canadian Journal of Behavioral Science*, 33(4), 251-268.
- Council on American-Islamic Relations. (2007). *The Status of Muslim Civil Rights in the United States*.
- Dasgupta, N., & Greenwald, A. G. (2001). On the malleability of automatic attitudes : Combating automatic prejudice with images of admired and disliked individuals. *Journal of Personality and Social Psychology*, 81(5), 800–814.

- Dunton, B. C., & Fazio, R. H. (1997). An individual difference measure of motivation to control prejudiced reactions. *Personality and Social Psychology Bulletin*, *23*, 316-326.
- Eack, S. M., Singer, J. B., & Greeno, C. G. (2008). Screening for anxiety and depression in community mental health: the beck anxiety and depression inventories. *Community Mental Health Journal*, *44*(6), 465–74. doi:10.1007/s10597-008-9150-y
- Esses, V. M., & Zanna, M. P. (1995). Mood and the expression of ethnic stereotypes. *Journal of Personality and Social Psychology*, *69*(6), 1052–1068. doi:10.1037//0022-3514.69.6.1052
- Fargues, P. (2008). Emerging Demographic Patterns across the Mediterranean and their Implications for Migration through 2030. *Transatlantic Council on Migration*, (pp. 1–29).
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage.
- Finchilescu, G. (2010). Intergroup anxiety in interracial interaction: The role of prejudice and metastereotypes. *Journal of Social Issues*, *66*(2), 334–351. doi:10.1111/j.1540-4560.2010.01648.x
- French, A. R., Franz, T. M., Laura, P., & Blaine, B. E. (2012). Reducing Muslim / Arab Stereotypes Through Evaluative Conditioning. *The Journal of Social Psychology*, *153*(1), 6–9.
- Gawronski, B., Peters, K. R., Brochu, P. M., & Strack, F. (2008). Understanding the relations between different forms of racial prejudice: a cognitive consistency perspective. *Personality & Social Psychology Bulletin*, *34*(5), 648–65. doi:10.1177/0146167207313729
- Greenland, K., Xenias, D., & Maio, G. (2012). Intergroup anxiety from the self and other: Evidence from self-report, physiological effects, and real interactions. *European Journal of Social Psychology*, *42*, 150-163

- Hertel, G., & Kerr, N. L. (2001). Priming in-group favoritism: The impact of normative scripts in the minimal group paradigm. *Journal of Experimental Social Psychology, 37*(4), 316–324. doi:10.1006/jesp.2000.1447
- Hofmann, W., & Baumert, A. (2010). Immediate affect as a basis for intuitive moral judgment: An adaptation of the affect misattribution procedure. *Cognition & Emotion, 24*(3), 522–535. doi:10.1080/02699930902847193
- Ickes, W. (1984). Compositions in black and white: Determinants of interaction in interracial dyads. *Journal of Personality and Social Psychology, 47*(2), 330–341. doi:10.1037//0022-3514.47.2.330
- Islam, M. R., & Hewstone, M. (1993). Dimensions of contact as predictors of intergroup anxiety, perceived out-group variability, and out-group attitude: An integrative model. *Personality and Social Psychology Bulletin, 19*(6), 700-710.
- Jasinskaja-Lahti, I., Mahonen, T., & Liebkind, K. (2011). Ingroup norms, intergroup contact and intergroup anxiety as predictors of the outgroup attitudes of majority and minority youth. *International Journal of Intercultural Relations, 35*, 346-355.
- Joshi, K. Y. (2006). The racialization of Hinduism, Islam, and Sikhism in the United States. *Equity & Excellence in Education, 39*(3), 211-226.
- Kamalipour, Y. (1995). *The U.S. media and the Middle East: image and perception*. Westport: Greenwood Press.
- Lee, S. a., Gibbons, J. a., Thompson, J. M., & Timani, H. S. (2009). The Islamophobia Scale: instrument development and initial validation. *International Journal for the Psychology of Religion, 19*(2), 92–105. doi:10.1080/10508610802711137

- Levin, S., Van Laar, C., & Foote, W. (2006). Ethnic Segregation and Perceived Discrimination in College: Mutual Influences and Effects on Social and Academic Life¹. *Journal of Applied Social Psychology, 36*(6), 1471-1501.
- Levinson, D., & Sanford, R. N. (1944). A scale of the measurement of anti-Semitism. *The Journal of Psychology: Interdisciplinary and Applied, 17*(2), 339–370.
- Mack, D., Johnson, C. D., Green, T., Parisi, A., & Thomas, K. (2002). Motivation to control prejudice as a mediator of identity and affirmative action attitudes'. *Journal of Applied Social Psychology, 32*(5), 934–964.
- Mahonen, T., Jasinskaja-Lahti, I., & Liebkind, K. (2011). The impact of perceived social norms, gender, and intergroup anxiety on the relationship between intergroup contact and ethnic attitudes of adolescents. *The Journal of Applied Social Psychology, 41*(8), 1877–1899.
- Mattick, R. P., & Clarke, J. C. (1998). Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. *Behaviour Research and Therapy, 36*(4), 455–70. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/9670605>
- Park, J., Felix, K., & Lee, G. (2007). Implicit attitudes toward Arab-Muslims and the moderating effects of social information. *Basic and Applied Social Psychology, 29*(1), 35–45.
doi:10.1080/01973530701330942
- Payne, B. K., Cheng, C. M., Govorun, O., & Stewart, B. D. (2005). An inkblot for attitudes: Affect misattribution as implicit measurement. *Journal of Personality and Social Psychology, 89*(3), 277–93. doi:10.1037/0022-3514.89.3.277
- Payne, B. K., Govorun, O., & Arbuckle, N. L. (2008). Automatic attitudes and alcohol: Does implicit liking predict drinking? *Cognition & Emotion* (Vol. 22, pp. 238–271).
doi:10.1080/02699930701357394

- Payne, B. K., McClernon, F. J., & Dobbins, I. G. (2007). Automatic affective responses to smoking cues. *Experimental and clinical psychopharmacology*, *15*(4), 400–9.
doi:10.1037/1064-1297.15.4.400
- Pearson, A. R., Dovidio, J. F., & Gaertner, S. L. (2009). The nature of contemporary prejudice: Insights from aversive racism. *Social and Personality Psychology Compass*, *3*(3), 314–338.
- Pearson, A. R., West, T. V, Dovidio, J. F., Powers, S. R., Buck, R., & Henning, R. (2008). The fragility of intergroup relations. *Psychological Science*, *19*(12), 1272–1280.
- Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice ? Meta-analytic tests of three mediators. *European Journal of Social Psychology*, *38*(January), 922–934. doi:10.1002/ejsp
- Plant, E. A., & Devine, P. (2003). The antecedents and implications of interracial anxiety. *Personality and Social Psychology Bulletin*, *29*(6), 790–801.
- Puhl, R. M., Schwartz, M. B., & Brownell, K. D. (2005). Impact of perceived consensus on stereotypes about obese people: A new approach for reducing bias. *Health psychology : Official Journal of the Division of Health Psychology, American Psychological Association*, *24*(5), 517–25. doi:10.1037/0278-6133.24.5.517
- Savelkoul, M., Scheepers, P., Veld, W., & Hagendoorn, L. (2011). Comparing levels of anti-Muslim attitudes across Western countries. *Quality & Quantity*, *46*(5), 1617–1624.
doi:10.1007/s11135-011-9470-9
- Shapiro, J., Baldwin, M., Williams, A., & Trawalter, S. (2010). The company you keep: Fear of rejection in intergroup interaction. *Journal of Experimental Social Psychology*, *47*, 221–227.
- Shelton, J.N. & Richeson, J. A. (2005). Intergroup contact and pluralistic ignorance. *Journal of Personality and Social Psychology*, *88*(1), 91–107. doi:10.1037/0022-3514.88.1.91

