



APPROVAL SHEET

Title of Dissertation: A Multi-Method Approach to Examine Predictors and Outcomes of Muslim American Adolescents' Social Identities

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## ABSTRACT

Title of Document:

A MULTI-METHOD APPROACH TO  
EXAMINE PREDICTORS AND OUTCOMES  
OF MUSLIM AMERICAN ADOLESCENTS'  
SOCIAL IDENTITIES

Merve Balkaya Ince, Ph.D., 2020

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Psychology

The Muslim American population is the fastest growing and one of the most discriminated against religious groups in the United States. The current socio-political climate poses profound developmental challenges for Muslim American adolescents. Adolescence is a key developmental period for identity development, but contextual stressors (e.g., Islamophobia, intergroup conflicts) might undermine Muslim American adolescents' identity development and ultimately increase their risk for experiencing psychological difficulties.

Despite the challenges and needs of this growing population, there was a paucity of research examining the experiences of Muslim American adolescents. This dissertation project sought to examine predictors and outcomes of Muslim American adolescents' social identities using a risk and resilience framework. Across three independent empirical papers, this dissertation examined factors that may promote or undermine Muslim American adolescents' social identities and their positive adjustment and negative adjustment outcomes in the United States. This dissertation employed a multi-method approach (i.e., cross-sectional survey data, intensive longitudinal data combined with short-term longitudinal data).

Briefly, the first paper examined: (1) the mediating role of Muslim American adolescents' religious and national identities in the cross-sectional associations between individual-level religious discrimination and internalizing and externalizing problems, and (2) the moderating role of group-level religious discrimination in the form of Islamophobia in these mediated associations. The second paper utilized a combination of short-term longitudinal survey and experience sampling methods to: (1) explore momentary fluctuations and temporal relations between two dimensions of Muslim American adolescents' religious identity (i.e., private regard and centrality) over the course of 14 days; and (2) examine if Muslim American adolescents' momentary religious identities mediated the associations between their stable perceptions of maternal religious socialization and subsequent civic engagement. Finally, the third paper explored potential time-varying (i.e., age differences) and gender differences in: (1) maternal religious socialization and (2) its relations with Muslim American adolescents' religious identity using cross-sectional survey data from 13- to 18-year-old Muslim American adolescents.

The cumulative knowledge gained from the three papers of this dissertation made important empirical, theoretical, and methodological contributions, which can have implications for intervention or prevention programs and policies to promote positive youth development.

A MULTI-METHOD APPROACH TO EXAMINE PREDICTORS AND  
OUTCOMES OF MUSLIM AMERICAN ADOLESCENTS' SOCIAL  
IDENTITIES

By

Merve Balkaya Ince

Dissertation submitted to the Faculty of the Graduate School of the  
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## **Chapter 1: Overall Background**

The Muslim American population is the fastest growing religious group, which is expected to double in size and become the second-largest religious group in the United States by the year 2040 (Pew Research Center, 2018a). Consistent with global demographic trends, Muslim Americans are considerably younger than the overall U.S. population with approximately 63% of Muslim Americans estimated to be minors who are below the age of 18 years (Pew Research Center, 2017a). However, not everyone has welcomed the increasing Muslim population trend in the United States, and Muslim Americans are currently one of the most discriminated against groups in the current socio-political context (Mogahed & Choudhoud, 2017; Ocampo, Dana, & Barreto, 2018). For example, the Council on American Islamic Relations (CAIR) has documented that discriminatory anti-Muslim hate crime incidents have increased by more than 60% from 2016 to 2018 (CAIR, 2018).

The current socio-political climate of increased intergroup conflicts, anti-Muslim sentiments, and religious discrimination poses profound developmental challenges, especially for Muslim American adolescents. Adolescence is a key developmental period in which young individuals refine their identities, which can have a profound impact on their subsequent psychological adjustment (Erikson, 1980). Although European and American Muslim adolescents' sense of belonging to their religious minority group may be the most salient source of their social identities (Abo-Zena & Midgette, 2019; Tahseen & Cheah, 2018; Verkuyten, 2016), Muslim youth may have unique challenges in reconciling their religious identity with their sense of belonging to the mainstream cultural group as public discourses often portray Islamic values to be incompatible with democratic values of the Western mainstream culture (e.g., Phalet, Fleischmann, & Hillekens, 2018). Hence, these unique contextual stressors might

increase Muslim American adolescents' risk for experiencing psychological difficulties and/or pose challenges to their positive adjustment and thriving.

Despite the challenges and needs of this growing population, there is a paucity of research examining the experiences and adjustment of Muslim American youth. The existing research on Muslim populations in the United States is further limited by a narrow focus on young adult samples and mostly qualitative studies. In fact, most quantitative studies on Muslim adolescents in Western contexts seem to have been conducted in European settings (e.g., in the Netherlands or Germany). Although these studies are informative, preliminary evidence suggests that there are important differences in Muslim American and European Muslim youth's social identities and adjustment (e.g., Balkaya, Cheah, & Tahseen, 2019; Fleischmann & Phalet, 2018; Tahseen & Cheah, 2018).

The aim of the dissertation project was to examine predictors and outcomes of Muslim American adolescents' social identities. Specifically, we examined factors that may promote and undermine Muslim American adolescents' social identities and their positive adjustment and negative adjustment outcomes in the United States. Specifically, we focused on the protective role of maternal religious socialization and risk factors of religious discrimination and Islamophobia and their contributions to adolescents' religious and national identities. The positive adjustment outcomes of interest associated with adolescents' identities were civic attitudes and behaviors, while the negative adjustment outcomes included internalizing and externalizing problems. This dissertation study employed a multi-method approach (i.e., cross-sectional survey data, intensive longitudinal data) and comprised three independent empirical papers. The data for the three studies were collected as part of a larger project and comprise survey data and a subsample of experience sampling data.

Briefly, the first paper examined: (1) the mediating role of Muslim American adolescents' religious and national identities in the cross-sectional associations between individual-level religious discrimination and internalizing and externalizing problems, and (2) the moderating role of group-level religious discrimination in the form of Islamophobia in these mediated associations. The second paper utilized a combination of short-term longitudinal survey and experience sampling methods to: (1) explore momentary fluctuations and temporal relations between two dimensions of Muslim American adolescents' religious identity (i.e., private regard and centrality) over the course of 14 days; and (2) examine if Muslim American adolescents' momentary religious identity mediated associations between their stable perceptions of maternal religious socialization and subsequent civic engagement. Finally, in the third paper, we explored potential time-varying (i.e., age differences) and gender differences in: (1) mothers' religious socialization practices and (2) the relations between maternal religious socialization and Muslim American adolescents' religious identity using cross-sectional survey data from 13- to 18-year-old Muslim American adolescents. Supplemental analyses were also conducted to examine age- and gender-based differences in Muslim American adolescents' perceptions of individual-level religious discrimination and its associations with their religious and national identity.

## Chapter 2: Paper One<sup>1</sup>

The overall aim of the first published dissertation paper (see Balkaya, Cheah, & Tahseen, 2019) was to examine the processes and conditions underlying the relations between religious discrimination and Muslim American adolescents' adjustment outcomes, specifically, their internalizing and externalizing problems (Balkaya, Cheah, & Tahseen, 2019). Ethnic minority individuals' social identities have been found to mediate the relations between their perceptions of discrimination and their adjustment. Specifically, despite the direct negative effects of discrimination on mental health, discrimination can also indirectly impact adolescents' mental health by either promoting or undermining their social group identification, depending on whether they identify more or less strongly with their social groups in response to these discriminatory experiences (e.g., Branscombe, Schmitt, & Harvey, 1999; Jasinskaja-Lahti, Liebkind, & Solheim, 2009). However, despite supporting empirical evidence for the mediating role of social identities, no previous research examined Muslim American adolescents' multiple group identities, including their religious (i.e., Muslim) and their mainstream national (i.e., American) identities, as processes underlying the relations between religious discrimination and their internalizing and externalizing problems.

Moreover, research suggests that the impact of individual-level discrimination (e.g., personal experiences of unfair treatment because of one's minority group) depends on one's perceptions of group-level stigma, such as discrimination targeted towards one's group as a whole (e.g., in the form of Islamophobia, or fear, stigma, and suspicion of Muslims as a group).

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<sup>1</sup>Balkaya, M., Cheah, C. S. L., & Tahseen, M. (2019). The mediating role of multiple group identities in the relations between religious discrimination and Muslim-American adolescents' adjustment. *Journal of Social Issues*, 75, 538–567. <https://doi.org/10.1111/josi.12326>

That is, group-level discrimination may moderate the relations between individual-level discrimination and social identity because individuals may either blame themselves for discrimination or discount their individual perceptions of discrimination and shift responsibility to those who discriminate against them, depending on their perceptions of personal discrimination *relative to* the discrimination their in-group faces as a whole (e.g., Armenta & Hunt, 2009; Crocker & Major, 1989). For example, Muslim American adolescents who perceive that Americans are generally not Islamophobic may attribute their individual experiences of discrimination to their personal deservingness, which may reduce their sense of belonging to social groups and ultimately exacerbate their psychological distress. In contrast, if Muslim American adolescents perceive that their individual experiences of discrimination are not unique to them as a person and are instead a common struggle among people in their religious group, they may attribute their unfair treatment to those who discriminate against them and become even more engaged with their social groups, which may ultimately alleviate the detrimental impact of discrimination.

However, very few studies have examined this interactive effect (see Armenta & Hunt, 2009 for an exception) and no study has examined its effects on adolescents' belonging to multiple social groups and subsequent mental health outcomes. To address these limitations, the first dissertation paper examined the mediating roles of Muslim American adolescents' religious and mainstream national (i.e. American) group identities in the associations between their perceptions of individual-level religious discrimination and their internalizing and externalizing behaviors. In addition, we explored the moderating role of their perceptions of group-level discrimination (i.e., Islamophobia) in these mediated associations.

Participants included 212 Muslim American adolescents (13-18-year-olds,  $M_{age} = 16.7$  years,  $SD_{age} = 1.6$  years; 59% female), who were born in the United States (89%) or immigrated when they were 1 month to 5 years old (11%,  $M = 2.59$  years,  $SD = 1.9$  years). Participants were of South-Asian (71%, e.g., Pakistan, Bangladesh), Middle Eastern/Arab/North African (23%, e.g., Egypt, Turkey), and other Asian (e.g., Indonesia, Malaysia) or bicultural descent (6%). Most of the adolescents lived in two-parent households with their parents (92% married, 2% re-married, 4% divorced, 1% widowed, 1% single or in relationship) and siblings ( $M = 2.7$  siblings,  $SD = 1.2$ ).

Participation in this study was restricted to self-identified Muslim American adolescents from immigrant backgrounds (i.e., Asian and Arab/Middle Eastern) who were either born in the United States or immigrated before the age of 6 years. We did not include Black Muslim adolescents in this study because their experiences of discrimination might be more complex due to the unique racial history of Black Americans and discrimination primarily based on race, rather than religion (Ahmed & Abdallah, 2018; Ahmed, Patel, & Hashem, 2015), which warrants a more specific and intersectional focus. Adolescents were recruited from various religious and non-religious organizations (e.g., mosques, community centers, grocery stores, etc.) across the Maryland-Washington D.C. metropolitan area and online (e.g., email listservs, social media).

Participants completed an online survey using adapted and validated measures that assessed their perceptions of individual-level religious discrimination ( $\alpha = .99$ ; Perceived Discrimination by Adults/Peers Scale; Way, 1997), group-level Islamophobia ( $\alpha = .87$ ; Perceived Islamophobia Scale; Kunst, Sam, & Ulleberg, 2013), religious and national identities ( $\alpha_{religious} = .92$ ;  $\alpha_{national} = .88$ ; Multigroup Ethnic Identity Measure; Phinney, 1992), and internalizing and

externalizing problems ( $\alpha_{\text{internalizing}} = .92$ ;  $\alpha_{\text{externalizing}} = .92$ ; The Youth Self Report; Achenbach & Rescorla, 2001).

Our results revealed that religious identity did not mediate the relations between individual-level religious discrimination and internalizing and externalizing problems, and these relations did not depend on adolescents' perceptions of Islamophobia. The fact that religious identity did not mediate the relations between adolescents' perceptions of individual-level religious discrimination and their internalizing and externalizing problems could be attributed to the overall very high levels of and relatively little variation in belonging to the Muslim group in our sample. Specifically, adolescents with a strong sense of belonging to their social group, in this case the Muslim group, may have more cultural and social resources from this group membership that can alleviate the detrimental impact of discrimination (Musso, Inguglia, & Lo Coco, 2015). Although it is possible that discrimination did not predict Muslim identity due to the high levels and little variation in Muslim identity, these descriptive characteristics are consistent with those from previous studies from Europe, which have similarly reported high levels of and little variation in religious identity among Muslim minority adolescents and young adults (e.g., Simsek, Jacob, Fleischmann, & van Tubergen, 2018).

In contrast, American identity mediated the relations between individual-level religious discrimination and internalizing and externalizing problems, but these relations depended on adolescents' perceptions of Islamophobia. Specifically, for adolescents who had the perception that the mainstream American society was not Islamophobic (i.e., low levels of Islamophobia), individual-level religious discrimination predicted a lower sense of belongingness to the American group, which in turn undermined their psychological adjustment. It is possible that adolescents may distance themselves from the mainstream group to protect their self-esteem if

the discriminatory experience is attributed to personal deservingness (e.g., Major, Kaiser, & McCoy, 2003).

That is, adolescents who perceive high levels of individual-level discrimination, but do not believe Muslim as a whole are targeted, may feel more negatively about themselves relative to the Muslim ingroup. Given that a sense of belonging to the host-national group may perpetuate this negative self-perception in the face of personal experiences of discrimination, adolescents may distance themselves from this group because it does not satisfy their social identity need to belong to this group (Celebi, Verkuyten, & Bagci, 2017; Vignoles, 2011). Previous research has also shown that discrimination could either undermine or promote individuals' self-esteem, depending on whether it threatens individuals' worldview (Major, Kaiser, O'Brien, & McCoy, 2007). Thus, perceptions of individual-level discrimination that counter adolescents' worldview that the larger American society is not Islamophobic may undermine their self-esteem, which may ultimately prompt adolescents to decrease their belonging to the more powerful host-national group. However, when adolescents perceived high levels of group-level Islamophobia, their perceptions of individual-level religious discrimination were linked to a stronger belongingness to the American group, which in turn was related to less internalizing and externalizing problems. Hence, it appears that Muslim American adolescents who perceive that their personal experiences of discrimination are not unique to themselves identify more strongly with the more powerful group that is the source of unfair treatment.

It is possible that these adolescents attribute the source of their individual perceptions of discrimination to a common struggle of their religious group, which may ultimately prompt them to identify more strongly with the national group in an attempt to reduce the unfair treatment of their religious group. Thus, Muslim American adolescents might increase their sense of

belonging to the more powerful host national group because their identification with this group may help them to gain social power and change the status quo to redress power inequalities between their socially devalued religious group and the superordinate national group (e.g., Roccas & Brewer, 2002; Roccas, Schwartz, & Amit, 2010; Sirin & Katsiaficas, 2011). Consequently, adolescents' increasing personal experiences with religious discrimination may, in fact, increase their identification with the mainstream American group because they could be motivated to identify with the mainstream group to gain social power (e.g., Craig & Richeson, 2016). This quest for more social power may be an attempt to redress social inequalities targeted towards themselves and their group as a whole and thereby reduce the suffering of all stigmatized ingroup members.

Findings of the first dissertation paper make unique theoretical and empirical contributions to the literature and have important implications for the practice of psychology. Despite rising anti-Muslim sentiments, there were a dearth of studies examining what it means to be Muslim and American for adolescents in the context of religious discrimination and Islamophobia. The first dissertation study contributed to our understanding of the implications of religious-based discrimination on Muslim American adolescents' religious and national social identities and their mental health. Moreover, our findings underscore the urgent need for more comprehensive programs and policies that target discrimination at multiple levels and foster Muslim American adolescents' multiple group identities. Finally, these findings may also have implications for the practice of psychology. Mental health professionals working with Muslim American adolescents may facilitate these youth's cultural and social assets, such as their sense of belonging to the Muslim and American groups. These assets may reduce and/or prevent

mental health difficulties, including depressive symptoms, anxiety, withdrawal as well as aggressive and delinquent behaviors.

