Belonging as a Predictor of Substance Use for Muslim American Emerging Adults

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Identified as a human need, belonging is severely under-studied among Muslim American emerging adults. During this transitional period, Muslim American emerging adults must also grapple with experiences of discrimination and ostracization, which may increase the likelihood of substance use as a coping mechanism. Due to the experiences of marginalization, combined with the taboo nature of substance use in religious and cultural contexts, Muslim American young adults may be at an increased risk for negative mental health outcomes compared to their non-Muslim peers. Therefore, it is important to identify predictors of substance use in Muslim American young adults to provide culturally relevant and responsive prevention and intervention measures. Our study surveyed 183 Muslim American young adults using snowball sampling to collect data on substance use and belonging experiences. Findings from the study provide evidence of moderate substance use among Muslim American young adults, with nearly half of the sample reporting lifetime use. Results from a binary logistic regression indicate that young American Muslims with higher rates of belonging to the Muslim community are less likely to report using substances compared to young Muslims with lower rates of belonging to the Muslim community.

Keywords

belonging • substance use • Muslim American • emerging adults

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Introduction

Young adulthood is a critical developmental period due to the significant transitional life experiences that occur, such as starting college or entering the workforce, impacting exploratory and risky pattern behaviors like engaging in substance use. In addition to these normative developmental changes, young Muslim Americans also face additional stressors, such as interpersonal and systematic discrimination, toxic social-political climates, and competing religious influences, as they navigate their roles in society. During this time, young adult Muslims often experience behavior changes to cope with these stressors, become socially accepted by their peers, and create distinctions between themselves and their family and community (Ahmed et al., 2014). Some of these behavioral changes include risk behaviors, which is defined as any behavior that has the potential to negatively impact a young person's psychosocial development (Ahmed et al., 2014). In working to balance their sense of autonomy with their need for attachment through developmental transitions, young Muslim Americans also search for belonging and community while contending with the various stressors mentioned above.

Many scholars have identified a sense of belonging to a community as a basic human need (Baumeister & Leary, 1995; Hagerty et al., 1992; Maslow, 1954). A lack of belonging to a community has been linked to an increase in risk behaviors such as "increased aggression, reduced prosocial behavior, and increased self-defeating behavior" (Baumeister et al., 2007; p. 517). Despite the significance of belonging and community in their religious values and cultural practices, very little research has examined the impact of a sense of belonging and community for young adult Muslim Americans. A sense of belonging, also defined as psychological belonging, is an emotion-based discernment of the value of fitting in between the self and its context (Hagerty & Patusky 1995). Given the higher rates of ostracization and discrimination that emerging adult Muslim Americans experience compared to older Muslim Americans (Abu-Ras, Suarez, & Abu-Bader, 2018; Hodge, et al., 2017), the importance of community belonging as a value in Muslim culture and tradition, as well as the protective role belonging plays in reducing risk behaviors (Ellis et al., 2015), has made examining the role of belonging in predicting substance use behavior a critical need. The present study explores the role of a general sense of belonging, belonging to the Muslim community, and belonging to American society in predicting the likelihood of using substances among emerging adult Muslim Americans. Since the latter experiences of belonging are rooted in social identities, the present study also accounts for the impact of Muslim and American identity centrality, or how important these identities are to one's sense of self (Cameron, 2004; Stryker & Serpe, 1994).

Understanding the cultural context of substance use for Muslim American young adults is crucial for developing culturally responsive clinical interventions for this population. Since alcohol, tobacco, and illicit drug use are prohibited in Islam, a Muslim's use of these substances is considered culturally risky (Ahmed et al., 2014). Additionally, alcohol and drug use are considered risk behaviors for young Muslims since they may have long-term negative impacts on their health outcomes (Ahmed et al., 2014). Very little research has explored the current rates of substance use in Muslim American samples. A report from 2010 found that 63.3% of US college students consumed alcohol in the past month, compared to 46.6% of Muslim US college students reporting alcohol consumption. Regarding illicit drug use, 22% of US college students reported use, but there are no studies on use by Muslim students (Abu-Ras, 2010).