- Shelton, J. N., West, T. V., & Trail, T. E. (2010). Concerns about appearing prejudiced: Implications for anxiety during daily interracial interactions. *Group Processes & Intergroup Relations*, *13*(3), 329–344. doi:10.1177/1368430209344869
- Shelton, J. N., Richeson, J. A., & Vorauer, J. D. (2006). Threatened identities and interethnic interactions. *European review of social psychology*, *17*(1), 321-358.
- Sheridan, L. P. (2006). Islamophobia pre- and post-September 11th, 2001. *Journal of Interpersonal Violence*, *21*(3), 317–36. doi:10.1177/0886260505282885
- Spencer-Rodgers, J., & McGovern, T. (2002). Attitudes toward the culturally different: The role of intercultural communication barriers, affective responses, consensual stereotypes, and perceived threat. *International Journal of Intercultural Relations*, *26*(6), 609–631. doi:10.1016/S0147-1767(02)00038-X
- Stephan, W., Boniecki, K., Ybarra, O., Bettencourt, A., Ervin, K., Jackson, L., et al. (2002). The role of threats in the racial attitudes of blacks and whites. *Personality and Social Psychology Bulletin*, *28*(9), 1242-1254
- Stephan, W., & Stephan, C. (1985). Intergroup Anxiety. *Journal of Social Issues*, *41*(3), 157-175.
- Stephan, W., & Stephan, C. (1996). Predicting Prejudice. *International Journal of Intercultural Relations*, *20*(3), 409–426.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of inter-group relations* (pp. 7–24). Chicago: Nelson–Hall

The future of the global Muslim population - pew forum on religion & public life. (n.d.). *Pew Forum on Religion & Public Life*. Retrieved March 15, 2013, from

<http://www.pewforum.org/future-of-the-global-muslim-population-regional-americas.aspx>

The future of the global Muslim population - pew forum on religion & public life. (n.d.). *Pew Forum on Religion & Public Life*. Retrieved March 15, 2013, from

<http://www.pewforum.org/The-Future-of-the-Global-Muslim-Population.aspx?loc=interstitialskip>

Turner, R. N., Hewstone, M., Voci, A., & Vonofakou, C. (2008). A test of the extended intergroup contact hypothesis: The mediating role of intergroup anxiety, perceived ingroup and outgroup norms, and inclusion of the outgroup in the self. *Journal of Personality and Social Psychology*, 95(4), 843.

Vezzali, L., & Giovannini, D. (2012). Secondary transfer effect of intergroup contact: The role of intergroup attitudes, intergroup anxiety and perspective taking. *Journal of Community & Applied Social Psychology*, 22, 125-144.

Voci, A., & Hewstone, M. (2003). Intergroup contact and prejudice toward immigrants in Italy: The mediational role of anxiety and the moderational role of group salience. *Group Processes & Intergroup Relations*, 6(1), 37-54.

Vorauer, J D, Main, K. J., & O'Connell, G. B. (1998). How do individuals expect to be viewed by members of lower status groups? Content and implications of meta-stereotypes. *Journal of Personality and Social Psychology*, 75(4), 917-37. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/9825528>

Vorauer, J. D., & Kumhyr, S. M. (2001). Is this about You or Me? Self-Versus other-directed judgments and feelings in response to intergroup interaction. *Personality and Social Psychology Bulletin*, 27(6), 706–719. doi:10.1177/0146167201276006

Wittenbrink, B., Judd, C. M., & Park, B. (2001). Spontaneous prejudice in context: variability in automatically activated attitudes. *Journal of personality and social psychology*, 81(5), 815–27. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/11708559>

Footnotes

¹ Due to an oversight, data on participant race were not collected. Based on previous work with this population, the majority (around 75%) of participants were most likely white.

² Due to an oversight, one item from the IATMS was not included in Study 2 (e.g., I wouldn't sit next to a Muslim on the bus, even if it were the last seat). As such, in Study 2 only 15 items were included for analysis rather than 16.

Table 1

Descriptive Statistics for all Study 1 Variables

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	α	Range		Skew
					Potential	Actual	
IATMS	468	3.46	1.53	0.89	1 - 10	.25-7.81	0.25
Future Interactions	467	3.98	2.18	0.86	1 - 10	.75-10	0.41
Comfort	468	3.97	1.94	0.84	1 - 10	.29-10	0.22
Setting	468	0.29	0.26	0.80	1 - 10	-.40-1.00	0.36
GIA	460	4.44	1.45	0.80	1 - 10	1.82-9.09	0.21
FT-Muslims	462	62.28	25.28		1 - 100	0-100	0.15
FT-Arabs	462	59.76	24.94		1-100	0-100	-0.23
Islamophobia	432	1.99	0.78	0.96	1-5	1-5	0.52
I-AB	444	1.94	0.77	0.92	1-5	1-5	0.57
I-CG	447	2.04	0.9	0.97	1-5	1-5	0.48
MCPR-Concern	438	-0.01	0.99	0.66	- 5-5	-4.79-3.01	-0.36
MCPR - Restraint	438	0.01	0.05	0.82	- 5-5	-3.15-3.03	0.06
BAI	441	1.53	0.11	0.92	1-4	1.32-1.86	0.64
FFA	439	2.933	0.5	0.69	1-4	1.5-4	-0.11
Family Attitudes	448	2.72	0.63	0.55	1-4	1-4	-0.11
Friend Attitudes	444	3.15	0.54	0.56	1-4	1.25-4	-0.21
PCI	449	4.33	1.56	0.94	1-7	1-7	0.17

Note. IATMS = Intergroup Anxiety toward Muslims, GIA = General Intergroup Anxiety, FT = Feeling Thermometer, I-AB = Affective/Behavioral subscale of the Islamophobia scale, I-CG = the Cognitive subscale of the Islamophobia scale, MCPR = Motivation to Control Prejudice Reactions, BAI = Beck Anxiety Inventory, FFA = Family and Friend Attitudes measure, and PCI = Personal Contact Inventory.