### Chapter 3: Paper Two<sup>2</sup>

The overall aim of the second paper (see Balkaya-Ince, Cheah, Kiang, & Tahseen, 2020) was to examine the dynamic momentary (i.e., daily) processes underlying the relations between mothers' religious socialization practices and Muslim American adolescents' subsequent civic engagement focusing on two dimensions, civic attitudes (i.e., beliefs and values about contributing to issues of public concern) and behaviors (i.e., engagement in specific activities that serve the common good). Previous studies have indicated that parents' cultural socialization strengthens the social identities of their adolescent children (e.g., Neblett, Banks, Cooper & Small-Glover, 2013) and a more positive social identity promotes civic participation on behalf of one's valued identity group (e.g., Chan & Latzman, 2015). Thus, adolescents' social identity may mediate the links between cultural socialization and civic engagement, but this effect had not been empirically examined. Moreover, religious-specific socialization and religious identity are understudied within the developmental sciences (Verkuyten, 2016; Vermeer & Scheepers, 2012).

Social identities are a multidimensional construct. Two commonly studied dimensions include private regard, which refers to individuals' positive feelings about their group membership, and centrality, which reflects the importance of group membership to individuals' self-concept (Sellers, Smith, Shelton, Rowley, & Chavous, 1998). Although social identities vary on a momentary and daily basis (e.g., Yip & Douglass, 2013), most approaches continue to measure identity in a static manner. Moreover, whether different dimensions of identity (e.g.,

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<sup>2</sup>Balkaya-Ince, M., Cheah, C. S. L., Kiang, L., & Tahseen, M. (2020). Exploring daily mediating pathways of religious identity in the associations between maternal religious socialization and Muslim American adolescents' civic engagement. *Developmental Psychology*, 56(8), 1446–1457. <https://doi.org/10.1037/dev0000856>

regard, centrality) affect one another on a situational basis remains unknown. The interplay between different identity dimensions can inform our understanding of daily identity processes, and the nature of these dynamic relations can have implications for real-time interventions to promote civic engagement.

To address these limitations, the second dissertation study aimed: (1) to explore momentary fluctuations and temporal relations between Muslim American adolescents' religious private regard and centrality during random assessments six times per day across 14 days; and (2) to examine if Muslim American adolescents' momentary religious private regard and centrality mediated the associations between adolescents' prior perceptions of maternal religious socialization and their subsequent civic attitudes and behaviors.

Participants included 95 Muslim American adolescents (51.6% male) between the ages of 13- to 18-years ( $M = 16.5$  years,  $SD = 1.6$  years). Most adolescents (90%) were second-generation, and adolescents who were born abroad (10%) moved to the U.S. between the ages of 1 month and 5 years and had lived in the U.S. for an average of 13.3 years ( $SD = 2.6$  years; on average 81% of their lives). We focused on Muslim American adolescents of Asian and Arab/Middle Eastern backgrounds as their daily identity and religious socialization experiences could be significantly different from those of Black Muslim youth (Ahmed, Patel, & Hashem, 2015). Participants were from South-Asian (76%, e.g., Pakistan), Middle Eastern/Arab/North African (21%, e.g., Egypt, Turkey), and other Asian descent (3%, e.g., Indonesia). The majority of adolescents lived in two-parent households with their parents (94% married, 5% divorced, 1% widowed) and siblings ( $M = 2.6$  siblings).

Participants were recruited in religious and non-religious organizations across the Maryland-Washington D.C. metropolitan area. Interested adolescents were screened for

eligibility, which was limited to self-identified Muslim adolescents between the ages of 13- to 18-years, who were either born in the United States or migrated before the age of 6 years and owned a smartphone or other electronic device with access to the Internet. Data collection was conducted in three phases. In Phase 1, adolescents reported on their stable perceptions of maternal religious socialization in the previous 12 months in an online survey using an adapted version of the Ethnic-Racial Socialization Scale ( $\alpha = .87$ ; Hughes & Johnson, 2001; Bebiroglu, Roskam, & van der Straten Waillet, 2015). Approximately one week later, adolescents started Phase 2 of the study answering experience sampling surveys on their momentary religious identities (i.e., private regard and centrality) using the adapted Multidimensional Model of Black Identity Scale-Short (MIBI-S; Martin, Wout, Sellers, & Gonzales, 2005), which showed acceptable within-person ( $\alpha_{\text{private regard}} = .69$ ,  $\alpha_{\text{centrality}} = .47$ ) and excellent between-person reliability ( $\alpha_{\text{private regard}} = .96$ ,  $\alpha_{\text{centrality}} = .91$ ) that were similar to reliability estimates reported in previous experience sampling studies (Seaton & Iida, 2019).

During this time, adolescents were randomly prompted to complete short surveys (~2-5 minutes) via text messages sent to their cellphones 6 times per day beginning after school until 11 pm over the course of 14 days, for a total of 84 possible experience surveys per adolescent. Comparable to other signal-contingent experience sampling studies (Wang et al., 2017), Muslim American adolescents completed 66% of the surveys on average (56 out of 84 possible surveys per person). In Phase 3, approximately 2 weeks after the experience surveys, adolescents completed a final online survey regarding their civic attitudes ( $\alpha = .84$ ; Participatory Citizen and Political Efficacy Scale; Flanagan, Syvertsen, & Stout 2007) and behaviors ( $\alpha = .78$ ; Civic Engagement Indicators Questionnaire; Andolina, Keeter, Zukin, & Jenkins, 2003). Adolescents' civic engagement was assessed as a global construct and did not differentiate whether

participants felt civic responsibility or were civically active within the context of their religious minority or the mainstream American group.

Dynamic Structural Equation Modeling (Asparouhov, Hamaker, & Muthén, 2018) revealed positive autoregressive and cross-lagged relations between religious private regard and centrality, suggesting that the importance adolescents ascribed to their religious group and their positive feelings towards their religious group reinforced one another in a cyclical nature over the course of their daily lives. Specifically, adolescents who felt more positively about their religious group at a given moment, relative to their own average levels of private regard, were more likely to report their belonging to the Muslim group as being of critical importance to their self-concept at subsequent momentary assessments and vice versa. These bidirectional findings suggest that the two religious identity dimensions are in a dynamic temporal interplay and reinforce each other over the course of adolescents' daily lives.

Moreover, adolescents' momentary religious identities differentially mediated the associations between maternal religious socialization and civic attitudes and behaviors, suggesting specificity in these developmental processes. Specifically, adolescents' positive feelings about their religious group belonging in their daily lives (private regard), an affective dimension of their religious identity, was linked to greater civic attitudes but not to civic behaviors. In contrast, the significance of adolescents' religious identity to their self-concept (centrality), which represents the relative importance they ascribe to their religious group belonging, was linked to more civic behaviors, but not their civic attitudes. Hence, our results suggested nuances in how different aspects of social identity could have different implications for the way in which civic engagement is embodied. The link between positive regard and attitudes (rather than behavior) could be due to the idea that private regard is affect-laden and

largely assesses beliefs and feelings. In contrast, centrality may reflect a commitment to one's social group and could promote actions, behaviors, and purpose in support of one's group, consistent with Eriksonian and social identity theories. Religious centrality may promote civic behaviors because the central tenets of Islam encourage altruistic behaviors and preach patience, tolerance, and peaceful contributions to the "common good" as exemplary behavior in the face of perceived injustice and systematic oppression. Hence, adolescents who feel that Islam is a central aspect of their self-image in their daily lives may be more likely to engage in civic behaviors because such behaviors embody Islamic ethics of social justice and uphold values that are critical to redress inequities.

The findings from this study have important theoretical, methodological, and applied implications for intervention or prevention programs and policies. In addition to filling important theoretical gaps by examining a topic (i.e., religious socialization and religious identity) and population that remains underrepresented in developmental sciences, we also used an innovative data-analytic approach of combining cross-lagged within-person analyses with between-person analyses using both experience sampling and survey data. This methodological approach helped us to understand the dynamic relations between the two dimensions of adolescents' daily religious identities as well as its mediating roles in the links between maternal religious socialization and adolescents' civic attitudes and behaviors. Moreover, our findings can also inform the practice of psychology in various social settings (e.g., policies, intervention or prevention programs). Although Muslim adolescents' religious identity is often depicted in public discourses as undermining their participation in the mainstream Western democratic system (Fleischmann, Martinovic, & Böhm, 2016; Ocampo et al., 2018), our study provides empirical evidence to refute these negative portrayals. In fact, we found that adolescents who

internalized their mothers' religious socialization messages and enacted them in their daily lives by identifying more strongly with their religious group felt greater civic responsibility and engaged in more civic behaviors, such as volunteering, engaging in leadership activities in their communities, and raising or donating money to nonprofit organizations. However, there was specificity in these processes in that the importance adolescents ascribed to being Muslim promoted civic behaviors, while their positive feelings about belonging to the Muslim group were linked to feeling greater civic responsibility. Hence, intervention/prevention programs and mental health professionals interested in promoting Muslim American adolescents' civic engagement may find it strategic to help families foster religious socialization and youth's internalization of the tenets of Islam as a means of increasing civic responsibility and action.

## Chapter 4: Paper Three

Parents are key socialization agents of cultural values (e.g., regarding ethnicity-race, religion, gender, etc.) during adolescence but there is not much empirical evidence for whether and how levels of parents' cultural socialization change throughout adolescence. Although studies have documented parenting changes throughout children's development (e.g., Ansari & Crosnoe, 2015; Hsieh, Stright, & Yen, 2017; Kim, Pears, Fisher, Connelly, & Landsverk, 2010), the majority of the literature on changes in parenting throughout their offspring's development has focused on the very early years to middle-childhood. In fact, it was observed that most studies of parenting during the developmental period of adolescence and beyond assess parenting practices - including cultural socialization practices - as a stable construct. The aim of the third dissertation study was to examine if and how the frequency of maternal socialization messages, specifically regarding religion, changed throughout adolescence (ages 13 to 18 years) for Muslim American girls and boys.

A burgeoning body of research indicates that parents' cultural socialization practices promote social identity development among minority adolescents both concurrently and over time (e.g., Hughes et al., 2006; Neblett et al., 2013; Y. Wang, Cham, Aladin, & Yip, 2019). Similarly, preliminary research (second dissertation study) suggests that maternal socialization of religious values promotes adolescents' religious identities in their daily lives (Balkaya-Ince et al., 2020). Although there is evidence to indicate that the magnitude of the associations between ethnic-racial socialization and adolescents' ethnic-racial identity changes throughout adolescence (Douglass & Umaña-Taylor, 2016; Huguley, M-T. Wang, Vasquez, & Guo, 2019), whether the impact of mothers' religious socialization practices varies throughout adolescence and differs for boys and girls was not known.

The purpose of the third dissertation study was to gain a better understanding of potential developmental (i.e., age) and gender differences in the perception of mothers' religious socialization practices as well as the relations between maternal religious socialization and Muslim American adolescents' religious identity across adolescence (13–18 years). We addressed these gaps in the literature by exploring potential time-varying and gender differences in: (1) maternal religious socialization practices, and (2) the relations between maternal religious socialization and Muslim-American adolescents' religious identity.

### **Maternal Religious Socialization and Adolescents' Religious Identities**

Although adolescence is a time of increased autonomy and contact with multiple socialization agents (e.g., peers, teachers), parents continue to play an important role in transmitting their cultural values and a sense of connection to their cultural group to their children (Hughes et al., 2006; Steinberg, 2020). Most research on parents' cultural socialization has focused on the transmission of ethnic-racial values, which promotes adolescents' sense of belonging to their ethnic-racial group and is linked to psychosocial and behavioral adjustment outcomes (e.g., self-esteem, academic competence, social acceptance, connection to others, depressive symptoms, anxiety; see M-T. Wang, Henry, Smith, Huguley, & Guo, 2020 for a meta-analytic summary).

Religion and religious identity play an important role in youth's development, particularly in the lives of minority and immigrant-origin youth, because it can meet spiritual needs and offer psycho-social benefits and social distinctiveness in the multicultural American context (Abo-Zena & Rana, 2015; Ysseldyk, Matheson, & Anisman, 2010). Nevertheless, studies examining the implications of parents' *religious* socialization on adolescents' development and well-being are limited (Balkaya-Ince et al., 2020; Vermeer & Scheepers, 2012).

For religious minorities such as Muslim adolescents in the United States, religious socialization practices may be the most salient way in which parents transmit values, practices, and a sense of belonging to their children. Although studies on religious minorities in the United States are scarce, preliminary evidence indicates that Muslim adolescents in Belgium reported higher levels of religious socialization than their Christian and non-affiliated peers (Bebiroglu, Roskam, & van der Straten Waillet, 2015), emphasizing the importance of religious socialization for Muslim youth living in Western contexts. Parents' religious socialization messages are transmitted through engaging in discussions and answering questions about religion, encouraging their children to engage in religious practices, and reinforcing or punishing behaviors based on their religious beliefs (Boyatzis & Janicki, 2003; Özdikmenli-Demir & Şahin-Kütük, 2012).

Adolescents and young adults with parents who were religious or transmitted religious socialization messages had more positive adjustment outcomes, including greater social connectedness, social competence, self-esteem, psychological well-being, and fewer depressive symptoms (Butler-Barnes, Martin, & Boyd, 2017; Krause, 2012; Krause & Ellison, 2007; Seol & Lee, 2012). Relatedly, using experience sampling methods, a recent study revealed that Muslim American adolescents who perceived their mothers as engaging in religious socialization practices were more likely to feel positively about belonging to the Muslim group and consider their religious group membership as central to their self-concept in their daily lives. In turn, these adolescents' daily religious identities over the course of 14 days were linked to greater civic attitudes and behaviors (Balkaya-Ince et al., 2020). Despite these documented positive effects of parents' religious socialization on positive youth adjustment, no study to date has examined how parents' religious socialization as well as its implications for adolescents' religious identity change throughout adolescence. The third dissertation study aimed to examine

these relations and focused on how the frequency of mothers' religious socialization practices as well as its effects on adolescents' religious identity changed throughout adolescence and based on adolescents' gender.

We assessed mothers' religious socialization for several reasons. Most of the parenting literature assesses parenting as a collective construct without specifying the target socialization agent (e.g., mother or father; M.-T. Wang et al., 2020). However, there can be important differences in mothers' and fathers' socialization practices and/or its impact on their children's development (Smith-Bynum et al., 2017). Thus, it is important to differentiate between maternal and paternal parenting practices (e.g., McHale et al., 2006). The current study focused on mothers' religious socialization practices because mothers tend to be the primary socialization agents and it remains largely unknown what specific practices and means fathers use to transmit cultural and religious values as well as what function they have on adolescents' social identities.

### **Age-Related Changes in Levels of Maternal Religious Socialization**

Despite growing evidence highlighting the importance of religious socialization for religious minority adolescents, little is known about *how* parents' religious socialization practices might change throughout adolescents' development (e.g., based on their age). Parenting practices are proposed to change throughout children's development (García Coll et al., 1996), but developmental changes in parenting practices remain understudied. In fact, most of the empirical evidence on changes in parenting based on children's age is based on the early years to middle-childhood (e.g., Ansari & Crosnoe, 2015; Hsieh, Stright, & Yen, 2017; Kim, Pears, Fisher, Connelly, & Landsverk, 2010), overlooking the changes in parenting practices during adolescence.

However, mothers might be less likely to engage in conversations about religion, such as about the history of Islam, with their children until they believe that children can comprehend and internalize their parents' messages. With increasing cognitive abilities and an increased interest in religion as a result of their religious identity formation during this developmental period, adolescents may also elicit more religious socialization from their parents as they develop. Indeed, it is likely that the levels of parents' religious socialization messages increase when adolescents start initiating dialogue about religion and asking questions about religious values and practices. Relatedly, within the framework of cultural socialization, researchers have suggested that there may be increased levels of parental socialization during developmental periods when children are consolidating their cultural knowledge and their ethnic-racial group identity (Hughes et al., 2006; McHale et al., 2006).