Previous literature points to various factors that can predict substance use for young Muslim Americans. For example, Dotinga (2005) suggests that lower substance use may be associated with lower levels of religious practice, specifically prayer and fasting, as well as lower levels of shame around drinking and believing that drinking was not necessarily forbidden within

religious doctrine. Additionally, for immigrant Muslims, acculturation may lead to greater similarity in substance use patterns with their newly acculturated identity rather than their original ethnic identity. Arfken and colleagues (2009) found that polysubstance abuse has been associated with higher levels of acculturation in a clinical sample of Arab Americans. This pattern is also seen in Europe, where greater acculturation is linked to alcohol use among Muslim immigrants in European countries (Delforterie et al., 2014; Sarasa-Renedo et al., 2005). In the Netherlands, first-generation Muslims are more likely to maintain expected cultural patterns regarding alcohol and substance use (for example, no use). On the other hand, second-generation immigrants usually adopt local drinking values, and this trend increases among those who do not feel accepted by the majority society (Dotinga, 2005). These findings lend to the conclusion that once immigrant-based Muslims in the US have undergone acculturation, they also adopt behavior patterns of the general American population, including substance use norms.

Reference Group Theory (Merton & Kitt, 1950) may explain the relationship between acculturation and substance use patterns for young immigrant Muslim Americans. Reference Group Theory explains that one's "reference groups" are sources used to determine appropriate attitudes and behavior (Merton & Kitt, 1950). Since the Muslim American community expands to non-immigrant ethno-racial groups, it is crucial to examine Reference Group Theory outside of the context of acculturation. Namely, the theory may explain the role of community belonging in the substance use patterns of Muslim Americans, regardless of immigrant status. For example, young Muslims' religious reference groups within the Muslim community may be more likely to have an absolute prohibition on alcohol and strong negative views towards any use. In contrast, given the normative culture of some substance use, the culture of their non-Muslim college, work, and sometimes family reference group may implicitly emphasize the social benefit of drinking culture in creating connections outside of professional settings (Abu-Ras et al., 2010). Evidence for the Reference Group Theory has been found for Christian samples, where students affiliated with a Christian denomination that held stricter prohibitions against drinking were less likely to drink than their peers from other denominations (Clarke et al., 1990). Additionally, socio-cognitive factors, such as seeing others drink socially, have also been shown to be a stronger predictor of alcohol use in other studies of second-generation Tunisian Dutch Muslims and Lebanese Muslims (Dotinga, 2005; Ghandour, 2009). Moreover, Arfken and colleagues (2013) suggest that living in a community with more Muslims and having few drinkers in their social network may serve as a deterrent against drinking for Muslim samples.

Although Muslim Americans report similar substance use rates to their peers, Muslim Americans may face worse outcomes due to the cultural risk that increases shame, guilt, and stigma. These risks can result in underreporting actual substance use patterns, as well as difficulty in seeking help. Past research on Muslims living in Muslim minority countries shows that Muslims are likely to underreport substance and alcohol use. Dotinga (2005) explored methodological obstacles in studying substance use and abuse in migrant populations, especially Muslims, noting response bias and social desirability bias as critical obstacles to consider. These obstacles may be linked to the cultural taboo around substance use in Muslim communities, as well as possible biases introduced by the characteristics or identity of the interviewer or researcher. In addition to underreporting, Muslims are also less likely to seek help related to their substance use. For example, Muslim heroin users in the Netherlands were less likely to enter methadone programs, and those who do enter stay fewer days than non-Muslim Dutch users (Verdurmen et al., 2014). Additionally, Abu-Ras and colleagues (2010) found that although nearly half of Muslim students reported alcohol consumption within the past year, none reported seeking help for alcohol-related problems compared to 2.93% of their non-Muslims peers who reported receiving counseling for alcohol problems (Abu-Ras et al., 2010).