Table 2

Factor Loadings of Intergroup Anxiety toward Muslims Scale Items in Study 1 from Exploratory Factor Analysis

Item	Future Interactions	Comfort	Settings
I could easily talk, one on one, with a Muslim at a party. (*)		.648	
I don't know much about the Islamic faith, but that doesn't bother me when I interact with Muslims. (*)		.689	
I wouldn't sit next to a Muslim on the bus, even if it were the last seat.			.676
I would feel anxious alone in a doctor's waiting room with a Muslim.			.713
I feel comfortable interacting with Muslims. (*)		.683	
I wouldn't consider myself a racist, but because I don't know how to act around Muslims I fear they may think I am racist.	.752		
I am confident in my ability to interact with people of the Islamic faith. (*)		.674	
I would not feel nervous if I had to do a task at work with a Muslim. (*)		.655	
I would feel nervous if I was walking on the street alone and a Muslim was walking toward me.			.617
I would feel comfortable volunteering to work with a Muslim in class. (*)		.665	
I worry about my safety when interacting with Muslims.			.660
I have little experience interacting with Muslims and that makes me feel nervous.	.688		
I wouldn't feel comfortable sitting next to a Muslim on the bus.			.585
I feel uncomfortable when interacting with Muslims because I fear they will think I am prejudiced against them.	.692		
I don't know much about the Islamic faith and that makes me feel uncomfortable around Muslims.	.739		
It wouldn't make me anxious to study alone with a Muslim. (*)		.466	

Note. * identifies reverse-coded items.

Table 3

Partial Correlations among IATMS and Convergent Measures in Study 1 Controlling for Concern

Variable	1	2	3	4	5	6	7	8	9	10
1. IATMS										
2. Future Interactions	.079***									
3. Comfort	.88***	.51***								
4. Setting	.74***	.48***	.50***							
5. GIA	.64***	.46**	.55***	.52***						
6. BAI	.17***	0.13**	.17***	.08	0.10*					
7. Islamophobia	.57***	.39***	.49***	.52***	.45***	.08				
8. I-AB	.62***	.41***	.54***	.55***	.47***	.09	.89***			
9. I-CG	.46***	.33***	.39***	.43***	.38***	.05	.94***	.69***		
10. FT-Muslims	-.61***	-.41***	-.52***	-.39***	-.49***	-.12*	-.56***	-.055***	-.048***	
11. FT-Arabs	-.59***	-.41***	-.54***	-.41***	-.50***	-.09	-.56***	-.054***	-.050***	.83***

Note. IATMS = Intergroup Anxiety toward Muslims, GIA = General Intergroup Anxiety, BAI = Beck Anxiety Inventory, I-AB = Affective/Behavioral subscale of the Islamophobia scale, I-CG = the Cognitive subscale of the Islamophobia scale, and FT = Feeling Thermometer.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 4

Partial Correlations among IATMS and Feeling Thermometer Items in Study 1 Controlling for Concern

FT Item	IATMS	Future		
		Interactions	Comfort	Settings
Older adults	-.18***	-.12*	-.19***	-.11*
Immigrants	-.52***	-.38***	-.49***	-.38***
Jews	-.41***	-.28***	-.39***	-.28***
Fraternities	-.10	-.06	-.10*	.02
Military Members	-.05	-.02	-.06	-.01
City Dwellers	-.34***	-.24***	-.32***	-.23***
Country Dwellers	-.21***	-.11*	-.23***	-.13**
Habitat for Humanity	-.11*	-.04	-.12**	-.12**
Lawyers	-.13*	-.12*	-.10*	-.10
Republican party	-.07	-.08	-.06	.02
Hispanics/Latinos	-.16**	-.14**	-.15**	-.10*
Daytime Talk Show Hosts	-.20***	-.18***	-.19***	-.10*
College professors	-.23***	-.17***	-.22***	-.14**
Nurses	-.16*	-.07	-.16***	-.14**
Greenpeace	-.22***	-.12*	-.23***	-.16***
Congress	-.10	-.12*	-.07	-.01
Elementary School Teachers	-.19***	-.10	-.20***	-.14**
African Americans	-.35***	-.20***	-.35***	-.25***
American Red Cross	-.15**	-.09	-.16***	-.12**
National Rifle Association	-.10*	-.04	-.14**	-.04
Mormons	-.39***	-.27***	-.37***	-.26***
Democratic Party	-.24***	-.17***	-.25***	-.14**
Asians	-.43***	-.31***	-.41***	-.28***
Christians	-.10	-.10	-.10*	-.01
Doctors	-.08	-.06	-.10	-.06
Caucasians	-.08	-.07	-.09	-.01
Environmentalists	-.26***	-.17***	-.28***	-.12*

Note. FT = Feeling Thermometer, IATMS = Intergroup Anxiety toward Muslims

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 5

Partial Correlations among IATMS and Additional Measures in Study 1 Controlling for Concern

Variable	1	2	3	4	5	6	7
1. IATMS							
2. Future Interactions	.79***						
3. Comfort	.88***	.51***					
4. Setting	.74***	.48***	.50***				
5. FFA	-.55***	-.46***	-.47***	-.40***			
6. Family Attitudes	-.44***	-.40***	-.37***	-.30***	.88***		
7. Friend Attitudes	-.50***	-.38***	-.44***	-.39***	.83***	.46***	
8. PCI	-.36***	-.36***	-.32***	-.19***	.51***	.42***	.46***

Note. IATMS = Intergroup Anxiety toward Muslims, FFA = Family and Friend Attitudes measure, and PCI = Personal Contact Inventory.

*** $p < .001$

Table 6

Descriptive Statistics for all Study 2 Variables

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	α	Range		Skew
					Potential	Actual	
AMP Arab							
RA MSA	169	3.45	1.98		0-100	1-10	-.00
Cultural Sensitive	196	.37	0.21	0.62	1-2	0 - 1	-0.47
IATMS	196	3.61	1.71	0.90	1 - 10	1-8.20	0.36
Future Interactions	196	1.90	0.57	0.85	1 - 10	1-3.08	0.11
Comfort	196	3.91	1.92	0.84	1 - 10	1-8.86	0.17
Setting	196	.036	0.27	0.79	1 - 10	0 -.97	0.08
PATA	196	0.49	0.24	0.92	1 - 10	0 -.98	-0.32
SIAS	196	0.27	0.15	0.92	0 - 4	-.05 - .60	0.20
FT Muslims	196	58.58	24.93		0-100	0-100	-.23
FT Arabs	196	52.06	25.20		0-100	0-100	-.01
FFA	196	3.02	0.58	0.74	1-4	1.38-4	-0.54
Family Attitudes	196	2.77	0.74	0.65	1-4	1-4	-0.33
Friend Attitudes	196	3.27	0.59	0.58	1-4	1.74-4	-0.74
PCI	195	3.01	.64	0.89	1-7	1-4.96	.03

Note. AMP = Affect Misattribution Procedure, RA = Resource Allocation Task, IATMS = Intergroup Anxiety toward Muslims, PATA = Prejudiced Attitudes toward Arabs, SIAS = Social Interaction Anxiety Scale, FT = Feeling Thermometer, FFA = Family and Friend Attitudes measure, and PCI = Personal Contact Inventory.