The few studies on differences in ethnic-racial socialization based on child age suggest that parental cultural socialization messages tend to increase along with child age (Hughes & Chen, 1997; McHale et al., 2006). However, other studies found little to no evidence of aged-based differences in the frequency of cultural socialization practices (e.g., Davis, Smith-Bynum, Saleem, Francois, & Lambert, 2017; Hu, Zhou, & Lee, 2017; Lee, Grotevant, Hellerstedt, & Gunnar, 2006). Given that these inconclusive findings could be partially due to methodological differences across studies, Hudgens (2012) examined if the frequency of parental cultural socialization practices changes throughout adolescence as reported by adolescents and their parents. The findings from this dissertation study indicated that while there were no changes in parent-reported cultural socialization; adolescent-reported cultural socialization showed a decreasing tendency from grades 5 to 12. However, the adolescent-reported model of change in parental cultural socialization showed a poor fit and this dissertation was not published. Thus,

these findings need to be interpreted with caution. Hence, although researchers posit that the frequency of parents' socialization practices can vary across the various developmental stages with children's growing competencies and experiences, more systematic studies are needed to examine potential changes in parents' cultural socialization throughout their children's development (Hughes et al., 2006; Hughes & Johnson, 2001; Umaña-Taylor & Fine, 2004; M-T. Wang et al., 2020).

Despite an increasing number of cross-sectional and longitudinal studies on cultural socialization, most of these studies use cultural socialization as a predictor or moderator of concurrent or subsequent levels of adolescents' social identities and/or their psychological adjustment (e.g., Williams et al., 2020; Woo et al., 2020; Zhou, Lee, & Syed, 2019). However, far less is known about how the frequency of parents' transmission of cultural socialization messages may vary based on their children's age. In particular, it is important to identify how the average levels of parents' socialization messages vary based on adolescents' continuous age, rather than their age group, because the former approach can reveal more nuanced information regarding potential transition points in parenting practices. Despite some preliminary evidence on changes in cultural and ethnic-racial socialization practices, how and when parents' *religious* socialization practices change throughout adolescence has also remained unexplored. This study aimed to explore potential developmental changes in parents' religious socialization practices across their children's ages of 13 to 18 years. Rather than combining age groups and imposing a certain developmental pattern of change (e.g., linear, quadratic, cubic, etc.), the current study used an innovative statistical approach that allowed us to elucidate more complex patterns of change that can vary freely across adolescents' age.

## **Age-Varying Associations between Religious Socialization and Religious Identity**

Adolescence is a fundamental developmental period for refining identities as youth navigate various social contexts in their daily lives and become more aware of the existence and significance of their social group memberships as a result of increasing social-cognitive capabilities (Erikson, 1980; Phinney, 2003). Minority adolescents' identification with various social groups, including their sense of belonging to their ethnic-racial or religious minority groups, is an indicator of their positive development and adjustment (e.g., Balkaya-Ince et al., 2020; Evans et al., 2012; Neblett, Rivas-Drake, & Umaña-Taylor, 2012). Developmental and social psychologists define social identities as a multidimensional construct that refer to individuals' attitudes and beliefs about their social group memberships and the processes by which these attitudes and beliefs develop over time (Tajfel, 1981; Umaña-Taylor et al., 2014; Verkuyten, 2016). Most theories and empirical research on social identities are focused on adolescents' ethnic-racial identity development with significantly less attention to other important social group memberships, including adolescents' religious identity. These studies on ethnic-racial identity often describe adolescents' social identity development as progressing from a passive towards a more sophisticated and active construction of their social group membership (e.g., see Douglass & Umaña-Taylor, 2016 for summary). Researchers have argued that adolescents who are actively exploring their identities might be more receptive to parents' cultural socialization messages (e.g., Huguley et al., 2019). In other words, while younger adolescents might be less receptive to their parents' socialization practices because they are less likely to have actively explored their group belonging yet, their sense of belonging to social groups might increasingly be informed by their socialization experiences as their social and cognitive capabilities develop further during middle- and late-adolescence. It is also possible

that the impact of parental socialization intensifies with adolescents' age because these parenting practices accumulate and therefore shape a stronger identity among older as compared to younger adolescents (Huguley et al., 2019).

Indeed, studies with adolescents from various minority groups have consistently shown that ethnic-racial and religious cultural socialization messages promote adolescents' ethnic-racial and religious identities, respectively (e.g., Balkaya-Ince et al., 2020; Huguley et al., 2019). However, adolescents' increased need for autonomy and movement toward independence might reduce the degree to which parents' socialization practices influence adolescents' sense of belonging to their social group. Hence, the relations between parents' cultural socialization and adolescents' social identities might change as adolescents develop. Indeed, preliminary evidence from Latinx adolescents indicates that the relations between parental ethnic-racial socialization and adolescents' ethnic-racial identity change based on adolescents' age (Douglass & Umaña-Taylor, 2016). Relatedly, a recent meta-analysis revealed that the positive associations between parents' ethnic-racial socialization practices and children's ethnic-racial identity were strongest for high school students as compared to middle school and elementary school students (Huguley et al., 2019). These findings suggest that the effects of parental cultural socialization can vary substantially across developmental periods, but whether the implications of adolescents' perceptions of religious socialization vary similarly across adolescence remains unexplored.

Given our current knowledge in the field, the aim of the proposed study was to build on these previous findings to examine whether the relations between maternal *religious socialization* and adolescents' *religious identity* change as a function of Muslim American adolescents' age and their gender (see below). For Muslim minority adolescents living in Western contexts, their religious identity is the most salient form of social identity (Abo-Zena &

Midgette, 2019; Tahseen & Cheah, 2018; Verkuyten, 2016). The negative public sentiments towards Islam might lead Muslim minority adolescents' religious identity to be central to their lives because their sense of belonging to the Muslim group can provide comfort and grounding amidst the challenges of navigating strained intergroup relations. For example, the negative public narratives may increase the saliency of their religious identity through proximal contexts such as discourses of negative media attention. Muslim adolescents' religious identity may also become more salient during adolescence because puberty marks a time where youth transition towards adult-like accountability in the Islamic faith (Abo-Zena, 2019). During this period, Muslim adolescents' awareness of their religious identity may increase because Islamic teachings set rules regarding many developmental tasks, including relationships with the opposite sex, the use of alcohol, and modest clothing.

Moreover, Muslim minority adolescents' religious identity might also be salient in their daily lives because it simultaneously meets their social identity motives for distinctiveness and belonging (e.g., see Vignoles, 2011). While Muslim American youth unite with other Muslim individuals within a religious faith practice through shared religious beliefs and practices, their religious identity also meets their need for distinctiveness given that their coreligionists (i.e., the Muslim ummah) is diverse with regard to ethnic-racial representation. However, the developmental literature has overlooked the role of parents' religious socialization practices in informing youth's sense of belonging to their religious group. Hence, the current study expands on the literature on ethnic-racial socialization and ethnic-racial identity to examine time-varying effects of religious socialization on Muslim American adolescents' sense of belonging to their religious group.

In the current study, we focused on adolescents' sense of belonging to their religious group, rather than other dimensions of their religious identity (e.g., centrality and private regard) because adolescents' belonging to their religious group has a special meaning among religious minorities (Abo-Zena & Midgette, 2019). For example, religious identity can meet individuals' need for social affiliation, increase their self-esteem, provide them with meaning and purpose, and serve as a means to cope with identity threats (Özdikmenli-Demir, & Şahin-Kütük, 2012; Vignoles, 2011; Ysseldyk, 2010). In addition, having a sense of belonging to one's religious group can also deflect adolescents from negative adjustment (e.g., engagement in risk behaviors) and promote positive youth development (Özdikmenli-Demir, & Şahin-Kütük, 2012; Vignoles, 2011; Ysseldyk, 2010). For Muslim American adolescents, a sense of belonging to their religious group may also simultaneously provide distinctiveness from the broader mainstream American population *and* social support within their religious communities (e.g., feeling understood despite being "different").

### **Gender as a Moderator**

Researchers have argued that boys and girls might experience their social groups differently because of potential differences in societal expectations (e.g., Suárez-Orozco & Qin, 2006). Importantly, parents' expectations of the gendered social experiences of their sons and daughters have been posited to impact their cultural socialization messages. Specifically, researchers have argued that girls might be more likely to receive cultural socialization messages because they are considered to play a key role in the transmission of culture within the family (Hill, 2001). Moreover, the gender intensification hypothesis (Hill & Lynch, 1983) argues that these gender differences might be more pronounced with increased pressure to conform to culturally sanctioned gender roles as youth mature (see Priess-Groben & Lindberg, 2018 for a

summary). However, the findings from research examining gender differences in parental cultural socialization practices are mixed. Some studies documented differences in the amount of socialization messages parents convey towards their daughters vs. sons, such that mothers delivered more socialization messages to promote cultural socialization and cultural pride to girls compared to boys (e.g., Lesane-Brown, Brown, Tanner-Smith, & Bruce, 2010; McHale et al., 2006; Neblett, Smalls, Ford, Nguyễn, & Sellers, 2009). However, other studies reported no gender differences in parents' cultural socialization practices (Harris-Britt et al., 2007; Hudgens, 2012; Hughes, Witherspoon, Rivas-Drake, & West-Bey, 2009). These inconclusive findings could be due to differences in the specific socialization practices assessed, research methods, source of information (i.e., parent vs. mother vs. father), parents' ethnicity/race, and their child's age.

Similarly, the degree of parents' religious socialization practices as well as their implications for Muslim American adolescents' religious identities might not only vary based on adolescents' age but also their gender. Although Islamic teachings consider men and women as equals, there are different roles and expectations for men and women within their families (Daneshpour, 2012). While men are expected to provide for and protect the family unit, women are typically viewed as responsible for transmitting religious knowledge and values (Sayeed, 2013). Hence, mothers may engage in more religious socialization practices with their Muslim daughters in an attempt to prepare them for their future expected role as caretakers who can transmit religious practices and values to future generations. Moreover, studies on ethnic-racial and religious *majority* adolescents and adults have consistently shown that girls or women were more religious compared to boys and men (e.g., see Beit-Hallahmi, 2014 for a review), likely because they might be receiving more religious socialization messages. In turn, these gendered

religious socialization experiences and expectations may differentially affect girls' and boys' religious identities throughout adolescence, which were explored in the current study.

### **Covariates of Maternal Religious Socialization and Religious Identity**

Previous studies have identified a number of covariates that can impact parents' cultural and/or religious socialization practices as well as adolescents' social identity processes. In addition to the systematic examination of adolescents' age and gender in the frequency of maternal religious socialization and its association with adolescents' religious identity, several covariates need to be considered.

For adolescents with histories of family immigration, the salience of their social identities (in particular their ethnic-racial identity) may vary based on their nativity. Adolescents who were born outside of the United States may explore their ethnic-racial identities earlier and receive more cultural socialization messages from their parents compared to U.S.-born adolescents (e.g., Umaña-Taylor, Zeiders, & Updegraff, 2013). Similarly, studies on immigrant-origin adolescents' religiosity have similarly indicated that first-generation adolescents who were born outside of the United States tended to display higher levels of religious involvement and were more likely to adhere to their parents' religious traditions than U.S.-born adolescents from immigrant backgrounds (Zhai & Stokes, 2009). Although our sample comprises primarily of second-generation adolescent children of immigrants, we controlled for nativity because similar differences in heightened religiosity and receptivity to maternal religious socialization are possible for Muslim American adolescents.

Another demographic covariate that has been identified in the literature is adolescents' ethnicity-race. Although findings are inconclusive, some studies have indicated that the frequency of parents' transmission of cultural and/or religious socialization messages might vary

across different cultural groups (e.g., M.-T. Wang et al., 2020). Adolescents' social identity development may also vary across ethnic-racial groups (see Umaña-Taylor et al., 2014 for a detailed summary). Maybe even more pertinent to the conceptual model in this study is the role of ethnicity-race in the associations between parental cultural socialization and adolescents' social identity. Specifically, a recent meta-analysis indicated that the strength of the positive associations between ethnic-racial socialization and ethnic-racial identity was strongest among Latinx youth as compared to African American and Asian American adolescents (Huguley et al., 2019). Relatedly, studies on religiosity have indicated that there might be cross-cultural and ethnic-racial differences in the importance and salience of religion (e.g., Moaddel, 2007; Pew Research Center, 2018b). For example, immigrant mothers who were raised in countries in which religion was a salient aspect of their socialization experience may place a greater emphasis on transmitting religious values and practices to their children (Abo-Zena & Barry, 2013). As the frequency and impact of maternal religious socialization messages on adolescents' religious identity might vary across different cultural groups, we controlled for adolescents' self-reported ethnic-racial group membership in all analyses.

Indicators of parental socioeconomic status (SES) or social class, including parental income or parental education, have also been reported as potential confounding variables in the associations between cultural socialization and adolescents' social identities. For example, some early studies on ethnic-racial socialization indicated that parents with higher compared to lower self-reported income and education levels reported engaging in cultural socialization practices more frequently (e.g., Caughy et al., 2002; McHale et al., 2006). Given that the SES-based differences in parents' socialization practices may shape adolescents' social identities (see

Hughes et al., 2006 for a detailed summary), our analyses controlled for parents' education levels.

We did not control for several other potential confounding factors that have been reported in the literature. Specifically, more recent studies have begun to unfold the role of parent-adolescent relationships, broader family/parenting context, neighborhood characteristics, and parents' own experiences (e.g., discrimination) and cultural indicators (e.g., cultural involvement, identity) in the parental ethnic-racial cultural socialization process (e.g., see Umaña-Taylor & Hill, 2020 for a detailed summary). In addition to these potential variables, parents' own religious indicators (e.g., religiosity, religious identity) and aspects of adolescents' religiosity (e.g., religiosity, other dimensions of religious identity, such as saliency or centrality) might play a role in the relations of interest. However, we did not have information on parents' religious indicators and other dimensions of adolescents' religious identity and were not able to control for these variables in the current study. To summarize, the current study controlled for adolescents' nativity, ethnicity/race, and SES (i.e., parental education).

### **Aims and Hypotheses**

The aim of the proposed study was to explore time-varying and gender differences in: (1) adolescents' perceptions of their mothers' religious socialization practices, and (2) the relations between maternal religious socialization and adolescents' religious identity among a sample of Muslim American adolescents. Consistent with previous research on ethnic-racial socialization and identity, we expected mothers' religious socialization to increase with adolescents' age (see Hughes et al., 2006). Moreover, we expected Muslim American girls to report higher levels of maternal religious socialization than boys, but given a lack of prior evidence of developmental

gender-based differences in cultural socialization, no specific hypotheses were formulated about gender-based mean differences in youth's perceptions of religious socialization across time.

Regarding our second aim and in line with findings focusing on adolescents' ethnic-racial experiences (Douglass & Umaña-Taylor, 2016; Huguley et al., 2019), we expected the relations between adolescents' perceptions of religious socialization to be more pronounced (i.e., stronger) during the transition from middle- to late-adolescence. However, due to the lack of research on gender differences in the time-varying associations between parents' cultural socialization practices and adolescents' social identities, our aim regarding how these relations might differ for Muslim girls vs. boys throughout adolescence were exploratory.

## **Method**

### **Participants**

The original sample consisted of 226 participants from which six were excluded from the analyses because they did not meet the participation criteria or withdrew from the study. Specifically, two participants were excluded because they did not have mothers and could therefore not report on maternal religious socialization practices. Four participants were removed from the analyses because they withdrew from the online survey without answering most of the demographic questions or the measures assessing religious socialization and religious identity. The resulting analysis sample consisted of 220 Muslim American adolescents between 13 to 18 years of age (59.5% female,  $M_{age} = 16.8$  years,  $SD_{age} = 1.5$ ).

Participants' demographic information is shown in Table 1. Most participants (89%) were born in the United States and were second- (88%) or third-generation (1%) immigrants. A small number of adolescents in the sample were first-generation immigrants (11%), who moved to the United States before the age of 6 (Range = 1 month to 5.8 years,  $M = 2.9$  years,  $SD = 1.9$

years) and had lived in the United States for an average of 13.8 years and more than 81% of their lives. Adolescents were from South-Asian (71%), Arab/Middle Eastern (24%), South-East-Asian (2%), or bicultural ethnic backgrounds (3%). Most of the adolescents lived in households with their siblings and married parents. Participants' parents tended to be highly educated with more than 70% of mothers and fathers having received some college education (see Table 1). On average, participants were satisfied with their financial situation and evaluated their families' economic standing as middle-class ( $M = 6.6$ ,  $SD = 1.8$  on a 10-point scale with higher scores indicating better economic standing).

[INSERT TABLE 1 HERE]

## **Procedures**

The data for the third study of this dissertation project came from a larger cross-sectional study examining the adjustment and development of Muslim American adolescents in the United States that was conducted from December 2016 through February 2018. Concerted efforts were made to gain the trust of adolescents and their parents and to increase rapport at a time of heightened fear of surveillance and distrust of researchers by Muslim communities (Amer & Bagasra, 2013; Pew Research Center, 2017b). First, we met with and obtained the endorsement and support of key leaders of Muslim communities in the Maryland-Washington D.C. metropolitan area. To facilitate participant recruitment, letters of endorsement were obtained, and recruitment fliers were distributed at community centers, events tailored towards Muslim youth, and online via social media. The research team consisted only of Muslim research assistants, who were trained in culturally-sensitive data collection approaches.