In addition to cultural factors, the demography of Muslim Americans may also predict their substance use behavior patterns, such as age, socioeconomic status, gender, and ethnic identities, which are necessary to take into consideration. In the 2019 National Survey on Drug Use and Health, individuals in emerging adulthood averaged the highest rates of substance use across the US compared to other age groups, with 22.54% reporting marijuana use in the past month, 5.54% reporting cocaine use in the past year, and 25.08% reporting tobacco product use in the past month (Substance Abuse and Mental Health Services Administration [SAMHSA], 2020). Arnett (2005) speculated that the key elements of emerging adulthood might influence the higher rates of substance use during this time. Specifically, Arnett (2005) referred to elements of emerging adulthood as the "age of identity explorations, the age of instability, the age of self-focus, the age of feeling in-between, and the age possibilities," (p. 239) and suggests that specific experiences during these developmental milestones may influence substance use. This study will take a closer look at the impact of age within this developmental period to examine the relationship of being on the younger or older end of emerging adulthood with predicting substance use.

Regarding gender differences, prior research on Muslims in young adulthood has found a lack of gender difference in drug use among Muslim American university students (Ahmed et al., 2014). However, research on the general young adult population suggests gender differences in substance use patterns (Patrick et al., 2012). Moreover, a study of British children of South Asian immigrants between ages 16–26 reported sex differences among South Asian immigrants in the use of substances and alcohol (Bradby, 2007). Namely, through their qualitative data collection through individual and group interviews, Bradby (2007) found that women were less likely to engage in tobacco use compared to men due to fear of damage to their reputation, as well as the increased levels of stigma and shame that were associated around substance use for women. Moreover, the socioeconomic status of parents of emerging adults may play a role in substance use among young adults (Patrick et al., 2012). For example, Patrick and colleagues (2012) found that young adult participants with higher parental socioeconomic status had higher rates of alcohol and marijuana use (Patrick et al., 2012).

Current Study

The present study has two main goals. First, to explore the frequency of substance use among a sample of Muslim American emerging adults. Second, to explore the extent to which demographic variables, such as gender, age, and socioeconomic status; national and religious identity centrality; and a general sense of belonging, sense of belonging to American society, and belonging to the Muslim community, predict substance use behavior for Muslim American emerging adults.

Methods

Procedures

Given the hard-to-reach nature of the intended sample, the authors utilized a snowball sampling strategy that commenced from their own networks in the United States to recruit participants. Specifically, participants were recruited by sharing the online Qualtrics survey link through American students and professional organizations' email listservs, virtual messaging groups, social media, and word of mouth. Data collection began in October 2020 and ended in February 2021. After consenting to participate, individuals were able to complete the survey at their convenience. Participants who indicated that they were from a faith group other than

Islam or reported being older than 29 were excluded from the study. To increase response rates, participants had the option to submit their emails to an external link at the end of the survey to enter a raffle drawing to win a \$20 gift card.

Participants

One hundred eighty-two Muslim American adults (58 males, 124 females, M = 22.90 years, SD = 3.15, range 18–29) completed the survey and were included in this sample. Most of the sample reported their ethnic or racial identity as Middle Eastern or North African (n = 77), followed by South Asian (n = 55), Black or African American (n = 21), East or Southeast Asian (n = 16), White (n = 6), multi-racial (n = 6), and Hispanic or Latino (n = 2). Participants reported their socioeconomic standing using the MacArthur Scale of Subjective Social Status (Adler et al., 2000), a one-item subjective 10-point Likert scale, indicating where they stand regarding income, education, and occupational standing compared to others in the United States, where a larger score indicated a higher socioeconomic status (M = 6.59, SD = 1.58).

Measures

Identity Centrality

The 8-item centrality subscale from the Multidimensional Model of Black Identity (MMBI) (Sellers, 2013) was adapted to assess national and religious identity centrality. This subscale measures the importance a person places on their identity on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), where higher scores translate to higher centrality. Two versions were administered to participants. The first version prompted participants to think about their American identity and the second version prompted participants to think about their Muslim identity. For the respective adapted versions, example items included: "Being American is an important reflection of who I am" and "In general, being part of my religious group is an important part of my self-image." Total scores were calculated by summing the values of each item and the ranged was 8–56. In this study, the reliability alpha for the American identity centrality and Muslim identity centrality subscales were .87 and .85, respectively.