Table 7

Partial Correlations among IATMS and Convergent Measures in Study 2 Controlling for Cultural Sensitivity Presentation Bias

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. IATMS													
2. Future Interactions	.81***												
3. Comfort	.91***	-.60***											
4. Settings	.82***	.61***	.65***										
5. PATA	.59***	.44***	.51***	.62***									
6. SIAS	.16*	.19**	.14	.11	.05								
7. FFA	-.44***	-.37***	-.38***	-.40***	-.34***	-.30***							
8. Family	-.32***	-.27***	-.27***	-.30***	-.26***	-.31***	.90***						
9. Friend	-.46***	-.38***	-.41***	-.41***	-.34***	-.18*	.82***	.49***					
10. FT-Muslims	-.58***	-.45***	-.52***	-.50***	-.60***	-.09	.31***	.24***	.31***				
11. FT-Arab	-.47***	-.37***	-.42***	-.43***	-.56***	-.05	.30***	.25***	.27***	.78***			
12. RA MSA	-.07	-.01	-.07	-.07	-.10	.05	-.05	-.02	-.08	.21**	.18*		
13. AMP Arabic	-.23***	-.18*	-.21**	-.20**	-.30***	.04	.17*	.09	.22**	.36***	.31***	0.05	
14. PCI	-.16*	-.13	-.17*	-.11	-.03	-.15*	.18*	.15*	.17*	0.03	-0.01	-0.11	-0.06

Note. IATMS = Intergroup Anxiety toward Muslims, PATA = Prejudiced Attitudes toward Arabs, SIAS = Social Interaction Anxiety Scale, FFA = Family and Friend Attitudes measure, FT = Feeling Thermometer, RA = Resource Allocation Task, MSA = Muslim Student Association, AMP = Affect Misattribution Procedure, and PCI = Personal Contact Inventory.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 8

Partial Correlations among IATMS and Feeling Thermometer Items in Study 2 Controlling for Cultural Sensitivity Presentation Bias

FT Items	IATMS	Future		
		Interactions	Comfort	Settings
Older adults	.04	.01	.02	.04
Immigrants	-.14*	-.10	-.11	-.19**
Jews	.02	-.03	.03	.07
Fraternities and Sororities	.16*	.08	.18	.11
Military Members	.15*	.03	.13	.14*
City Dwellers	-.20**	-.12	-.17*	-.24***
Country Dwellers	-.06	.01	-.06	-.15*
Habitat for Humanity	-.07	-.02	.06	*.16*
Lawyers	.07	.04	.09	.07
Republican party	.18*	.16*	.13	.17*
Hispanics/Latinos	-.31***	-.19**	-.30***	-.30
Daytime talk show hosts	-.12	-.06	-.13	-.10
College professors	-.23**	-.19**	-.20**	-.21**
Nurses	-.05	-.09	-.01	-.02
Greenpeace	-.19**	-.15*	-.21**	-.21**
Congress	.05	.01	.06	.05
Elementary school teachers	-.06	-.01	-.11	-.05
Blacks/African Americans	-.30***	-.19***	-.28***	-.30***
American Red Cross	-.01	.02	-.05	-.03
National Rifle Association	.03	.04	.01	-.06
Mormons	-.13*	-.10	-.19*	-.17*
Democratic party	-.03	.01	-.07	-.02
Asians	-.26***	-.19**	-.25***	-.27***
Christians	-.01	-.01	-.03	.02
Doctors	-.07	-.08	-.09	-.02
Whites/Caucasians	-.11	-.07	-.15*	-.09
Environmentalists	-.19**	-.15*	-.21**	-.18*
Politicians	.17**	.12	.15*	.16*

Note. FT = Feeling Thermometer, IATMS = Intergroup Anxiety toward Muslims

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 9

Partial Correlations among IATMS and Additional Measures in Study 2 Controlling for Cultural Sensitivity Presentation Bias

Variable	1	2	3	4	5	6	7	8	9	10
1. IATMS										
2. Future Interactions	.83***									
3. Comfort	.91***	.60***								
4. Setting	.82***	.61***	.65***							
5. AMP - Caucasian	.02	.09	-.03	.05						
6. AMP - AA	-.18*	-.08	-.15*	-.19**	.54***					
7. AMP - Asian	-.12	-.02	-.14	-.10	.59***	.65***				
8. FFA	-.44***	-.37***	-.38***	-.40***	-.17*	.13	.05			
9. Family	-.34***	-.27***	-.38***	-.30***	-.21**	.80	.03	.90***		
10. Friend	-.46***	-.38***	-.41***	-.41***	-.05	.15*	.07	.82***	.49***	
11. PCI	-.16*	-.13	-.17*	-.11	-.09	-.07	-.01	.18*	.15*	.17*

Note. IATMS = Intergroup Anxiety toward Muslims, AMP = Affect Misattribution Procedure, AA = African American, FFA = Family and Friend Attitudes measure, and PCI = Personal Contact Inventory.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 10

Partial Correlations among IATMS and Resource Allocation Task Items in Study 2 Controlling for Cultural Sensitivity Presentation Bias

Resource Allocation Items	IATMS	Future		
		Interactions	Comfort	Settings
International Business Club	-.07	-.09	-.03	-.06
Theatre Student Organization	.01	-.04	.05	-.01
WVU Mine Rescue Team	.02	-.01	-.03	.05
American Kids International Parents	-.14	-.20**	-.08	-.08
International Student Organization	-.13	-.10	-.07	-.22**
Fraternities	.08	.09	.08	.01
Sororities	.09	.10	.08	.05
Queer Student Union	-.23**	-.19*	-.23	-.15*
The Council for Math Education	.13	.18*	.07	.10
WVU Women's Rugby Football Club	-.04	.04	-.09	-.03
WVU Men's Rowing	-.11	-.01	-.14	-.12
WVU Hip Hop Club	.01	-.01	-.02	.06
West Virginia University Club Soccer	-.09	-.01	-.11	-.04
WVU Habitat for Humanity	.06	.06	.05	.04
Campus Crusade for Christ	.14	.06	.16*	.12
Young Democrats	-.04	-.04	-.07	-.01
Gender Equality Movement	-.10	-.12	-.07	-.08
College Republicans of WVU	-.01	-.01	-.01	.02
Veterans of WVU	.18*	.13	.18*	.16*