Participants were recruited from various religious (e.g., mosques) and non-religious organizations (e.g., community centers, supermarkets, schools, youth groups) across the region.

In addition, the research team and religious community leaders distributed information about the study online in social media platforms and listservs across the United States. Research assistants asked interested adolescents questions to determine if they met the eligibility criteria to participate in the study, including: (1) self-identifying as a Muslim adolescents of Asian and Arab/Middle Eastern background, regardless of their level of religiosity, (2) being between the ages of 13- to 18-years, and (3) being either born in or having migrated to the United States before the age of 6 years. We did not include Black Muslim adolescents in the current study because their religious socialization and religious identity processes have been proposed to be unique due to the unique racial history of Black individuals and communities in the United States (Ahmed & Abdallah, 2018; Ahmed, Patel, & Hashem, 2015), which warrants a more specific focus. Similarly, other youth from immigrant backgrounds, such as Latinx Muslim adolescents, were not included as they tend to be socialized by parents who are converts (Pew Research Center, 2018b). Prior to data collection, research assistants explained the data collection procedures and incentives to the participants and their parents. Once adolescents' assent and their parents' consent were obtained, research assistants prompted participating adolescents to complete an online survey at a place of their preference with internet access. Adolescents received a \$15 check for their participation.

## **Measures**

**Demographic Information.** Participants completed a questionnaire to report on their demographic information, such as their age, gender, nativity, ethnicity/race, immigration background, and information about their family (e.g., parents' marital status, age, education, socioeconomic status).

**Maternal Religious Socialization.** Maternal religious socialization was assessed with an adapted version of the cultural socialization subscale of the Ethnic-Racial Socialization Scale (Hughes & Johnson, 2001). Similar to previous studies which have validated this measure for the use of religious socialization practices (Bebiroglu et al., 2015), the four items of the subscale were reworded to reflect mothers' religious socialization practices in the past 12 months (e.g., *"My mother talked to me about important people or events in Islamic history"*; see Appendix A) and were answered on a 5-point scale ranging from "Never" to "Very often." A composite mean score was created with higher scores indicating greater perceptions of maternal religious socialization. This measure has been shown to be valid and reliable among Muslim American adolescents (Balkaya-Ince et al., 2020) and showed good internal consistency in the current study ( $\alpha = .80$ ). Although the ERSS may not capture all relevant practices and means mothers may engage in while transmitting religious values to their children, we used this scale for several reasons. First, very few measures exist to capture parents' religious socialization. Most of the existing measures (e.g., Martin et al., 2003) use very broad indicators, such as parents' religiosity. However, the focus of the current study was to assess parents' transmission of religious values, which is related but conceptually different from their religiosity. Moreover, other religious socialization scales (e.g., see Seol & Lee, 2012) were developed based on the Christian faith and some of the practices assessed in these scales were not relevant for transmitting religious values among religious minorities, such as Muslim American adolescents. Given that previous studies had used and validated the adapted version of the ERSS among religious minority youth (Balkaya-Ince et al., 2020; Bebiroglu et al., 2015), including Muslim American adolescents, we used this measure despite its limitations.

**Religious Identity.** An adapted version of the Multigroup Ethnic Identity Measure (MEIM, Phinney, 1992) was used to measure adolescents' religious (i.e., Muslim) identity (see Appendix B). The items of the Affirmation and Belonging subscale were reworded to reflect adolescents' feelings about their sense of belonging to the Muslim religious group (e.g., "*I have a strong sense of belonging to the Muslim group*"), which was assessed on a 5-point Likert scale ranging from "Strongly disagree" to "Strongly agree." Composite mean scores were created for the five-item subscale with higher scores indicating a stronger Muslim identity. This measure has been found to be valid and reliable among Muslim American adolescents (Balkaya, Cheah, & Tahseen, 2019) and indicated high internal consistency in the current study ( $\alpha = .91$ ).

### **Data Analytic Plan**

#### **Preliminary Analyses**

Prior to employing the statistical analyses of interest, a series of preliminary analyses were conducted. The reliability analyses (see descriptions of the measures for more detailed information) revealed high internal consistency of the measurement instruments. To test for TVEM's only assumption of smooth change over time for the entire sample (i.e., not discontinuous; Lanza, Vasilenko, Liu, Li, & Piper, 2014), distributions of the time variable (i.e., adolescents' age) were examined for continuity. As shown in Figure 1, the time variable of age showed continuous representation over time. Dummy variables for participants' self-reported nativity (0 = not born in U.S., 1 = U.S.-born), ethnicity/race (with South-Asian participants as the reference group), their parents' education (0 = less than at least some college education, 1 = at least some college education) were examined as covariates in all analyses.

[INSERT FIGURE 1 HERE]

## **Time-Varying Effect Modeling**

Time-varying Effect Modeling (TVEM; Lanza et al., 2014; Tan, Shiyko, Li, Li, & Dierker, 2012) was conducted using the SAS %TVEM macro (Li et al., 2017), where adolescents' continuous age was used as the time-varying variable. TVEM is an extension of linear regression modeling that allows intercept and slope coefficients to vary freely as a function of time. In contrast to traditional regression and multilevel modeling, TVEM can reveal more nuanced patterns of relations between variables that can change freely over time because it is a nonparametric model that does not impose constraints on the shapes of intercepts and slopes. Instead of enforcing a shape to describe the relations between variables (e.g., linear, quadratic, cubic, etc.), TVEM allowed shapes to be estimated freely from the available data. To test potential changes over time, a p-spline approach was used in which the optimal number of knots that determine the shape and degree of smoothness were estimated by the %TVEM software using a Maximum Likelihood approach (Tan et al., 2012).

Consistent with previous studies assessing gender as a moderator in time-varying mean levels as well as time-varying associations between variables, we estimated separate models for girls and boys. To examine the first aim as to whether mothers' use of religious socialization practices for girls and boys change across adolescence, we estimated a time-varying intercept model. To answer the second research question regarding whether the strength of the associations between maternal religious socialization practices and Muslim American girls' and boys' religious identities change over time, a time-varying slope function model was estimated. Significance was determined with 95% Confidence Intervals (CI), such that periods where age-specific 95% CIs do not overlap with 0 indicate statistical significance at  $p$  smaller than .05 level. Gender differences in the age-varying effects in the intercept-only as well as slope models were

ascertained by comparing the CIs of the models for girls vs. boys. When the CIs between groups (i.e., girls and boys) did not overlap, the mean levels or the relations between the variables of interest were conservatively deemed to be significantly different for the two groups at any given time point (Vasilenko, 2017).

TVEM was used for several reasons. First, the cross-sectional nature of the data would not have allowed us to employ a latent or individual growth trajectory approach to examine changes in adolescents' perceptions of maternal religious socialization and associated changes with their religious identities *over time* (i.e., first vs. subsequent waves of data collection). The innovative nature of TVEM allows us to examine how the frequency of religious socialization as well as its association with religious identity change based on adolescents' age with cross-sectional data of adolescents across a wide age range (13 to 18 years). Moreover, compared to other alternative approaches of examining age-based differences using cross-sectional data (e.g., correlation, regression, ANOVA by grouping ages) and longitudinal trajectory approaches (e.g., latent growth curve modeling, individual growth curve modeling/Multilevel modeling), TVEM offers more flexibility for exploring complex age-based changes because it estimates these changes freely based on the available data without imposing a specific shape on the models.

## **Results**

### **Descriptive Statistics**

Descriptive statistics and bivariate correlations among the variables are presented in Table 2. On average, adolescents reported levels around the middle of the scale ( $M = 3.24$ ,  $SD = 1.03$ , on a 5-point scale) of maternal religious socialization over the past 12 months and high levels of religious identity on the 5-point scale ( $M = 4.26$ ,  $SD = 0.77$ ). Whereas religious identity was not associated with adolescents' age ( $r(218) = -.03$ ,  $p = .62$ ), maternal religious socialization

was negatively associated with adolescents' age ( $r(218) = -.20, p = .003$ ), indicating that older adolescents reported lower levels of maternal religious socialization. No significant gender differences were found in adolescents' perceptions of maternal religious socialization ( $t(218) = 0.09, p = .93$ ), indicating that girls and boys have reported similar average levels of religious socialization practices across the sample. Moreover, adolescents' reports of their mothers' religious socialization practices were positively correlated with their religious identity ( $r(218) = .19, p = .005$ ), suggesting that participants who perceived their mothers as engaging in greater religious socialization were more likely to feel a greater sense of belonging to their religious group. The demographic control variables of nativity, parental education, and ethnicity were not significantly related to maternal religious socialization and adolescents' religious identity ( $ps > .05$ ).

[INSERT TABLE 2 HERE]

### **Age-Related Changes in Maternal Religious Socialization**

Results of the intercept models (see Figure 2) revealed some gendered time-varying trends in Muslim American adolescents' perceptions of maternal religious socialization.

[INSERT FIGURE 2 HERE]

Specifically, while girls reported that their mothers "often" engaged in religious socialization practices (at age 13.5  $\beta = 4.03$ , 95% CI [3.16; 4.91]), there was a continuous and linear declining pattern in their perceptions of maternal religious socialization with older adolescents only reporting having received religious socialization messages "sometimes" during the past 12 months (at age 18.9  $\beta = 2.93$ , 95% CI [2.48; 3.39]) after controlling for the non-significant dummy-coded demographic control variables of nativity ( $\beta = .05$ , robust  $SE = .33$ , robust  $z = 0.15, p = .88$ ), ethnicity ( $\beta s < .76$ , robust  $z s < 1.08, ps > .24$ ), and parental education ( $\beta$

= .22, robust  $SE = .21$ , robust  $z = 1.06$ ,  $p = .29$ ). Despite fluctuations of more than 1-point on a 5-point Likert-scale, the declining trend in girls' reports of maternal religious socialization did not reach statistical significance because the confidence intervals at the lower range of the age distribution (i.e., early adolescence) were overly wide due to the limited sample size of girls who were 13 to 14 years old.

In contrast, boys reported significantly lower levels of maternal religious socialization at early adolescence (at age 13.2  $\beta = 2.72$ , 95% CI [2.38; 3.06]) as indicated by the 95% CIs. However in contrast to girls declining tendency, boys' reports showed a significant increase and peaked around mid-adolescence (at age 15.0  $\beta = 3.61$ , 95% CI [3.24; 3.98]), and significantly declined thereafter at the transition between late adolescence and young adulthood (at age 18.9  $\beta = 2.07$ , 95% CI [1.36; 2.79]). The dummy-coded demographic control variables of nativity ( $\beta = .00$ , robust  $SE = .22$ , robust  $z = 0.00$ ,  $p = .99$ ) and parental education ( $\beta = .23$ , robust  $SE = .26$ , robust  $z = 0.90$ ,  $p = .37$ ) were not related to male adolescents' reports of maternal religious socialization, but South-East Asian ( $\beta = .81$ , robust  $SE = .42$ , robust  $z = 1.92$ ,  $p = .05$ ) and bicultural boys ( $\beta = .90$ , robust  $SE = .29$ , robust  $z = 3.11$ ,  $p = .002$ ) reported significantly higher levels of religious socialization compared to South-Asian boys. No statistical difference was observed between South-Asian and Arab/Middle Eastern adolescents' perceived frequency in maternal religious socialization ( $\beta = .16$ , robust  $SE = .25$ , robust  $z = 0.63$ ,  $p = .53$ ). Overall, boys' perceptions of maternal religious socialization showed more variation than those of girls with estimated coefficients showing fluctuations between "rarely" (around 2.08) to somewhat "often" (around 3.61) throughout adolescence equaling to a difference of approximately 1.53 points on a 5-point-scale.

## Age-Varying Associations between Maternal Religious Socialization and Religious Identity

The time-varying slopes for girls and boys are illustrated in Figure 3.

[INSERT FIGURE 3 HERE]

Across adolescence, maternal religious socialization was positively related to Muslim girls' religious identity, but these positive relations were not significant (as indicated by the confidence intervals not including zero), except during a short period around late adolescence. From approximately 17 through 18 years of age, maternal religious socialization was linked to higher levels of religious identity among girls (at age 17  $\beta = .30$ , 95% CI [.02; .58; at age 18  $\beta = .31$ , 95% CI [.01; .62]) after controlling for the non-significant covariates of nativity ( $\beta = -.04$ , robust  $SE = .31$ , robust  $z = -0.12$ ,  $p = .91$ ), ethnicity ( $\beta s < .74$ , robust  $z s < 0.70$ ,  $p s > .27$ ), and parental education ( $\beta = .26$ , robust  $SE = .21$ , robust  $z = 1.97$ ,  $p = .23$ ).

For boys, the slopes between maternal religious socialization and religious identity showed a quadratic trend fluctuating from negative but non-significant slopes around early adolescence (at age 13.2  $\beta = -.27$ , 95% CI [-.94; .39], to increasingly positive and statistically significant slopes during mid- through late adolescence around 15.5 ( $\beta = .32$ , 95% CI [.02; .62] through 18.4 years ( $\beta = .04$ , 95% CI [.02; .80]), followed by a slight yet not statistically significant decline in the effect size of the slopes during the transition of late adolescence to young adulthood (at age 18.9  $\beta = .19$ , 95% CI [-.56; .93]). Nativity ( $\beta = -.04$ , robust  $SE = .23$ , robust  $z = -0.18$ ,  $p = .86$ ) and parents' education ( $\beta = .32$ , robust  $SE = .25$ , robust  $z = 1.27$ ,  $p = .20$ ) were not significant covariates in the time-varying slopes. Moreover, the time-varying slopes between maternal religious socialization and religious identity did not show significant differences between Arab/Middle Eastern and South-Asian boys ( $\beta = .20$ , robust  $SE = .22$ , robust  $z = 0.92$ ,  $p = .36$ ). However, both, South-East-Asian ( $\beta = -1.06$ , robust  $SE = .46$ , robust  $z = -$

2.33,  $p = .02$ ) as well as bicultural ( $\beta = -1.60$ , robust  $SE = .49$ , robust  $z = -3.30$ ,  $p < .001$ ) boys' estimates of time-varying slopes differed from those of South-Asian boys, such that they were more negative.

## Discussion

Religion can serve as an important protective factor in the lives of young people (Hardy et al., 2019), especially for ethnic-racial minority youth from immigrant-origin backgrounds (Abo-Zena & Barry, 2013). Religion can provide a sense of belonging, purpose, and meaning, which can serve as important assets for young individuals during a time in which they navigate normative developmental changes (Benavides, 2012; Ebstyne King & Furrow, 2004; Richert & Saide, in press; Schnitker & Emmons, 2013). In particular, religious socialization messages have been posited to strengthen young individuals' social identities because they provide clear and explicit messages of values and behavioral guidance that can be important during a developmental period in which adolescents begin to explore who they are and how they feel about their social group memberships (Balkaya-Ince et al., 2020; Clayton-Jones et al., 2016). Religious socialization is more salient and may play an even more pivotal role in the positive development of ethnic-racial and religious minority youth because it can help them cope with acculturative stressors and provide a clear meaning system as adolescents attempt to bridge the value systems of their parents' heritage culture and the mainstream host culture (Abo-Zena & Barry, 2013).

Most previous studies on the role of religious processes in adolescents' and young adults' adjustment and development have primarily been conducted on European-American or ethnic-racial minority youth who identify with the faith of the dominant society (Abo-Zena & Barry, 2013; Ahmed, 2009). Far less is known about the role of religion among religious minority

youth and no previous study has explored gender-based and developmental differences in parental religious socialization and their effects on Muslim American adolescents' religious identity. The purpose of this study was to contribute to this scant literature by examining developmental and gender-based differences in Muslim American adolescent boys' and girls' perceptions of maternal religious socialization and its impact on their sense of belonging to the Muslim group.