Sense of Belonging

The 18-item Sense of Belonging Instrument – Psychological (SOBI-P) (Haggerty & Patusky, 1995) was administered to assess a general sense of belonging. Participants were asked to rank each item on a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Sample items included: "I generally feel that people accept me" and "I don't feel that there is any place where I really fit in this world." Items that indicate less belonging were reverse-coded so that higher scores on this scale indicated a greater sense of belonging. Total scores were calculated by summing the values of each item and the range was 18–72. The reliability alpha was .92.

American Society and Muslim Community Belonging

To assess for American society belonging and Muslim community belonging, participants were asked to indicate their responses on a Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree) for the following items: "I feel belonging to the general American society" and "I feel belonging to my religious community." Each item assessed for American society belonging and Muslim community belonging, respectively.

Substance Use

The World Health Organization's Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST; Humeniuk et al., 2010) was used to assess participants' substance use status and patterns. The first question prompted participants to identify whether they have ever used the following substances for non-medical use: tobacco products, alcoholic beverages, cannabis, cocaine, amphetamines, inhalants, sedatives or sleeping pills, hallucinogens, and opioids. If participants indicated using any of the prompted substances, the second question asked participants to indicate how often they used that substance within the last three months. Participants reporting use in the past three months were then asked three more questions per substance, which included how often they "felt a strong desire or urge to use," how often their use "led to health, social, legal, or financial problems," and how often they "failed to do what is normally expected of you because of your use." These four items were scored on a 5-point Likert scale (for example, never, once or twice, monthly, weekly, and daily or almost daily). Finally, all participants who reported any lifetime use were asked three additional questions regarding if a "friend or relatives or anyone else ever expressed concern about (their) use" of each substance, if the participant had "ever tried and failed to control, cut down, or stop using" each substance reported, and if the participant had, through non-medical use, "ever used any drug by injection." All three items were scored on a 3-point Likert scale (for example, never; yes, but not in the past 3 months; and yes, in the past 3 months) and were scored to determine low, moderate, or high-risk levels of use as suggested by the ASSIST scoring guide. The ASSIST measure was used in two ways. First, the frequency of lifetime and past 3-month use, as well as the risk level of use, are included in the frequency table below. Second, lifetime substance usage or whether someone ever used any substance in their lifetime, was an individual score used in the analysis. Namely, participants who indicated any substance use in their lifetimes were scored as 1 on this item, whereas participants who indicated no substance use in their lifetimes were scored as -1.

Results

Frequency

The frequency of substance use is displayed in Table 1, showing lifetime use and past 3-month use, as well as the risk level of each user. Tobacco use was most reported, with 32.8% (n = 60) of the sample reporting at least one use in the past and 10.4% being at moderate risk levels. Next, 26.8% (n = 49) of the sample reported using cannabis at least once in the past, with 8.7% of the sample at a moderate risk level; 15.8% (n = 29) of the sample reported drinking alcohol at least once, with 1.1% of the sample at a moderate risk level; and 4.4% (n = 8) and 3.3% (n = 6) of the sample reported using sedatives and hallucinogens, respectively, at least once in their lifetime.

Correlation

Table 2 displays the listwise Pearson's correlation matrix. Those who endorsed a stronger American identity centrality were also more likely to report a stronger sense of belonging to American society (r = .39, p < 0.001), and participants who endorsed a stronger sense of Muslim identity centrality were also more likely to report a stronger sense of belonging to the Muslim community (r = .65, p < 0.001). Additionally, participants who reported a greater general sense of belonging were more likely to identify as male (r = .25, p < 0.001), be older (r = .18, p < 0.05), report higher socioeconomic status (r = .23, p < 0.01), stronger religious

	Lifetime Use n (%)	Past 3-month Use n (%)	Low Risk n (%)	Moderate Risk n (%)	High Risk n (%)	
Tobacco	60 (32.8%)	32 (17.5%)	12 (6.6%)	19 (10.4%)	1 (.5%)	
Alcohol	29 (15.8%)	9 (4.9%)	7 (3.8%)	2 (1.1%)	-	
Cannabis	49 (26.8%)	21 (11.5%)	3 (1.6%)	16 (8.7%)	2 (1.1%)	
Cocaine	5 (2.7%)	2 (1.1%)	1 (.5%)	-	1 (.5%)	
Amphetamine	5 (2.7%)	-	-	-	-	
Inhalants	2 (1.1%)	-	-	-	-	
Sedatives	8 (4.4%)	3 (1.6%)	-	2 (1.1%)	-	
Hallucinogens	6 (3.3%)	2 (1.1%)	1 (.50%)	1 (.5%)	_	
Opioids	2 (1.1%)	-	-	-	_	
Total	80 (43.7%)					