Note. IATMS = Intergroup Anxiety toward Muslims

* $p < .05$, ** $p < .01$

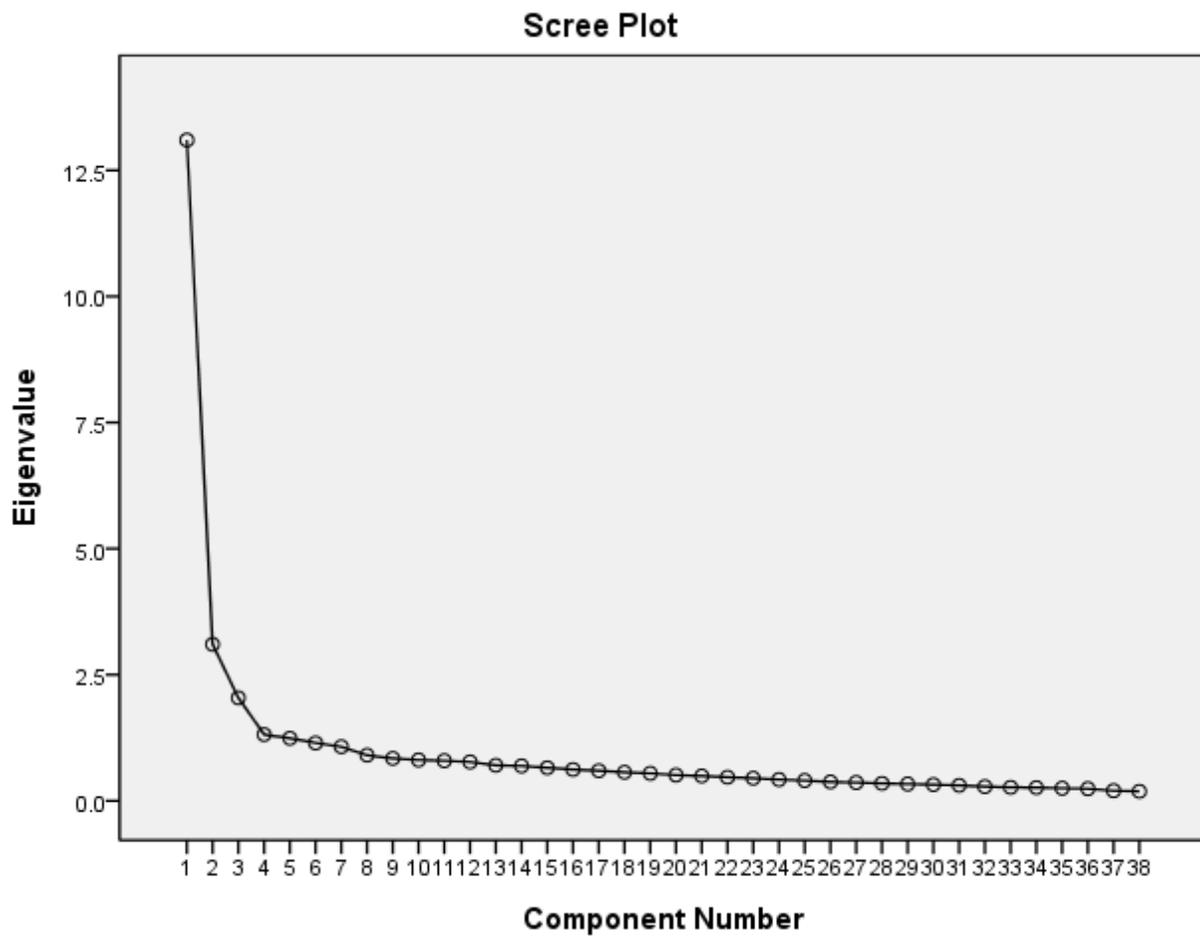


Figure 1. The scree plot from the exploratory factor analysis in Study 1, indicating a three factor solution.

Appendix A: Questionnaires

Intergroup Anxiety toward Muslims Scale (Study 1 & 2)

General Intergroup Anxiety Scale (GIA; Stephan & Stephan, 1985) (Study 1)

Feeling Thermometer (Study 1 & 2)

Motivation to Control Prejudice Responses (MCPR; Dunton & Fazio, 1997) (Study 1)

Islamophobia Scale (Lee, Gibbons, Thompson, & Timani, 2009) (Study 1)

Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1998) (Study 1)

Resource Allocation Task (Study 2)

Cultural Sensitivity Presentation Bias Scale (Lee, Gibbons, Thompson, & Timani, 2009)
(Study2)

Prejudiced Attitudes toward Arabs Scale (Bushman & Bonacci, 2004) (Study 2)

Social Interaction Anxiety Measure (Mattick & Clarke, 1998) (Study 2)

Family and Peer Attitudes Measure (Study 1 & 2)

Personal Contact Inventory (Study 1 & 2)

Demographic Information (Study 1 & 2)

Intergroup Anxiety toward Muslims Scale

Instructions: Read each statement and rate how much you disagree or agree with the statement on a 1 (strongly disagree) to 10 (strongly agree) scale.

(1) Strongly Disagree – (10) Strongly Agree

Items with an asterisk () will be reverse coded*

1. I would be worried my family would be upset if I dated a Muslim.
2. I feel awkward with Muslims.
3. I could easily talk, one on one, with a Muslim at a party. (*)
4. I don't know much about the Islamic faith, but that doesn't bother me when I interact with Muslims. (*)
5. I fear Muslims will judge me for not having the same beliefs as them.
6. When interacting with a Muslim, I am nervous that we will have a verbal argument.
7. I wouldn't sit next to a Muslim on the bus, even if it were the last seat.
8. I would feel anxious alone in a doctor's waiting room with a Muslim.
9. I feel comfortable interacting with Muslims. (*)
10. I wouldn't consider myself a racist, but because I don't know how to act around Muslims I fear they may think I am racist.
11. I am confident in my ability to interact with people of the Islamic faith. (*)
12. I would not feel nervous if I had to do a task at work with a Muslim. (*)
13. I would feel nervous if I was walking on the street alone and a Muslim was walking toward me.
14. I would feel comfortable volunteering to work with a Muslim in class. (*)
15. I would feel awkward at a social gathering where I was the only non-Muslim.
16. I worry about my safety when interacting with Muslims.
17. I have little experience interacting with Muslims and that makes me feel nervous.
18. I feel awkward with Muslims because I feel that they don't agree with the values of US culture.
19. I would feel comfortable if I was the only non-Muslim in the room. (*)
20. I wouldn't feel comfortable sitting next to a Muslim on the bus.
21. I wouldn't mind if a Muslim went to a party I was at. (*)
22. I have Muslim friends. (*)
23. I feel uncomfortable when interacting with Muslims because I fear they will think I am prejudiced against them.
24. I would feel nervous if I were the only person on a bus and a Muslim came on.
25. My friends wouldn't judge me if I dated a Muslim. (*)
26. I would feel uncomfortable if I were working on a project with a Muslim.