### **Age-Related Changes in Levels of Maternal Religious Socialization**

Our findings indicated that there were developmental trends in Muslim American adolescents' perceptions of maternal religious socialization with increasing age across adolescence, which differed for girls and boys. Specifically, during early adolescence Muslim American girls reported that their mothers frequently engaged in religious socialization practices. However, girls' perceptions showed a continuous and linearly declining trend during middle through late adolescence, such that older adolescents perceived their mothers to only occasionally engage in religious socialization practices. It is important to note that the declining tendency did not reach significance, likely because the sample size of girls was underpowered during periods in which maternal religious socialization was reported at the highest (i.e., early adolescence  $n = 5$  of 13 year-old girls) in comparison to the lowest points (i.e., late adolescence  $n = 45$  of 18 year-old girls). In contrast to girls' frequent reports of maternal religious socialization during early adolescence, boys perceived their mothers to only occasionally engage in religious socialization during this time. However, Muslim American boys perceived their mothers to engage in more frequent conversations about Islam with increasing age, peaking during mid-adolescence (i.e., age 15) where boys reported their mothers to transmit religious messages frequently. After this increase from early to mid-adolescence, Muslim American boys'

perceptions of religious socialization declined particularly during the transition from late adolescence to early emerging adulthood, such that older boys perceived their mothers to rarely convey religious socialization messages.

Some ethnic-racial differences were observed among Muslim American boys' but not girls' reports of maternal religious socialization, such that South-East Asian and bicultural boys perceived their mothers as transmitting religious socialization messages more frequently compared to their South-Asian peers. These ethnic-racial differences could be due to the different functions mothers' religious socialization messages may play depending on their own socialization experiences in their country of origin as well as the family constellation. Specifically, religion and culture have been described as being intricately intertwined among some South-East Asian countries, such as Indonesia (French et al., 2014). South-East Asian mothers may therefore engage in religious socialization messages more frequently because these messages simultaneously convey religious *and* cultural socialization messages. Relatedly, religion may also serve a different function for bicultural boys. It is possible that mothers may emphasize religious socialization messages more in bicultural families because religion unifies cultural differences that might be observed among their mothers and fathers who come from different cultural backgrounds.

Overall, the gender-based differences in Muslim American boys' and girls' perceptions of maternal religious socialization in early adolescence based on our time-varying intercept models are consistent with existing theories and some empirical findings, which suggest that daughters receive more cultural and religious socialization messages than sons because girls are expected to become primary caregivers who play a greater role in transmitting these values and practices to future generations (Beit-Hallahmi, 2014; Lesane-Brown, Brown, Tanner-Smith, & Bruce,

2010; McHale et al., 2006; Miller & Stark, 2002; Neblett, Smalls, Ford, Nguyễn, & Sellers, 2009). However, our findings indicated that the gender-based differences in adolescents' perceptions of maternal religious socialization were only salient during early adolescence, suggesting a complex interplay in how cultural expectations might shape girls and boys differentially throughout their development.

Specifically, while older Muslim American girls perceived their mothers to convey religious socialization messages less frequently compared to their younger counterparts, boys' perceptions showed a more complex age-based trend throughout adolescence: Differences in Muslim American girls' and boys' reports of religious socialization during early adolescence diminished and became nearly identical during mid-adolescence, a time during which girls reported decreased while boys reported increased perceptions of maternal religious socialization. These opposite trends in girls' and boys' reports in religious socialization practices faded off during late adolescence, a time during which girls and boys both reported receiving religious socialization messages least frequently. Whereas the early gender-based differences around age 13 in our sample are consistent with gender differences documented in the broader literature on religiosity among Christian adults living in primarily European and North American cultural contexts (Beit-Hallahmi, 2014; Pew Research Center, 2016) as well as immigrant-origin Muslim and Christian Arab American adults (Amer & Hovey, 2007), the nonsignificant gender differences we found from mid- through late-adolescence align with previous research revealing no gender differences in Muslim American emerging adults' (Sirin & Katsiaficas, 2011) and Muslim adults' religiosity (Pew Research Center, 2016).

It is possible that the gender differences in early adolescence could be due to other gender-based developmental differences in Muslim American girls' and boys' lives. The onset of

puberty marks an important transition point from being considered a child into holding adult-like religious accountability in Muslim adolescents' lives (e.g., Abo-Zena, 2019). It is likely that parents may engage in greater socialization messages, particularly towards their daughters, during the pubertal period to prepare and ensure that their children are aware of their religious responsibilities. Since the onset of puberty tends to be slightly earlier and more discrete for girls with the onset of menarche (Abo-Zena, 2019; Brix et al., 2019), it is possible that mothers may indeed be conveying more religious socialization messages towards their daughters during this time. Mothers may be holding off on increasing these socialization messages towards their sons because the markers for the onset of puberty in boys may be more variable. Moreover, mothers may also prefer to delegate the responsibility of their sons' religious socialization during the transition to puberty to their fathers because gender-based religious requisites may be more easily communicated by fathers with less embarrassment compared to mothers.

Together, these findings appear to counter the gender intensification hypothesis which has posited that gender differences might increase as adolescents age because differences in societal expectations might become more pronounced for girls with increasing societal pressures to conform to gender role expectations (see Priess-Groben & Lindberg, 2018 for a summary). Given that daughters are thought to receive greater religious socialization from their mothers compared to sons, one would expect mothers to transmit even more religious socialization messages to their daughters during adolescence while boys are granted more autonomy and independence during this time. One explanation for the opposite patterns in our study with high religious socialization mean levels during early adolescence and decreasing tendency during late adolescence might be because mothers may begin to transmit religious socialization messages to their daughters during the pre-adolescence or even childhood years. Indeed, studies have found

that children develop religious concepts early in their development, which are often shaped by their parents' socialization practices (e.g. Saide & Richert, 2020). Researchers have also argued that children are exposed to religious socialization messages in ways that are quite different from other cultural practices (Richert, Saide, Lesage, & Shaman, 2016). Thus, the observed decline in girls' reports during middle through late adolescence might reflect a "regression to the mean" in theoretical terms. That is, mothers may see less of a need to continue to talk to their daughters about important people or events in Islamic history or encourage them to read books about Muslims because their daughters may have already shown an increased propensity to internalize these continued socialization messages because they may have begun to do so in childhood (e.g., Özdikmenli-Demir, & Şahin-Kütük, 2012; Richert, Shaman, Saide, & Lesage, 2016; Scourfield, Gilliat-Ray, Khan, & Otri, 2019). Hence, the gender intensification may have begun earlier in childhood for Muslim American girls and may have faded during adolescence. In other words, the gender differences between girls' and boys' reports in religious socialization may be observed earlier because the pressure to conform to their respective gender roles may have occurred earlier in Muslim girls' and boys' development since religion tends to be socialized at younger ages (e.g., early adolescence or pre-adolescence). Consistent with female gender roles, girls may have received greater religious socialization to prepare them for their future role as mothers who are responsible for transmitting these values to their own children. In contrast, boys might have been granted more autonomy and independence in the pre-adolescent years in an attempt to socialize them to be self-sufficient and capable of taking care of the family financially as married adults.

Importantly, this decline in girls' perceptions of religious socialization has to be interpreted in light of the religious socialization scale that was used. Although older Muslim

American girls may perceive their mothers as encouraging them less frequently to read books about Muslims and engage in conversations about influential Islamic figures and history, these items might not be reflective of the broader spectrum of their religious socialization experiences. Other religious socialization practices that were not captured in this study might in fact show a different developmental trend throughout the adolescent years. For example, mothers may likely convey religious values; encourage their daughters to participate in religious-based youth groups (e.g., halaqas); set expectations, rules, and restrictions based on Islamic teachings (e.g., pre-marital dating, alcohol consumption); and engage in practices to reinforce modest religious clothing more frequently during adolescence and emerging adulthood (Ahmed & Abdallah, 2018; Özdikmenli-Demir & Şahin-Kütük, 2012).

The low levels of reported religious socialization by boys in early adolescence is consistent with the gender intensification hypothesis (Hill & Lynch, 1983) and indicates that Muslim mothers may engage in lower levels of religious socialization with their boys than girls in the pre-adolescent years. However, as Muslim American boys are granted more autonomy and independence with increasing age, mothers may feel increased pressure to accelerate their religious socialization to protect their sons. In particular, with the social and physical changes in their sons' lives as a result of their increased autonomy (e.g., unsupervised interactions with peers, greater exposure to non-Muslim peers, autonomy to drive, dating, etc.) mothers might be concerned that their sons could lose their religious identity and adopt values or engage in behaviors that are incompatible with Islamic teachings and ethics. Such concerns that their children may lose their cultural and religious beliefs and practices are referred to as cultural or religious reaffirmation and are common among parents from minority backgrounds and might trigger an increase in cultural or religious socialization (e.g., De Hoon & van Tubergen, 2014;

Güngör, Fleischmann, Phalet, & Maliepaard, 2013; Phalet, Fleischmann, & Hillekens, 2018).

Although Muslim girls also show increased desire for autonomy during adolescence, their parents tend to exert more control and monitoring towards their daughters as compared to their sons due to greater societal and cultural pressures for girls to conform (Ayubi, 2019).

Relatedly, it is possible that the different developmental patterns of religious socialization experiences between girls and boys could be attributed to differences in “triggers” that may prompt mothers to convey religious socialization messages. For daughters, the onset of puberty and particularly menarche during early adolescence may alert mothers that it is time to convey religious socialization messages to try to prevent their daughters from engaging in behaviors that are not aligned with their faith. The onset of their sons’ puberty may be more variable because it is not marked by a distinct biological transition point (e.g., such as menarche for girls). Thus, mothers’ religious socialization messages for boys may begin later in adolescence after they are more certain that their sons have reached puberty or have been alerted that their sons may be exposed to or engaging in religiously prohibited behaviors (e.g., premarital dating, alcohol consumption, etc.).

Despite gender differences in the age-based variation in Muslim American adolescents’ reports of maternal religious socialization, the general decreasing developmental trend in Muslim American girls’ and boys’ reports of maternal religious socialization, particularly in late adolescence. These findings contradicted our hypotheses proposing age-based increases (Hughes & Chen, 1997; McHale et al., 2006) perhaps because of the earlier onset of religious socialization in comparison to ethnic-racial socialization (Richert et al., 2016). However, our findings were more consistent with the literature on religiosity. Although existing findings are mixed, most studies suggest that many aspects of religiosity decrease over time among youth

who identify with the dominant religion (e.g., Hardy, Pratt, Pancer, Olsen, & Lawford, 2011; Steinman & Zimmerman, 2004) and among Muslim minority adolescents and young adults (Maliepaard & Lubbers, 2013). Researchers attribute changes in the developmental patterns in religiosity to changing socialization experiences in individuals' lives, including their parental socialization experiences (e.g., Beit-Hallahmi, 2014). Importantly, recent studies have documented that there might be important within-group heterogeneity (e.g., Goodman & Dyer, 2020; Kliewer et al., 2020; Wright, Yendork, & Kliewer, 2018) and cultural differences in the developmental patterns of religiosity (e.g., French, Christ, Lu, & Purwono, 2014; Simsek, Fleischmann, & van Tubergen, 2019), such that different patterns of change in religiosity within a given sample could be shaped by variations in youth's socialization experiences as well as their minority vs. majority status within different cultural contexts. Our findings of nuanced age-based and gender-varying patterns in Muslim American adolescents' religious socialization experiences are consistent with these recent findings that suggest a complex interplay between differences in adolescents' socialization experiences and developmental changes.

### **Age-Varying Associations between Maternal Religious Socialization and Religious Identity**

Previous cross-sectional, longitudinal, and meta-analytic studies have shown that parental ethnic-racial socialization promotes ethnic-racial identity development among minority adolescents' and emerging adults (e.g., Anglin & Wade, 2007; Hughes, Rivas-Drake, Witherspoon, & West-Bey, 2009; Huguley et al., 2019; Neblett et al., 2013). Researchers have argued that parents' transmission of cultural values, customs, traditions, history, and pride provide adolescents with cultural assets and adaptive conceptualization of their ethnic-racial group that can increase their self-concept and promote positive feelings and a sense of belonging to their ethnic-racial group membership (e.g., see Umaña-Taylor & Hill, 2020 for a summary).

However, some preliminary evidence suggests that the associations between parental ethnic-racial socialization and adolescents' ethnic-racial identity may vary across adolescence, in that the relations might be stronger at specific developmental periods (Douglass & Umaña-Taylor, 2016; Huguley et al., 2019). Similar to the accumulating evidence from the ethnic-racial socialization literature, an experience sampling study has shown that mothers' transmission of religious socialization messages helps to strengthen adolescents' daily religious identity and their subsequent civic engagement (Balkaya-Ince et al., 2020). Moreover, a study has indicated that various indicators of the socialization context within the family can contribute to a stronger sense of cultural (i.e., Arab) and bicultural (i.e., Arab-American) identity among Arab Muslim young adults (Britto & Amer, 2007).

Findings from the present study built on this previous literature and revealed that the positive effect of mothers' *religious* socialization practices on adolescents' sense of belonging to the religious group were strongest at the later stages of adolescence for Muslim Americans, but the strength of the associations also differed based on gender especially during early adolescence. The age-based differences are consistent with previous findings (Huguley et al., 2019), in which the relations between parental ethnic-racial socialization and adolescents' exploration of their ethnic-racial identity and a global indicator of ethnic-racial identity (i.e., combination of multiple identity dimensions) become stronger with adolescents' age. However, our study focused on adolescents' sense of belonging to the Muslim group and revealed that the strength of these associations may not only change based on adolescents' age but also their gender. Specifically, Muslim American girls' perceptions of maternal religious socialization only predicted a stronger sense of belonging to the Muslim group during a short time frame in late adolescence around 17 through 18 years of age. In contrast, boys' perceptions of maternal

religious socialization were linked to a stronger sense of Muslim identity during a wider developmental timeframe spanning from mid- through late adolescence around the ages of 15.5 through 18.4.

Although boys reported lower levels of maternal religious socialization in early adolescence, they appeared to reap the positive effects of these socialization messages for their sense of belonging to the Muslim group shortly after the observed “spurt” in their reports in maternal religious socialization and at an earlier age and for a longer duration of time during adolescence compared to girls. These differential associations between maternal religious socialization and religious identity between Muslim American girls and boys could be attributed to differences in their broader socialization experiences. Specifically, Muslim boys are often granted more autonomy and independence at earlier ages than Muslim girls, who express frustration about being patronized by their parents often until they are adults (Ayubi, 2019). Boys, in contrast to girls, may therefore have earlier opportunities to explore their religious identity, internalize their mothers’ religious socialization messages, and enact them in their lives by feeling a greater sense of belonging in a self-determined manner.

Muslim American girls tend to be able to separate themselves from their parents more during later times in adolescence than boys, and in particular during the transition from high school to college, because their parents tend to have more limited opportunities to exert control over their daughters during this time (e.g., more unsupervised time, living out of state). These differential gender dynamics and inequalities in the relationships between mothers and their sons vs. daughters are often the product of cultural applications and male-dominated interpretations of religion (known as *tafseer*) rather than religious teachings of the Qur’an, which preach and protect the equality of men and women (Daneshpour, 2017). However, the differential treatment

may allow Muslim American boys to be more receptive to internalizing their mothers' religious socialization messages and expressing them through their sense of belonging to their religious group at earlier ages because they might be able to explore what it means to be a Muslim adolescent in the United States due to earlier opportunities for autonomous internalization of these messages. Indeed, the literature on ethnic-racial socialization (Hughes et al., 2006; M-T. Wang et al., 2020) as well as developmental theories on the effects of parental socialization (e.g., Ryan & Deci, 2000), have both suggested that children and adolescents are more likely to internalize socialization messages when youth have had the opportunity to actively explore these messages and enact them in their lives in a self-determined manner.

### **Limitations**

Several limitations of the current study need to be addressed. Despite the flexibility of the TVEM and its promise for answering innovative research questions that can inform the design of more targeted intervention programs, findings from the TVEM cannot be interpreted as representing causal associations. Namely, our findings indicating differences in the strength of the associations between maternal religious socialization and adolescents' religious identity over the course of adolescence merely confirm a time-varying association between the constructs without evidence for the temporality of these effects. The cross-sectional nature of the data imposed further constraints on causal interpretations as we cannot disentangle whether maternal religious socialization predicts future changes in adolescents' religious identity, or vice versa. Moreover, the observed age-based differences in the frequency of maternal religious socialization as well as its associations with adolescents' religious identity could also be due to other time-varying or time-invariant factors, such as cohort effects (i.e., rather than developmental age effects), changes in identity exploration over the course of adolescence, or the

effects of other salient transitional periods (e.g., transitioning from middle to high school). Although TVEM allows us to control for such potential time-varying and time-invariant covariates, inherent limitations due to the cross-sectional nature of the data do not allow us to rule out the possibility of alternative explanations for the observed age-based changes in maternal religious socialization and its associations with adolescents' religious identity.

Another limitation concerns the use of self-report data for all variables of interest, which might inflate the relations between the constructs due to common-method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Although data from multiple informants (e.g., maternal instead of adolescent report on religious socialization practices) would enable a more rigorous exploration of time-varying psychological processes, we were more interested in adolescents' perceptions of their socialization experiences than mothers' perceptions of their own engagement in socialization practices. Studies have indicated that there are substantial discrepancies between parent and child/adolescent reports of parenting, including cultural socialization practices (e.g., Hou et al., 2020; Hudgens, 2012; Hughes, Hagelskamp, Way, & Foust, 2009; Peck, Brodish, Banerjee, & Eccles, 2014), suggesting that cultural socialization messages parents believe to transmit may not be noticed or internalized by their children. Thus, findings from the present study based on adolescents' own perceptions are important because they can guide the design of future studies that might use multiple informants and methods (e.g., observations) to reveal the unique and combined effects of these processes on adolescent development.

Moreover, the focus of the third study on adolescents' perceptions of their mothers' religious socialization practices overlooks the important role their fathers might be playing in transmitting religious values and practices. Indeed, Islamic teachings posit that mothers and fathers play complementary but unique roles in socializing their children to believe and act in

accordance to their religion (see Hossain & Juhari, 2015 for a summary). The results of our study cannot be generalized to fathers who likely engage in different religious socialization practices that were not assessed in the current study and/or their practices might have a different impact on their children's sense of belonging to the religious group. For example, Muslim fathers may have a more controlling tone in socializing religion and use fewer strategies that convey volitional functioning and autonomy, particularly within the context of socializing their daughters because they consider themselves to be responsible for protecting their daughters from harm and upholding their honor (Daneshpour, 2017; Özdikmenli-Demir & Şahin-Kütük, 2012; Silva, 2019). Thus, it is possible that Muslim fathers' religious socialization may not promote adolescents' sense of belonging as strongly as mothers' practices, which may be happening in a more nurturing socialization context. While the findings of our study can be informative as mothers tend to be the primary caregivers, future studies should also include adolescents' perceptions of their fathers' religious socialization practices in order to have a more comprehensive understanding of parents' joint role in Muslim American adolescents' religious identity development. Specifically, future studies should assess how fathers transmit religious values, practices, and pride as well as what implications these practices have on adolescents' religious identity.

Importantly, daughters and sons may also be differentially affected by their mothers' versus fathers' socialization practices (Özdikmenli-Demir & Şahin-Kütük, 2012). For example, Muslim fathers may participate in public religious activities, such as attending Jummah prayers (i.e., Friday afternoon prayers in congregation, which are obligatory for Muslim men), more frequently with their sons than daughters because they are often separated by gender. By attending these activities with their sons, Muslim fathers may potentially play a greater role in

instilling a sense of belonging to the Muslim group among their sons, while Muslim mothers may contribute more to the development of a religious identity among their daughters. Thus, while mothers may overall be more effective in promoting affective ties to their religious group than fathers due to the more nurturing nature of their interactions, these effects may also vary by child gender.

In addition to mothers' and fathers' unique role in transmitting religious values, practices, and a sense of belonging to their daughters and sons, it is also important to note that there might be a dynamic interplay between maternal and paternal religious socialization practices, which may also vary based on their children's age and gender. Thus, mothers and fathers may increase or decrease their religious socialization practices or deflect certain practices to one another depending on the needs of their growing children. For example, once their daughters reach puberty, Muslim fathers may reduce their involvement in the religious socialization process of their daughters in an attempt to respect their privacy. Although the onset of puberty represents a developmental time that marks the transition towards adult-level religious accountability in Islam (Abo-Zena, 2019), fathers may not be as involved in their daughters' engagement in religious practices (e.g., praying five times per day, fasting) in a fear of embarrassing their daughters who are exempted from these religious practices during their menstruation. During this time, mothers may compensate and increase their religious socialization messages towards their daughters in order to prepare and ensure that their daughters understand their religious responsibilities related to their gender role. In contrast, fathers may be more involved in their sons' religious socialization during early adolescence to ensure that their sons are prepared and informed about their religious responsibilities as specified within the male gender role. Hence, with their

growing and changing needs of their sons and daughters, mothers and fathers may delegate and coordinate different religious socialization practices to each other.

Another limitation concerns the measurement of religious socialization in the present study. Although previous studies have validated the use of this cultural socialization scale for measuring Muslim minority parents' religious socialization practices (Bebiroglu et al., 2015), the scale may not assess unique nuances with regard to the content (i.e., specific practices, such as encouragement to participate in religious rituals, conveying religious values) and means of delivering religious socialization messages (e.g., behavioral modeling vs. active religious instruction) that may be salient during adolescence and emphasized among Muslim American families. Specifically, mothers may also be transmitting religious values, practices, and a sense of belonging to the religious group in ways that were not captured in the current study, such as increasing their children's awareness of discrimination based on their religious group membership (i.e., preparation for bias), conveying religious values, "channeling" their children to engage with coreligionist peers and participate in religious-based groups as well as setting expectations and rules based on Islamic teachings (Ahmed & Abdallah, 2018; Özdikmenli-Demir & Şahin-Kütük, 2012). Therefore, a more focused examination of how religious minority parents transmit their religious history, values, and practices to their children is needed.

The findings of this study also have to be interpreted with caution because the few items were primarily focused on how frequently mothers encouraged their children to read books about Muslims and engaged in conversations about important people or events in Islamic history. In particular, the frequency of mothers' religious socialization practices as well as its effects on adolescents' sense of belonging might have shown a different pattern if a more comprehensive measure of religious socialization were used. For example, consistent with the religious

channeling hypothesis (see Martin et al., 2003 for a review), in addition to more direct socialization practices within the home, mothers may engage in other external-based socialization such as encouraging their adolescent daughters and sons to participate in religious youth-based groups. Although we observed a decline of the more home-based practices that were captured in the current study, these practices could be more appropriate for younger children. Other practices, such as parents' channeling, which were not assessed in our study, may in fact increase in frequency during adolescence. Moreover, channeling adolescents into youth-based religious groups may also be more strongly linked to fostering a sense of belonging to the religious group with increasing independence compared to practices such as encouraging youth to read books and engaging in conversations about the history of Islam.

It is also important to note that mothers' religious socialization practices might be closely intertwined with their cultural socialization practices (e.g., see French et al., 2014 for an example of how Islam can be interwoven with culture). Indeed, researchers have argued that religious and cultural values tend to be strongly connected, especially among more traditional and first-generation ethnic-racial minority immigrants because their religious values, practices, and knowledge were socialized within their ethnic and cultural contexts (e.g., Amer & Kayyali, 2016; Ahmed & Reddy, 2007; Beyers, 2017; Cadge & Ecklund, 2007; Kim, 2011). Immigrant and ethnic-racial minority Muslim parents may also embed cultural socialization messages within religious socialization messages because they might worry that their children may assimilate and lose their religious and cultural identity in the course of their acculturation process to the mainstream American culture (Ahmed, 2009). In contrast, their U.S.-born adolescents may be able to separate their religion more explicitly from their cultural and ethnic practices as their

religious socialization happens within a cultural context where their families' ethnic and cultural practices can be more clearly distinguished from religious teachings.

Despite our attempts to recruit a diverse body of Muslim American adolescents with varying levels of religious socialization experiences and religious identity, our recruitment methods and location of our sample introduced limitations to the generalizability of our findings. Specifically, consistent with most studies on Muslims Americans (e.g., see Amer & Bagasra, 2013 for a review), participants in this study were recruited based on their self-identification as Muslim American adolescents. Even though we articulated and encouraged adolescents with any levels of religiosity and religious identity to participate in the study, adolescents with higher levels of belonging to the Muslim group may have been more willing to self-identify and therefore participate in the study. Hence, our results may only be applicable to adolescents with higher levels of religious identity. For example, it is possible that adolescents with lower religious identities perceive their mothers to be engaging in lower levels of religious socialization, which may be more stable across adolescence and might be less receptive to their parents' socialization efforts.

Consistent with other studies, contextual factors and demographic characteristics of participants may be important factors to shape the processes in the current study, which could pose limitations on the generalizability of our findings. For example, most of our participants were middle-class and primarily second-generation Muslim American adolescents from immigrant backgrounds living in the Maryland/Washington metropolitan area in the United States. Given that the majority of participants lived in a region and neighborhoods where the Muslim population is larger than compared to the overall nation (Association of Religion Data Archives, 2010) and in a more liberal sociocultural context, adolescents in our sample may live

in neighborhoods with more positive characteristics (e.g., Witherspoon & Hughes, 2014), such as more mosques, diversity, religious representation, and acceptance. Therefore, they may be exposed to greater religious socialization in and outside of the family (e.g., peer groups, religious communities), and feel more comfortable in internalizing these messages through their identities than those living in less diverse and more hostile regions in the United States. Indeed, previous research has shown that neighborhood contexts can shape the parenting practices of ethnic-racial and immigrant-origin parents (e.g., see Witherspoon, May, McDonald, Boggs, & Bámaca-Colbert, 2019) and provide a source of pride, affirmation, and belonging for young elementary-school children (Witherspoon, Daniels, Mason, & Smith, 2016). The experiences of the adolescents in our study may also be different from their peers who live in religious and cultural enclaves because youth living in enclaves may be receiving religious socialization messages from various resources in their immediate contexts beyond their parents, including peers and immediate neighborhoods. The relative importance of parents' socialization messages may be lessened in environments with multiple socialization agents.

Our participants were also predominantly middle-class and well-educated, and their religious socialization and identity experiences might be different from their peers whose families might be less educated and from lower socioeconomic backgrounds. For example, participants in our study may have had greater opportunities for religious socialization experiences given that their mothers have more emotional and financial resources to engage in religious socialization messages (e.g., religious camps, driving their children to youth groups, more time to engage in religious socialization). While adolescents in our study are representative of immigrant-origin Muslim families in the United States and the Maryland, Virginia, and Washington D.C. metropolitan area (Pew Research Center, 2017), our findings may not be

generalizable to families who are living in other regions in the United States, are from lower SES backgrounds, are refugees, or have lived in the United States for multiple generations (i.e., third generation or higher).

We only focused on Muslim American adolescents from Arab/Middle Eastern and Asian backgrounds for reasons specified previously. The perceptions and experiences of participants in this study could be different among Muslim American adolescents from other ethnic-racial and cultural backgrounds. Therefore, our findings might not apply to the experiences of other groups, such as African American Muslim youth. For example, African American Muslim adolescents tend to come from a history of slavery, be more likely to have parents who are converts (Pew Research Center, 2018b), have extended family networks that are more diverse with regard to religious affiliation (Ahmed & Abdallah, 2018), and experience anti-Black micro-aggressions and racism from non-Black coreligionists (Hill, Kowalski, Kocak, Muhammad, Ahmed, Islam, 2015). These differences in cultural and socialization experiences may have differential implications on their sense of belonging to the Muslim community. Hence, future studies should explore these processes among Muslim American adolescents from different ethnic-racial backgrounds, socioeconomic status, generational status, and across different regional and cultural contexts.

Although the specificity of our sample poses limitations to the generalizability of our findings, it also represents a strength. The Muslim American population is a very diverse group from a myriad of cultural and demographic backgrounds (e.g., varying levels of SES and education), including but not limited to immigrant, immigrant-origin, non-immigrant, and refugees from Arab, Middle Eastern, North American, Latinx, European, and African-American backgrounds (Amer & Bagasra, 2013; Pew Research Center, 2017). Hence, a specific focus on a

subgroup of this population may be beneficial because it enables us to tease apart psychological processes without homogenizing the diverse experiences of this understudied population.

## **Implications**

The findings from this third dissertation study have important theoretical, methodological, and practical implications. Researchers generally agree that parenting practices, including cultural socialization, change across different developmental periods of their offspring (M-T. Wang et al., 2020). In other words, parents may use different amounts of certain socialization strategies with their 13-year-old children compared to their 18-year-old children. However, studies have thus far tended to measure parenting practices as stable across this developmental period. Although the number of longitudinal studies on parenting practices, including cultural socialization, have increased over the past decades, most of these studies focus on parenting as a predictor or moderator of children's adjustment outcomes. The primary focus of these previous studies has been to assess whether mean levels of parenting practices predict or interact with other constructs to predict subsequent mean levels of children's adjustment outcomes across the different ages. However, there are far fewer studies that systematically examine how parenting practices change over time or as a function of children's age (see Ansari & Crosnoe, 2015; Hsieh, Stright, & Yen, 2017; Kim, Pears, Fisher, Connelly, & Landsverk, 2010 for exceptions).

This third study built on this limited previous work on the broader parental socialization literature. Although prior literature has documented that parents' cultural or religious socialization messages promote a stronger sense of social identity and positive youth development, our study provided novel information regarding whether the frequency of these messages fluctuates with adolescents' age and depending on their gender. Our findings indicated

that both the frequency of maternal religious socialization as well as its implications on adolescents' religious identity showed a complex gendered pattern of change across adolescence. These findings advance our understanding of how adolescents' own characteristics (e.g., age and gender) impact their perceptions of maternal religious socialization and its associations with their religious identities and have two important theoretical implications.

First, results from this study on religious socialization can assist in refining theories to reflect these complexities in mothers' socialization efforts more broadly, which may be tailored towards the developing and specific needs of their daughters and sons. Specifically, theories on mothers' cultural socialization efforts and the socialization of gender should emphasize the importance of adolescents' own characteristics (e.g., age and gender) in eliciting differential socialization efforts from their mothers more explicitly. Although the broader literature on socialization and parenting recognizes and systematically examines the role of children's own characteristics in eliciting differential socialization efforts by their parents, the literature on cultural socialization seems to have neglected this issue in the last decade.

Indeed, a recent review on ethnic-racial socialization studies has called for a greater need to integrate parental ethnic-racial socialization efforts with the broader socialization literature (Umaña-Taylor & Hill, 2020). Studies examining how adolescents' characteristics shape their perceptions of parental cultural socialization are not the focus in most recent studies and appear to have been of more interest to researchers in the first decade of studies on ethnic-racial socialization. However, our findings suggest that it is important to revive interest in this topic to move towards a more nuanced understanding of parental socialization efforts given recent methodological and statistical advancements. These efforts will allow us to better disentangle the complexities in religious and cultural socialization, and align cultural socialization studies with

the broader literature on parenting, which has long recognized and systematically analyzed children's own contributions in shaping their socialization experiences (e.g., Bornstein, 2009; Lansford et al., 2018; Yu, Cheah, Hart, & Yang, 2018).

Similarly, our findings can also be used towards adapting a more systematic bioecological lens (Bronfenbrenner & Morris, 2006) in the study of parental cultural socialization practices, where parenting might be conceptualized *and* assessed as a more dynamic process that is receptive to changes in their growing children at various ages throughout their adolescence. For example, given evidence for changes in the frequency of mothers' religious socialization practices across the adolescent years and based on their gender, future studies might focus on how changes (i.e., slopes), rather than frequencies (i.e., mean levels), in parenting practices relate to changes in their children's adjustment.

It is important to note that it would have not been possible to disentangle the complex interplay between adolescents' own characteristics (age and gender) and their perceptions of maternal religious socialization and its effects on their religious identity with other cross-sectional data analytic approaches. Hence, our use of the innovative statistical tool of time-varying effect modeling provided a useful illustration of how the effects of parenting practices on adolescents' social identities may vary across developmental time (i.e., adolescent age) and youth's gender, which can be extended to other developmental research questions.

Importantly, our findings can also inform the development and implementation of more targeted and effective intervention programs. The findings of the third study revealed the developmental progression and "sensitive periods" during which Muslim American adolescent girls' and boys' perceptions of maternal religious socialization messages may be most effective in fostering a positive religious identity. From an applied perspective, knowing when

adolescents' perceptions of their parents' religious socialization practices are most effective in promoting a sense of belonging and pride in their religious group can inform the design of more effective and tailored prevention and intervention programs. Focusing on these periods can allow these programs to minimize their costs and maximize their benefits. That is, our findings have suggested that mothers tailor the frequency of their socialization messages differently for their daughters and sons based on their adolescents' age. However, high levels of maternal religious socialization were not always linked to a greater sense of religious identity. Specifically, mothers' religious socialization messages only promoted Muslim American boys' and girls' sense of belonging to their religious group during mid- or late adolescence, respectively. Thus, intervention and prevention efforts that aim to foster positive youth development during adolescence by targeting parenting practices to promote a positive sense of belonging to social groups may be most effective during these "sensitive" periods of around approximately 15 to 18 years for boys and around 17 through 18 years for Muslim girls when these adolescents are most receptive to benefiting from receiving these religious socialization messages.