27. I feel uncomfortable because I think Muslims want me to convert to their faith
28. Muslims and non-Muslim Americans are so different, I don't think they will ever be able to interact well.
29. I don't know much about the Islamic faith and that makes me feel uncomfortable around Muslims.
30. When interacting with a Muslim I am nervous that he/she will want to fight me.
31. It wouldn't make me anxious to study alone with a Muslim. (*)
32. I would feel comfortable if I were the only non-Muslim in a room. (*)
33. I know some people in my life I care about would judge me negatively if I were friends with Muslims.
34. I feel nervous when interacting with Muslims because I think they don't agree with my values.
35. I feel embarrassed when interacting with Muslims because I am worried they will think I am sinful.
36. I expect Muslims to hate me because I am an American.
37. I don't think Muslims will judge me for not having the same beliefs as them. (*)
38. My knowledge of the Islamic faith allows me to feel comfortable when interacting with this group. (*)

General Intergroup Anxiety

(Stephan & Stephan, 1985)

“If you were the only member of your ethnic group and you were interacting with people from a different racial or ethnic group (e.g., talking with them, working on a project with them), how would you feel compared to occasions when you are interacting with people of your own ethnic group?”

(1) Not at All – (10) Very Much

Certain

Awkward

Self-Conscious

Happy

Accepted

Confident

Irritated

Impatient

Defensive

Suspicious

Careful

Feeling Thermometer

Instructions: Rate how positively you feel toward each group on a scale of 0 to 100. If you have a more positive view toward most members of a group rate them between 50 and 100. If you have a more negative attitude toward the group, rate the group between 0 and 50. You can use any number between 0 and 100 to describe your attitudes toward the group.

0 (Extremely Negative View) – 100 (Extremely Positive View)

Older adults
Immigrants
Jews
Fraternities and Sororities
Military Members
Arabs
City Dwellers
Country Dwellers
Habitat for Humanity
Lawyers
Republican party
Hispanics/Latinos
Daytime talk show hosts
Muslims
College professors
Nurses
Greenpeace
Congress
Elementary school teachers
Blacks/African Americans
American Red Cross
National Rifle Association
Mormons
Democratic party
Asians
Christians
Doctors
Whites/Caucasians
Environmentalists
Politicians

Motivation to Control Prejudice Responses

(Dunton & Fazio, 1997)

Please read each of the following statements carefully. Indicate the extent to which you agree or disagree with each statement according to the following scale.

- 1- strongly disagree
- 2- disagree
- 3- disagree somewhat
- 4- no opinion
- 5- agree somewhat
- 6- agree
- 7- strongly agree

1. In today's society it is important that one not be perceived as prejudiced in any manner. ____
2. I always express my thoughts and feelings, regardless of how controversial they might be. ____
3. I get angry with myself when I have a thought or feeling that might be considered prejudiced. ____
4. If I were participating in a class discussion and a student of another race/ethnicity expressed an opinion with which I disagreed, I would be hesitant to express my own viewpoint. ____
5. Going through life worrying about whether you might offend someone is just more trouble than it's worth. ____
6. It's important to me that other people not think I'm prejudiced. ____
7. I feel it's important to behave according to society's standards. ____
8. I'm careful not to offend my friends, but I don't worry about offending people I don't know or don't like. ____
9. I think that it is important to speak one's mind rather than to worry about offending someone. ____
10. It's never acceptable to express one's prejudices. ____
11. I feel guilty when I have a negative thought or feeling about a person of another race/ethnicity. ____
12. When speaking to a person of another race/ethnicity, it's important to me that he/she not think I'm prejudiced. ____
13. It bothers me a great deal when I think I've offended someone, so I'm always careful to consider other people's feelings. ____
14. If I have a prejudiced thought or feeling, I keep it to myself. ____
15. I would never tell jokes that might offend others. ____
16. I'm not afraid to tell others what I think; even when I know they disagree with me. ____
17. If someone who made me uncomfortable sat next to me on a bus, I would not hesitate to move to another seat. ____

Islamophobia Scale

(Lee, Gibbons, Thompson, & Timani, 2009)

Instructions: Using the scale below, please select the number that best describes to what extent you agree or disagree with each of the following items. There is no right or wrong answer. Please do not leave any item blank.

1 – Strongly Disagree, 2 – Disagree, 3 – Not Sure, 4 – Agree, 5 – Strongly Agree

1. I would support any policy that would stop the building of new mosques (Muslim place of worship) in the U.S..
2. If possible, I would avoid going to places where Muslims would be.
3. I would become extremely uncomfortable speaking with a Muslim.
4. Just to be safe, it is important to stay away from places where Muslims could be.
5. I dread the thought of having a professor that is Muslim.
6. If I could, I would live in a place where there are no Muslims.
8. Muslims should not be allowed to work in places where many Americans gather such as airports.
9. Islam is a dangerous religion.
10. The religion of Islam supports acts of violence.
11. Islam supports terrorist acts.
12. Islam is Anti-American.
13. Islam is an evil religion.
14. Islam is a religion of hate.
15. I believe that Muslims support the killings of non-Muslims.
16. Muslims want to take over the world.

DEVELOPING AN INTERGROUP ANXIETY TOWARD MUSLIMS SCALE

Beck Anxiety Inventory

(BAI; Beck, Epstein, Brown, & Steer, 1998)

Instructions: Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by each symptom during the **PAST WEEK, INCLUDING TODAY**, by checking the appropriate blank.

NOT AT ALL	MILDLY It did not bother me much	MODERATELY It was very unpleasant, but I could stand it	SEVERELY I could barely stand it
-------------------	--	--	--

- | | | | | |
|---|-------|-------|-------|-------|
| 1. Numbness or tingling. | _____ | _____ | _____ | _____ |
| 2. Feeling hot. | _____ | _____ | _____ | _____ |
| 3. Wobbliness in legs. | _____ | _____ | _____ | _____ |
| 4. Unable to relax. | _____ | _____ | _____ | _____ |
| 5. Fear of the worst happening. | _____ | _____ | _____ | _____ |
| 6. Dizzy or lightheaded. | _____ | _____ | _____ | _____ |
| 7. Heart pounding or racing. | _____ | _____ | _____ | _____ |
| 8. Unsteady. | _____ | _____ | _____ | _____ |
| 9. Terrified. | _____ | _____ | _____ | _____ |
| 10. Nervous. | _____ | _____ | _____ | _____ |
| 11. Feelings of choking. | _____ | _____ | _____ | _____ |
| 12. Hands trembling. | _____ | _____ | _____ | _____ |
| 13. Shaky. | _____ | _____ | _____ | _____ |
| 14. Fear of losing control. | _____ | _____ | _____ | _____ |
| 15. Difficulty breathing. | _____ | _____ | _____ | _____ |
| 16. Fear of dying. | _____ | _____ | _____ | _____ |
| 17. Scared. | _____ | _____ | _____ | _____ |
| 18. Indigestion or discomfort in the abdomen. | _____ | _____ | _____ | _____ |
| 19. Faint. | _____ | _____ | _____ | _____ |
| 20. Face flushed. | _____ | _____ | _____ | _____ |
| 21. Sweating (not due to heat). | _____ | _____ | _____ | _____ |

Resource Allocation

(adapted from Tajfel & Turner, 1986)

Imagine you are the treasurer for WVU Student Government. Due to University budget cuts this year, the total amount of money for student organizations has decreased. It is your job to decide what percent of the budget, if any, will go to each organization. Be sure that your percent allocations add up to 100%.