## Chapter 5: Overall Implications

The cumulative knowledge gained from the three papers of this dissertation project has made important empirical and theoretical contributions beyond what could have been achieved through each individual study. Despite the importance of religion for religious minorities, developmental sciences have largely overlooked the role of religion in adolescents' development and adjustment (King & Furrow, 2008; Phalet et al., 2018), particularly among religious minority youth. Together, the three papers of the dissertation project addressed this gap by examining: (1) threats to Muslim American adolescents' social identities, including religious and national identity (i.e., religious discrimination and Islamophobia), (2) factors that promote their religious identity (i.e., religious socialization); and (3) positive and negative adjustment outcomes associated with social identity, within a population of youth that remains underrepresented in psychological and developmental literature (Balkaya-Ince et al., 2020).

The developmental literature on ethnic-racial minorities has long recognized the importance and interconnected nature of experiences of discrimination, parents' cultural socialization practices, and adolescents' social identity (with a primary focus on ethnic-racial identity) in shaping minority adolescents' development. Discrimination experiences constitute the realities of minority adolescents' lives and have implications for their mental and physical health and thriving as well as their ethnic-racial identity development (see Benner et al., 2018; Gilbert & Zemore, 2016; Pascoe & Smart Richman, 2009; Schmitt, Branscombe, Postmes, & Garcia, 2014 for reviews). Parents' cultural socialization practices play a crucial role in reducing the detrimental impact of discrimination on adolescents' mental and physical health because they promote children's exploration and understanding of their ethnicity/race and sense of pride and belonging to their ethnic-racial group (Huguley et al., 2019; Umaña-Taylor & Hill, 2020).

Moreover, adolescents' ethnic-racial identity has also been found to either exacerbate or buffer against the negative effects of discrimination on their mental health. Although the interconnected nature of these processes has long received attention within the ethnic-racial socialization literature, the literature on religious processes in religious minorities is still underdeveloped and has not produced a comprehensive framework for understanding these crucial factors and processes in shaping religious minority adolescents' development. Across three empirical studies, this dissertation project was the first to examine the contributions of religious discrimination, Islamophobia, maternal religious socialization, and adolescents' social identities, including their religious and national identity, to Muslim American adolescents' mental health (i.e., internalizing and externalizing problems) and positive youth development (i.e., civic attitudes and behaviors).

Empirically, the findings across the three papers of this dissertation project can jointly help us to move towards a more social justice and equity-focused approach to the study of Muslim American and other marginalized minority adolescents in developmental sciences. The overall aim of this dissertation project was to contribute to our understanding of potential predictors and outcomes of adolescents' social identities. Specifically, we examined the role of risk (i.e., religious discrimination, Islamophobia) *and* protective factors (i.e., religious socialization) in Muslim American adolescents' positive (i.e., religious and national identity, civic engagement) as well as negative adjustment outcomes (i.e., internalizing and externalizing problems). The three studies came together to employ a risk and resilience framework and provided a more comprehensive understanding of the different challenges experienced by Muslim American adolescents as well as cultural and religious assets than would have been feasible to conduct within a single study. Despite increasing levels of religious discrimination

and Islamophobia and struggles associated with these experiences (e.g., Amer & Hovey, 2012), Muslim minorities often show resilience to these adversities through personal agency, strength, and civic engagement (Abo-Zena, 2019; Hargreaves, 2016; Mogahed & Choudhoud, 2017).

This balance between risk and resilience in studying developmental processes among Muslim American adolescents is crucial for several reasons. First, there is a disproportional focus on negative adjustment outcomes (e.g., radicalization) in the scarce literature on Muslims, which contribute to the negative stereotyping of this population and perpetuation of the prevailing public anti-Muslim sentiments in the United States (Lynch, 2013; Samari, 2016). In order to promote equity and social justice in developmental sciences and reduce the risk of stigmatizing this population (Killen, Rutland, & Yip, 2016), it is important to study risk and protective factors in predicting mental health difficulties as well as positive adjustment outcomes. This dissertation project was able to disentangle various risk (e.g., religious discrimination versus Islamophobia) and protective factors (e.g., religious socialization), underlying processes (e.g., religious and national identities), and conditions (e.g., Islamophobia, adolescents' gender and age) in explaining Muslim American adolescents' mental health difficulties (e.g., internalizing and externalizing problem) and positive youth development (e.g., civic engagement).

This three-paper dissertation project was able to shed light into the risk and resilience in the development of Muslim American adolescents in several ways. Adolescents' individual-level perceptions of religious discrimination were relatively low in our sample and did not demonstrate any developmental pattern of change across adolescence and variation based on adolescents' gender (see supplemental analyses in Supplement). However, Muslim American adolescents' experiences with religious discrimination on an interpersonal level as well as

Islamophobia on a group level posed a significant threat to their mental health by increasing their risk for internalizing and externalizing problems (Paper 1). Importantly, Muslim American adolescents also showed resilience in the face of religious discrimination and Islamophobia especially with regard to their social identities. Specifically, the two forms of discrimination did not independently nor jointly undermine adolescents' sense of belonging to their religious group and only decreased adolescents' sense of belonging to the American group for youth who believed that the society is not Islamophobic. Interestingly, adolescents who believed that the broader public is Islamophobic felt a greater sense of belonging to the mainstream American group in the face of individual experiences of religious discrimination (Paper 1).

Our time-varying supplemental analyses provided further evidence to reveal that religious discrimination was not predictive of adolescents' religious identity for Muslim American girls and boys alike between the ages of 13 through 18 years. Moreover, religious discrimination either undermined *or* even promoted adolescents' sense of belonging to the American group depending on whether they believed their religious group as a whole was targeted or not by Islamophobia in the American society (Paper 1). When Islamophobia was not taken into account, the independent effects of religious discrimination had a stronger effect on Muslim American boys' national identity as compared to girls. Despite the small effects, religious discrimination was linked to a lower sense of belonging to the American group around mid-adolescence (14 through 15 years) and predicted a greater sense of belonging around a short time around the age of 17. These supplemental analyses built on our findings in the first paper, in that they suggest that the effects may have been driven by developmental and gender-based patterns. In other words, compared to girls, Muslim American boys may experience specific risk and

protective factors at different points of their development, which can undermine or contribute to sense of belonging to the mainstream American group.

Our findings also demonstrated Muslim American adolescents' positive youth development in the form of their civic engagement. Maternal religious socialization messages served as a religious asset to foster civic engagement in Muslim American adolescents by promoting a dynamic daily interplay in adolescents' positive feelings about being Muslim and the importance they ascribe to their religious group membership (Paper 2). Important to note was the fact that the frequency in which mothers were reported to engage in religious socialization practices changed across adolescence and differentially for boys and girls (Paper 3). Muslim American girls and boys also appeared to reap the benefits of their mothers' socialization messages for their religious identity differentially based on their gender and age.

Relatedly, the multi-method approach across the three papers of this dissertation project helped us to better understand important developmental mechanisms and conditions (Paper 1), daily and short-term developmental processes (Paper 2), and age- and gender-based developmental differences in Muslim American adolescents' lives (Paper 3 and supplemental analyses). The combination of concurrent, short-term longitudinal, and intensive longitudinal data that we used across three empirical papers would not have been feasible to employ in a single study.

In addition, the knowledge derived from this dissertation project can inform initiatives to: (1) educate Muslim as well as non-Muslim populations about Muslim American adolescents' unique challenges and developmental assets, and (2) change the negative public narratives about Muslims. Specifically, although Muslim adolescents are underrepresented and remain "hidden" within the social sciences, they are at the same time in the spotlight of public and media attention

in the current socio-political climate in the United States. In particular, public narratives often portray Muslim American adolescents' religious identities as being antithetical to their democratic participation and integration in the American society (Ocampo et al., 2018; Pew Research Center, 2017b). However, the first and second papers of this dissertation project provide empirical evidence that are in contrast to these public misconceptions. At the same time, Muslim Americans are also not immune to the negative conceptions and portrayals of Muslims, which can be particularly confusing for adolescents during a time in which they navigate these public conceptions and try to make sense of who they are and how they feel about being Muslim *and* American. The findings of this dissertation study can inform Muslim and non-Muslims about factors that promote and undermine Muslim American adolescents' development.

Moreover, our findings can be translated and used in policy and advocacy settings. Psychologists and psychological scientists can serve the public interest and influence social policies in various ways (e.g., see Maton, 2017 for an extensive review and examples). For example, findings of this dissertation study can be disseminated along with other relevant studies in the form of congressional briefings (e.g., focused on raising awareness of the pervasiveness and detrimental impact of religious discrimination and Islamophobia), policy fact sheets or blog posts (e.g., to raise awareness about the unique struggles of Muslim American adolescents as well as their resilience), and letters on specific legislation and federal regulations that are of direct or indirect relevance to Muslim Americans (e.g., "Muslim" travel ban, DACA regulations, restrictive immigration regulations during COVID-19, other discriminatory regulations towards minorities and immigrants).

The three studies can also collectively aid in the implementation of culturally appropriate and relevant prevention and/or intervention programs to reduce the detrimental effects of risk

factors and maximize the impact of protective factors to promote the healthy adjustment of Muslim adolescents in the United States. Specifically, the first paper focuses on how individual experiences of religious discrimination (e.g., being made fun of) and perceptions of Islamophobia towards their religious group (e.g., fear of Islam and Muslims as a group) jointly contribute to adolescents' sense of belonging to the Muslim and American group and their internalizing and externalizing problems. This paper informs us of how risk factors and stressors in Muslim American adolescents' lives might affect their social identities and negative indicators of their mental health. In contrast, the second paper examined the role of maternal religious socialization and adolescents' situational religious identity in predicting their subsequent civic engagement. The second study contributes to our understanding of how religious factors and processes can be assets for the positive development of Muslim American adolescents with regard to their engagement in civic life.

Finally, the third paper revealed how the frequency of mothers' religious socialization messages and the extent to which they are associated with adolescents' religious identities changed across adolescents' age and based on their gender. Findings from the third paper shed light on when (i.e., what age) and for whom (i.e., girls or boys) religious socialization processes might be most effective in fostering positive youth development. Together, knowledge from the three studies can contribute to the design of programs and policies that: (1) acknowledge and address the different social stressors Muslim youth face and the repercussions for their mental health; (2) support their religious assets to promote their positive development; and (3) are implemented during "sensitive" periods when adolescents might be most receptive to benefiting from these programming efforts.

Tables

Table 1. *Participants' Report of Demographic Characteristics for Study 3*

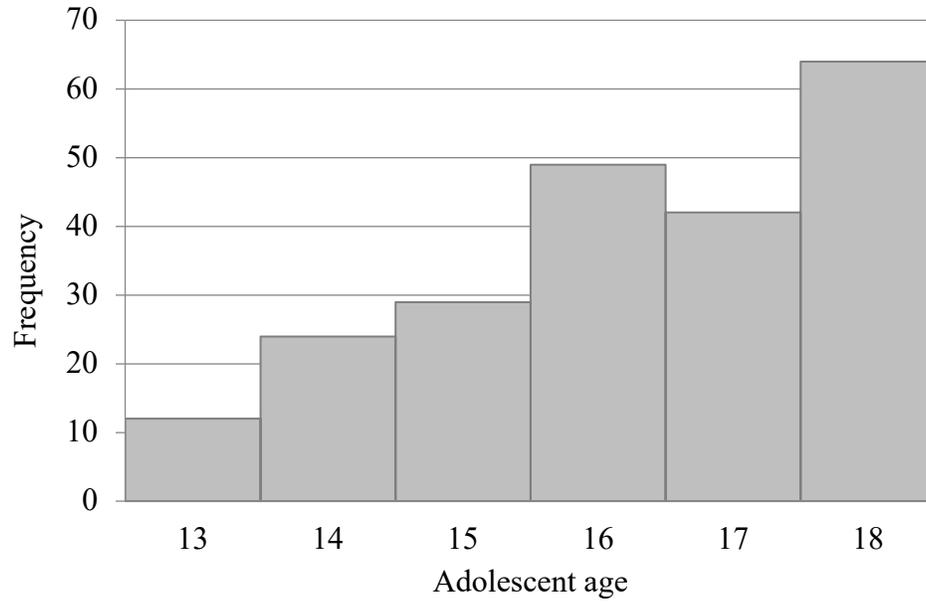
Variable	%
Nativity	
U.S.-born	88.6
Foreign-born	11.4
Religious denomination	
Sunni	89.1
Shia	5.9
Other (Sufi, Ahmadiyya)	5.0
Parents' marital status	
Married	92.0
Divorced or separated	3.9
Remarried	1.8
Other (single, in relationship, widowed)	2.2
Maternal education	
Less than 7 <sup>th</sup> grade	3.6
7 <sup>th</sup> – 11 <sup>th</sup> grade	7.1
High school graduate or GED	17.9
Partial college	15.2
College graduate	33.2
Graduate/professional degree	22.9
Paternal education	
Less than 7 <sup>th</sup> grade	2.3
7 <sup>th</sup> – 11 <sup>th</sup> grade	8.2
High school graduate or GED	12.4
Partial college	11.0
College graduate	32.1
Graduate/professional degree	33.9

Table 2. *Bivariate Correlations and Descriptive Statistics for Study 3*

Variables	1	2	3	4	5	6	7	8	9
1. Religious socialization	–								
2. Religious identity	.19**	–							
3. Age	-.20**	-.03	–						
4. Gender	-.01	.04	.23**	–					
5. Nativity	-.03	.09	-.02	-.00	–				
6. Parental education	.11	-.04	-.10	-.05	-.11	–			
7. Arab/Middle Eastern	.09	.08	.03	.05	.07	-.02	–		
8. South-East Asian	-.03	.09	.01	-.06	-.14*	.07	-.09	–	
9. Bicultural	-.08	-.06	-.00	.10	.07	.08	-.10	-.03	–
Range	1-5	1-5	13-18	0-1	0-1	1-7	0-1	0-1	0-1
<i>M</i>	3.24	4.26	16.76	0.60	0.89	5.27	0.24	0.03	0.03
<i>SD</i>	1.03	0.77	1.55	0.49	0.32	1.57	0.43	0.15	0.18