Total Budget: 20,000 (100%)

Ex: Psychology club 17%

Organizations:

1. International Business Club
2. Theatre Student Organization
3. WVU Mine Rescue Team
4. American Kids International Parents
5. International Student Organization
6. Fraternities
7. Sororities
8. Queer Student Union
9. The Council for Math Education
10. WVU Women's Rugby Football Club
11. WVU Men's Rowing
12. WVU Hip Hop Club
13. West Virginia University Club Soccer
14. WVU Habitat for Humanity
15. Muslim Student Association
16. Campus Crusade for Christ
17. Young Democrats
18. Gender Equality Movement
19. College Republicans of WVU
20. Veterans of WVU

DEVELOPING AN INTERGROUP ANXIETY TOWARD MUSLIMS SCALE

Cultural Sensitivity Presentation Bias Scale

(Lee, Gibbons, Thompson, & Timani, 2009)

Instructions: Please indicate whether or not each of the following statements applies to you by circling either *T* (True) or *F* (False).

- | | | |
|---|---|---|
| T | F | I never told a racist joke |
| T | F | I never made fun of the way non-English speakers spoke. |
| T | F | I have always been against racial/ethnic discrimination. |
| T | F | I never had negative thoughts about people from other countries. |
| T | F | I am always thinking about the plight of people from other countries. |
| T | F | I have always told the people who made racist remarks that I am offended by their comments. |
| T | F | I am always sensitive to the needs of non-English speaking people. |
| T | F | I always make a concerted effort to help international students adjust to living in the U.S. |
| T | F | I never made fun of the way people from other countries lived. |
| T | F | I always try to speak with individuals from other racial/ethnic backgrounds to learn about their lives. |

Prejudiced Attitudes toward Arabs Scale

(Bushman, & Bonacci, 2004)

Instructions: Respond to the following items on a scale of 1 to 10, 1 being strongly disagree and 10 being strongly agree.

1. Arab-Americans have moral standards that they apply in their dealing with each other, but with non-Arab-Americans, they are unscrupulous, ruthless, and undependable.
2. There is something different and strange about Arab-Americans; one never knows what they are thinking or planning, or what makes them tick.
3. A major fault of Arab-Americans is their conceit, overbearing pride, and their idea that they are a chosen ethnic group.
4. It is wrong for Arab-Americans and non-Arab-Americans to intermarry.
5. Even for Arab-Americans who live in America, their first loyalty is to their home country rather than to America.
6. If there are too many Arab-Americans in America, our country will be less safe.
7. I can hardly imagine myself voting for an Arab-American who is running for an important political office.
8. One general fault of Arab-Americans is their over-aggressiveness, a strong tendency always to display their own looks, manners, and customs.
9. You just can't trust a group of young Arab-American men together because they are probably up to criminal or delinquent activity.
10. In order to maintain a nice residential neighborhood it is best to prevent Arab-Americans from living in it.
11. If I knew I had been assigned to live in a dorm room with an Arab-American, I would ask to change rooms

DEVELOPING AN INTERGROUP ANXIETY TOWARD MUSLIMS SCALE

Social Interaction Anxiety Scale

(Mattick & Clarke, 1998)

Instructions: Please report how much each item describes you on a scale of 0 (*Not at All*) to 4 (*Extremely*).

Items with an asterisk () will be reverse coded*

Rating: 0 (*Not at all*), 1 (*Slightly*), 2 (*Moderately*), 3 (*Very*), 4 (*Extremely*)

1. I get nervous if I have to speak with someone in authority (teacher, boss, etc.)
2. I have difficulty making eye-contact with others
3. I become tense if I have to talk about myself or my feelings
4. I find difficulty mixing comfortably with the people I work with
5. I tense-up if I meet an acquaintance in the street
6. When mixing socially I am uncomfortable
7. I am tense if I am alone with just one other person
8. I am at ease meeting people at parties, etc. *
9. I have difficulty talking with other people
10. I find it easy to think of things to talk about*
11. I worry about expressing myself in case I appear awkward
12. I find it difficult to disagree with another's point of view
13. I have difficulty talking to attractive persons of the opposite sex
14. I find myself worrying that I won't know what to say in social situations
15. I am nervous mixing with people I don't know well
16. I feel I'll say something embarrassing when talking
17. When mixing in a group I find myself worrying I will be ignored
18. I am tense mixing in a group
19. I am unsure whether to greet some I know only slightly

Family and Friend Attitudes Measure

(adapted from Mahonen, Jasinskaja-Lahti, & Liebkind, 2011)

Instructions: Read each statement and rate how much the statement represents the attitudes of your family or friends. Rate (1) disagree to (4) agree.

(1) disagree, (2) somewhat disagree, (3) somewhat agree, (4) agree

Higher scores indicate more integration and acceptance of out-group members

Asterisks indicate reverse code ()*

Family:

1. My family knows many people of other races and cultures.
2. My family would be upset if I married someone outside of my culture. (*)
3. My family does not interact with people of other races and cultures. (*)
4. Everyone in my family practices the same faith. (*)

Friends:

1. My friends would dislike it if I dated outside of my ethnic group. (*)
2. I have friends who are in different social classes.
3. My friends and I have the same faith. (*)
4. My friends are friends with people of other races.

DEVELOPING AN INTERGROUP ANXIETY TOWARD MUSLIMS SCALE

Personal Contact Inventory
(Levin, Van Laar, & Foote, 2006)

Instructions: Read each statement and rate at what level the statement applies to you on a 1 (never) to 7 (often) scale.

(1)Never – (7) Often

1. How much contact do you have with people from a different racial/ethnic group during your daily life? ____
2. How much contact do you have with close friends of a different racial/ethnic group from yourself? ____
3. How often do you talk informally with someone that is of a different racial/ethnic group from yourself? ____
4. How often do you visit with someone of a different racial/ethnic group from yourself at their home? ____

When you interact with people from a different racial/ethnic group, what other people are generally present?

A - Just the person from the other racial/ethnic group and me

B - Several members of a different racial/ethnic group and me

C - Just the one person from the other racial/ethnic group, and several people from my racial/ethnic group

D - Several members of both groups

In the following section, please estimate the proportion of individuals from various racial/ethnic groups that you have encountered at different times in your life. For each scenario, use the following scale to indicate how many people from each group were generally present in your interactions:

	None						All
	1	2	3	4	5	6	7
White/Caucasian	1	2	3	4	5	6	7
African American	1	2	3	4	5	6	7
Asian / Pacific Islander	1	2	3	4	5	6	7
Hispanic / Latino	1	2	3	4	5	6	7
Muslim	1	2	3	4	5	6	7
Christian	1	2	3	4	5	6	7
Hindu	1	2	3	4	5	6	7
Jewish	1	2	3	4	5	6	7

The neighborhood where you grew up ____

The high school from which you graduated ____

Your high school classes ____
Your close friends from high school ____
Your casual friends from high school ____
Your college classes ____
Your close friends from college ____
Your casual friends from college ____

DEVELOPING AN INTERGROUP ANXIETY TOWARD MUSLIMS SCALE

Demographic Information

What is your gender?