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

## Figures



*Figure 1.* Histogram of age representation across the sample

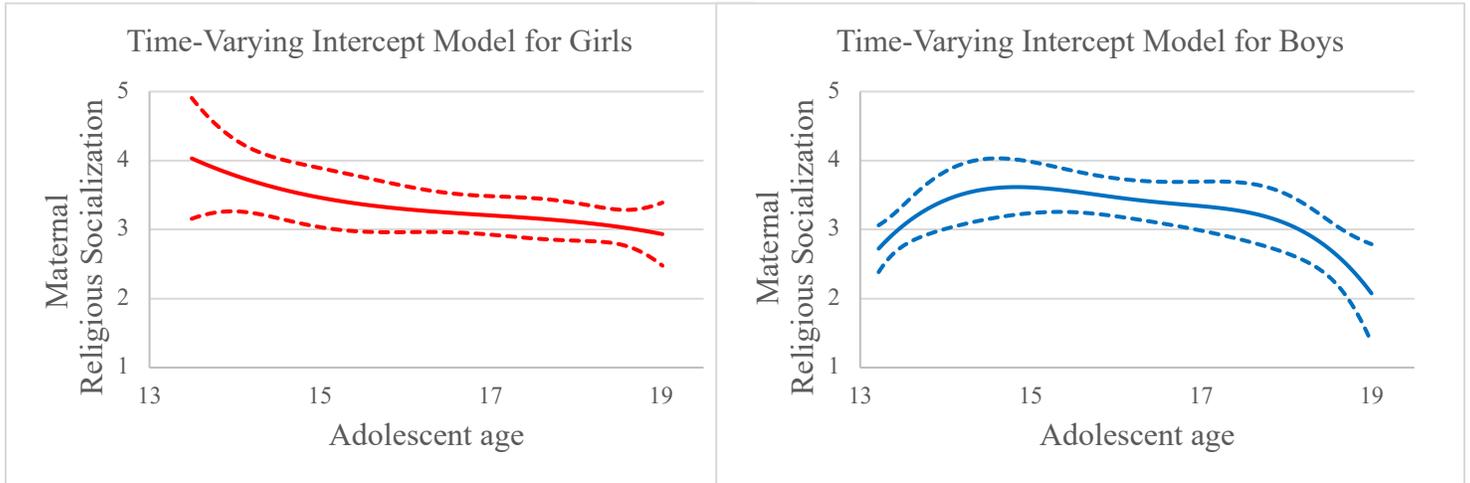
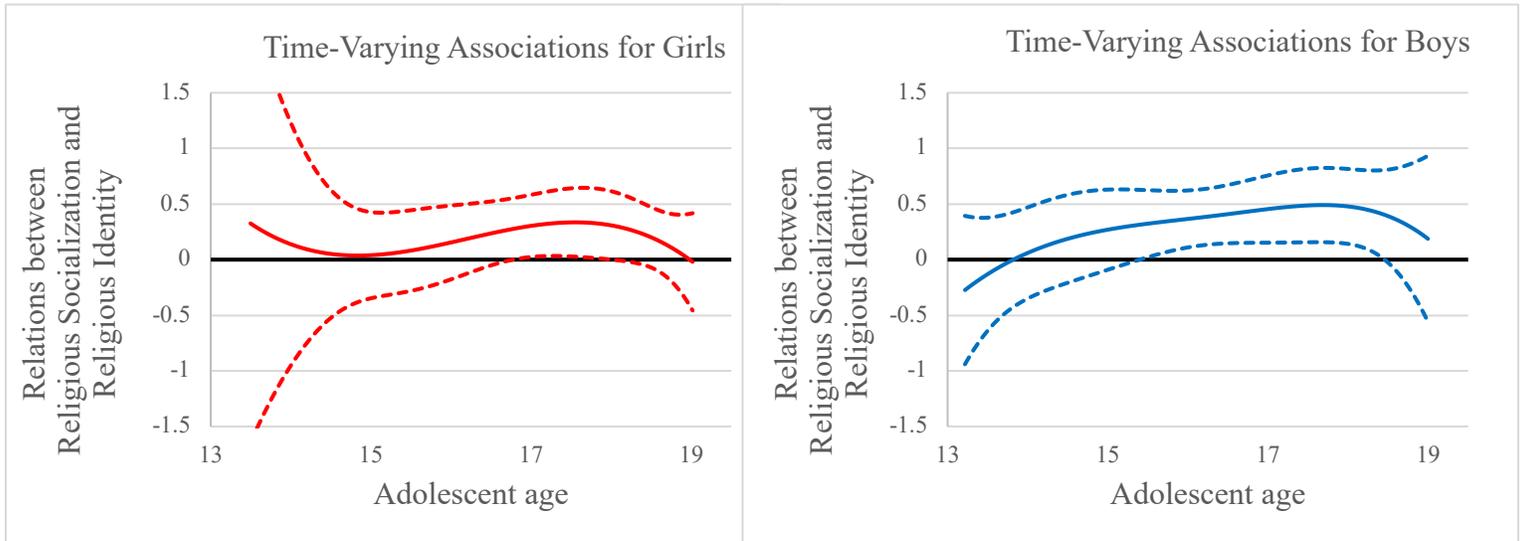


Figure 2. Time-varying intercepts of maternal religious socialization for girls and boys across time (i.e., adolescents' age) of Study 3.

Note: Dashed lines represent the 95% Confidence Intervals



*Figure 3.* Time-varying associations between maternal religious socialization and girls' and boys' religious identity across time (i.e., adolescents' age) of Study 3.

*Note:* Dashed lines represent the 95% Confidence Intervals

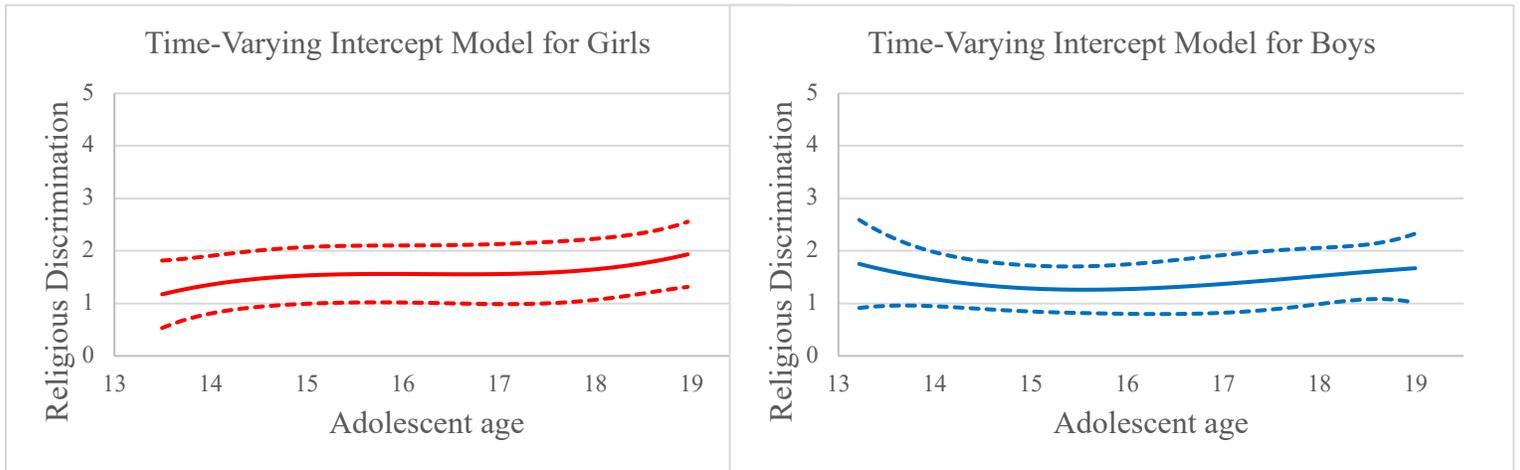
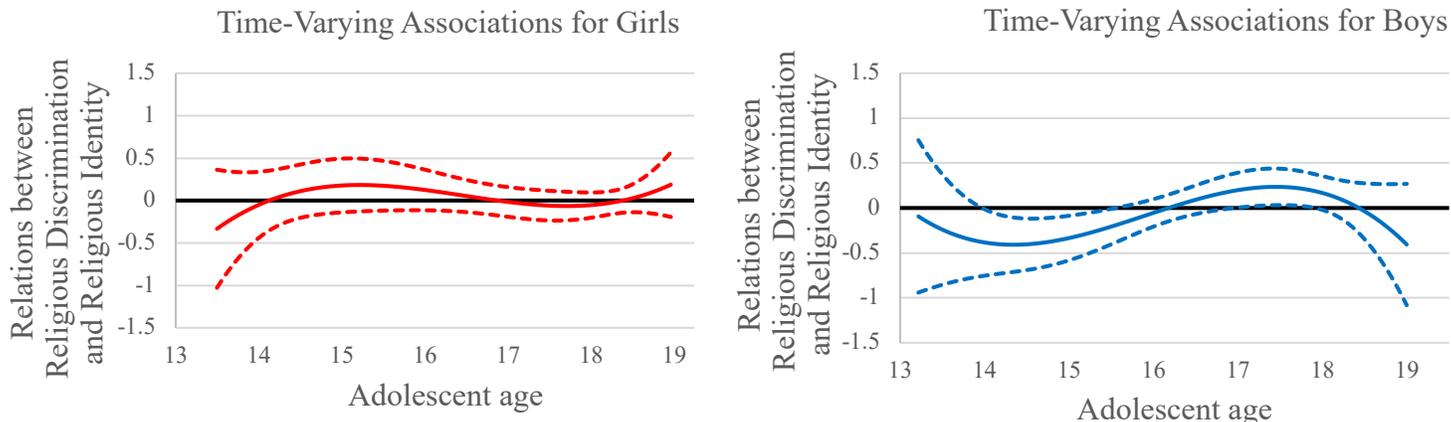


Figure 4. Time-varying intercepts of religious discrimination for girls and boys across time (i.e., adolescents' age) of supplemental analyses.

Note: Dashed lines represent the 95% Confidence Intervals



*Figure 5.* Time-varying associations between religious discrimination and girls' and boys' religious identity across time (i.e., adolescents' age) of supplemental analyses.

*Note:* Dashed lines represent the 95% Confidence Intervals

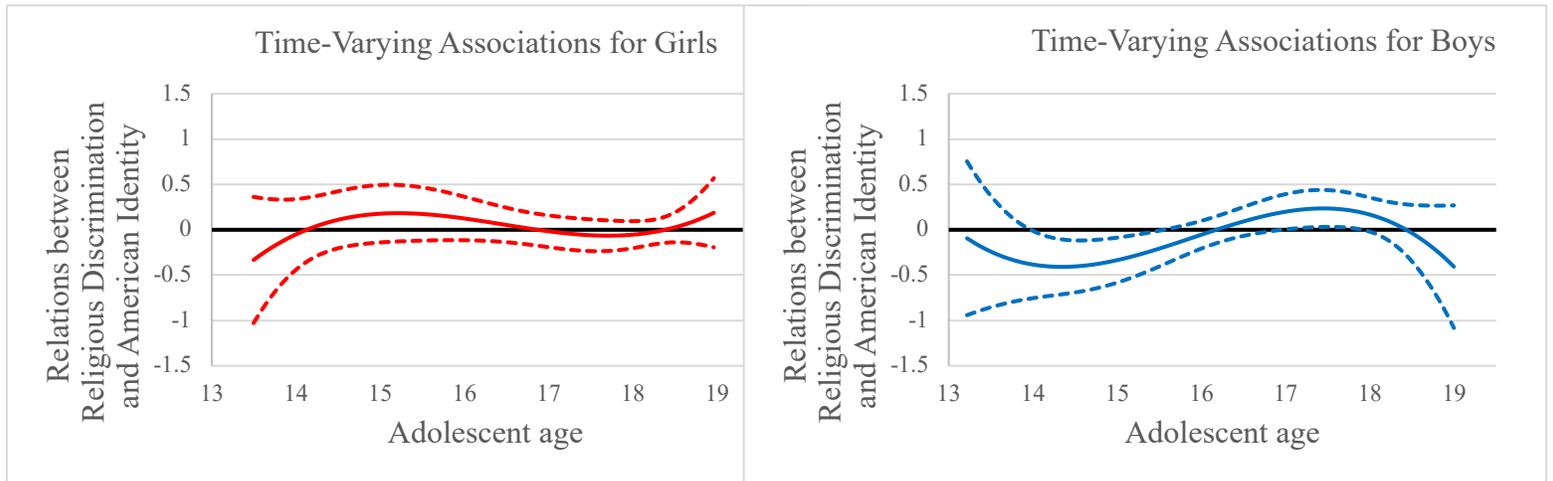


Figure 6. Time-varying associations between religious discrimination and girls' and boys' national identity across time (i.e., adolescents' age) of supplemental analyses.

Note: Dashed lines represent the 95% Confidence Intervals

Appendix A

**Adapted Religious Socialization Subscale of the Ethnic-Racial Socialization Scale used in**

**Study 2 and Study 3**

1. My mother talked to me about important people or events in Islamic history.
2. My mother encouraged me to read books about Muslims.
3. My mother talked to me about important people or events in the history of different cultural or religious groups, other than my own.
4. My mother encouraged me to read books about other cultural or religious groups.

## Appendix B

### **Adapted Affirmation/Belonging Subscale of the Multigroup Ethnic Identity Measure used in Study 1 and Study 3**

1. I have a strong sense of belonging to the Muslim group.
2. I feel a strong attachment toward my Muslim group.
3. I am happy that I am a member of the Muslim group.
4. I have a lot of pride in the Muslim group.
5. I feel good about my Muslim background.

## Supplement

Supplemental analyses were run to examine the time-varying mean levels of Muslim American adolescents' perceptions of religious discrimination separately for boys and girls. Moreover, the time-varying slopes between religious discrimination and adolescents' religious and national identities based on gender were also examined. These supplemental analyses focused on individual-level religious discrimination because the literature on developmental trends in discrimination has only been conducted on individual-level discrimination (e.g., Brody et al., 2006; Greene, Way, & Pahl, 2006; Hughes et al. 2016; Niwa, Way, & Hughes, 2014; Seaton, Caldwell, Sellers, & Jackson, 2008; Smith-Bynum, Lambert, English, & Ialongo, 2014) and no comparative studies exist examining developmental patterns of group-level forms of discrimination, such as Islamophobia.

### Age-Related Changes in Religious Discrimination

Results of the intercept models (see Figure 4) revealed no significant gender- and age-based trends in Muslim American adolescents' perceptions of individual-level religious discrimination as indicated by overlapping confidence intervals across age, both within as well as across gender.

[INSERT FIGURE 4 HERE]

Both girls and boys reported perceiving religious discrimination ranging from “never” to “rarely.” Although older girls (at age 18.9  $\beta = 1.94$ , 95% CI [1.32; 2.56]), reported slightly higher perceptions of religious discrimination than younger girls (at age 13.5  $\beta = 1.17$ , 95% CI [0.53; 1.81] these differences were not statistically significant. Boys showed slightly different patterns, such that early adolescent boys (at age 13.2  $\beta = 1.75$ , 95% CI [0.91; 2.59]) reported similar levels of religious discrimination to late adolescent boys [at age 18.9  $\beta = 1.65$ , 95% CI

[1.05; 2.26]),], with a very slight non-significant decrease in mid-adolescence [at age 15.5  $\beta = 1.26$ , 95% CI [0.82; 1.71]],]. However, these differences across time and across boys and girls did not differ statistically.

### **Age-Varying Associations between Religious Discrimination and Religious Identity**

The time-varying slopes for the relations between individual-level religious discrimination and religious identity for girls and boys are illustrated in Figure 5.

[INSERT FIGURE 5 HERE]

Across adolescence, girls' and boys' perceptions of religious discrimination were not related to their religious identity as indicated by the 95% confidence intervals overlapping with zero. Although the patterns of the slopes showed some gendered patterns, these patterns were not significantly different because the confidence intervals across the groups overlapped at all age points. While the slopes between religious discrimination and religious identity were negative but not different from zero during early adolescence (at age 13.5  $\beta = -0.23$ , 95% CI [-1.60; 1.14]), they became negative but not different from zero during late adolescence (at age 18.9  $\beta = 0.23$ , 95% CI [-0.08; 0.54]) among girls. For boys, the slopes were positive but non-significant during early adolescence (at age 13.2  $\beta = 0.21$ , 95% CI [-0.51; 0.93]) and late adolescence (at age 18  $\beta = 0.18$ , 95% CI [-0.08; 0.44]), but negative and non-significant during mid-adolescence (at age 15  $\beta = -0.12$ , 95% CI [-0.37; 0.12]).

### **Age-Varying Associations between Religious Discrimination and National Identity**

The time-varying slopes for the relations between individual-level religious discrimination and national (i.e., American) identity for girls and boys are illustrated in Figure 6. Whereas no time-varying differences were observed in the slopes for girls, the slopes for boys showed differences across age. Specifically, religious discrimination was not significantly

related to national identity across adolescence for girls as indicated by the overlap between the confidence intervals and zero. However, religious discrimination showed age-based differential relations with American identity for boys. While the slopes were negative during mid-adolescence around the ages of approximately 14 through 15.5 years (e.g., at age 14  $\beta = -0.38$ , 95% CI [-0.76; -0.03]), they turned positive around a short time period around the age of 17 (e.g., at age 17.5  $\beta = 0.24$ , 95% CI [0.03; 0.44]), followed by a non-significant decline towards negative slopes around the ages of 18 years and thereafter (e.g., at age 18.5  $\beta = -0.05$ , 95% CI [-0.38; 0.27]). Although the slopes for girls were not significant throughout adolescence, they appeared to show an opposite, yet not statistically significantly different, pattern to those of boys. While religious discrimination was associated with a lower level of national identity for boys (around ages of 14 through 15.5 years), these associations were positive but not different from zero for girls (e.g., at age 14  $\beta = -0.03$ , 95% CI [-0.30; 0.34]). Similarly, while boys' slopes were positive and significant, girls' slopes were negative yet not significant (e.g., at age 17.5  $\beta = -0.06$ , 95% CI [-0.23; 0.11]). However, as can be seen in the time-varying slope graphs, these gendered patterns were not significantly different given the overlap in confidence intervals across the two groups.

[INSERT FIGURE 6 HERE]

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