- A – Male
- B – Female

What is your age? _____

Religious Affiliation?

- | | |
|----------------------------|--------------------------------|
| A - Christian – Protestant | F - Muslim |
| B - Christian – Catholic | G - Jewish |
| C - Hindu | H - Atheist |
| D - Buddhist | I - Agnostic |
| E - Not religious | J - Other – Please list: _____ |

Citizenship Status

- A – United States Citizen
- B – U.S. Permanent Resident (non-citizen)
- C – Non-US Citizen (foreign student)

Please indicate your sexuality (Check one):

- 1) Straight/Heterosexual
- 2) Lesbian/Homosexual Female
- 3) Gay/Homosexual Male
- 4) Bi-sexual
- 5) Transgendered

What is your political affiliation?

- A. Liberal
- B. Conservative
- C. Independent
- D. Not Interested
- E. Other _____

Approximately, how large was your high school graduating class?

- | | |
|---------------|----------------|
| A- 75 or less | F- 376-450 |
| B- 76-150 | G- 451-525 |
| C- 151-225 | H- 526-600 |
| D- 226-300 | I- 601-675 |
| E- 301-375 | J- 675 or more |

On a 4.0 scale, what was your approximate GPA in high school? _____

Family Background

What is the highest level of education obtained by your mother?

- A- did not receive high school diploma or GED
- B- high school diploma or GED
- C- vocational training (e.g., electrician, plumber, mechanic, beautician, L.P.N., etc.)
- D- some college (but no degree)
- E- associate's degree or equivalent (2-year degree)
- F- bachelor of arts (B.A.) or bachelor of science (B.S.) degree
- G- some graduate work (but degree not completed)
- H- master's degree (e.g., M.A., M.S., M.S.W., M.B.A., M.L.S., etc.)
- I- completion of a Ph.D. or professional degree requiring at least 3 years of full-time graduate work (e.g., M.D., O.D., D.D.S., J.D., L.L.D.)
- J- other _____

What is the highest level of education obtained by your father?

- A- did not receive high school diploma or GED
- B- high school diploma or GED
- C- vocational training (e.g., electrician, plumber, mechanic, beautician, L.P.N., etc.)
- D- some college (but no degree)
- E- associate's degree or equivalent (2-year degree)
- F- bachelor of arts (B.A.) or bachelor of science (B.S.) degree
- G- some graduate work (but degree not completed)
- H- master's degree (e.g., M.A., M.S., M.S.W., M.B.A., M.L.S., etc.)
- I- completion of a Ph.D. or professional degree requiring at least 3 years of full-time graduate work (e.g., M.D., O.D., D.D.S., J.D., L.L.D.)
- J- other _____

What is the highest level of education obtained by you?

- A- did not receive high school diploma or GED
- B- high school diploma or GED
- C- vocational training (e.g., electrician, plumber, mechanic, beautician, L.P.N., etc.)
- D- some college (but no degree)
- E- associate's degree or equivalent (2-year degree)
- F- bachelor of arts (B.A.) or bachelor of science (B.S.) degree
- G- some graduate work (but degree not completed)
- H- master's degree (e.g., M.A., M.S., M.S.W., M.B.A., M.L.S., etc.)
- I- completion of a Ph.D. or professional degree requiring at least 3 years of full-time graduate work (e.g., M.D., O.D., D.D.S., J.D., L.L.D.)
- J- other _____

How would you characterize your hometown?

- A- rural (unincorporated)
- B- small town (village or town)
- C- suburban (metropolitan area of a large city)
- D- small city (population < 30,000)

DEVELOPING AN INTERGROUP ANXIETY TOWARD MUSLIMS SCALE

E- medium-sized city (population 30,000 – 100,000)

F- large city (population > 100,000)

What would you estimate your combined family income to be?

A- 0 – \$19,999

B- \$20,000 - \$39,999

C- \$40,000 - \$59,999

D- \$60,000 - \$79,999

E- \$80,000 - \$99,999

F- \$100,000 - \$119,999

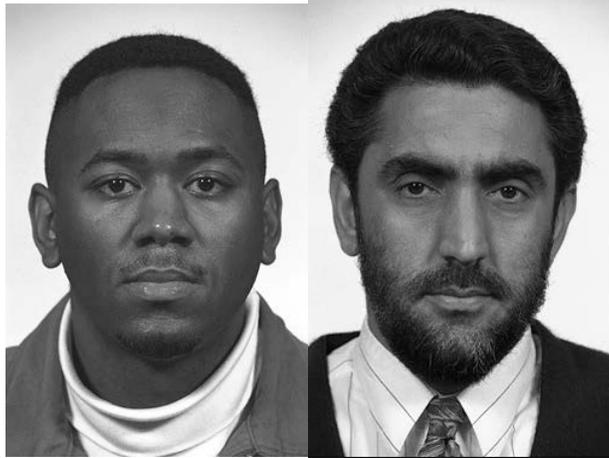
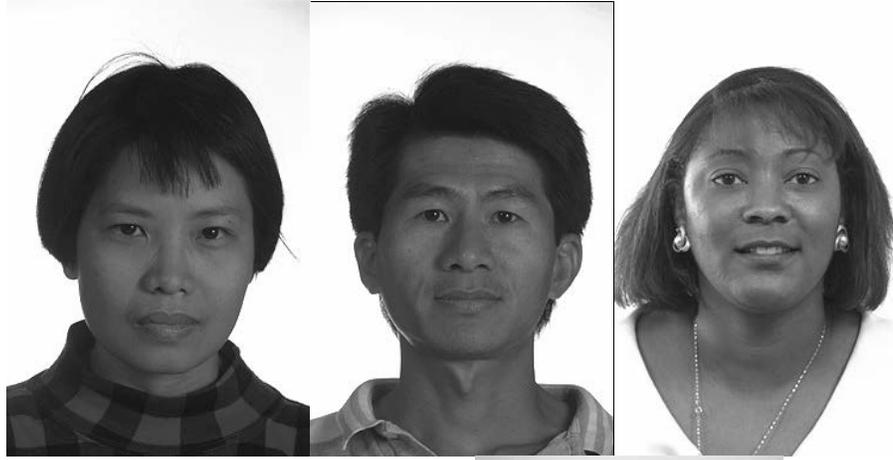
G- \$120,000 - \$139,999

H- \$140,000 or more

What is your home state? _____

Appendix B: Affective Misattribution Procedure Stimuli

Examples of faces used in the AMP



Examples of novel stimuli used in the AMP

蟾老

青