Table 1. Frequency of Substance Use for Muslim Americans

Note: Risk categories were scored using the recommended scoring criteria provided by The World Health Organization's Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST).

Table 2. Correlations Among Study Variable
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	1	2	3	4	5	6	7	8
1. Gender	-							
2. Age	18*	-						
3. Socioeconomic Status	.17*	02	_					
4. American Centrality	03	.10	.04	ı				
5. Muslim Centrality	.04	.04	.04	.10	_			
6. General Sense of Belonging	.25***	.18*	.23**	.04	.16*	-		
7. American Belonging	.31***	.01	.12	.39***	08	.35***	-	
8. Muslim Belonging	.10	.08	.04	.10	.65***	.39***	.13	ı
9. ASSIST	.07	08	11	12	20**	10	04	27***

Note: Gender is scored as "1 = female" and "2 = male." ASSIST scores are "-1 = has never used any substance in their lifetime" and "1 = has used any substance at least once in their lifetime". p < .05 (two-tailed), ***p < .01 (two-tailed), ***p < .01 (two-tailed)

identity centrality (r = .16, p < 0.05), a stronger sense of belonging to American society (r = .35, p < 0.001), and a stronger sense of belonging to the Muslim community (r = .39, p < 0.001). Lastly, lifetime substance use, measured as whether someone has ever used substances in their lifetime or not, was negatively and significantly linked to a Muslim identity centrality (r = -.20, p < 0.01), and a sense of belonging to the Muslim community (r = -.27, p < 0.001). In other words, participants who reported using substance use at least once in their lifetime were less likely to report a stronger Muslim identity centrality and less likely to report a stronger sense of belonging to the Muslim community than those who never used any substances in their lifetime.

Table 3. Binary Logistic Regression Predicting Lifetime Substance Use Among Muslim Americans

	В	Wald	df	Sig.	Odds Ratio	95% C.I. for	
						Odds Ratio	
						Lower	Upper
Gender	.501	1.680	1	.20	1.650	.774	3.519
Age	027	.261	1	.61	.973	.877	1.080
Socioeconomic Status	152	2.059	1	.15	.859	.697	1.057
American Identity	150	1.050	1	.31	.861	.647	1.146
Muslim Identity	320	1.196	1	.27	.726	.409	1.289
General Sense of Belonging	.001	.005	1	.95	1.001	.963	1.041
American Society Belonging	007	.003	1	.96	.993	.757	1.302
Muslim Community	315	4.234	1	.04	.730	.541	.985
Belonging							
Constant	13.809	5.843	1	.02	993222.87		

Note: Gender is scored as "1 = female" and "2 = male."

Logistic Regression

Binary logistic regression was used to predict substance use for Muslim American emerging adults. Due to evidence that points to gender (Bradby, 2007), age (Arnet, 2005), and socioeconomic status (Patrick et al., 2012) as predictors of substance use, these variables were included in the model. Additionally, cultural factors, namely American and Muslim identity centrality, were included in the model to control for their overlapping variance with the variables of interest found in the correlation matrix. Various forms of belonging were also included in the model, including a general sense of belonging, American society belonging, and Muslim community belonging. Assumptions for linearity (for example, a linear relationship between unstandardized predicted value and studentized residuals) and multicollinearity (for example, tolerance greater than .1 and VIF less than 10) were met, and there were no outliers found. The full model showed a statistically significant better fit than the constant-only model ($\chi^2(8) = 20.49, \rho < .01$). The model explained 14.6% (Nagelkerke R²) of the variance and correctly classified 62.9% of cases. See Table 3 for regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals. Of all the predictors, Muslim community belonging was the only statistically significant predictor of lifetime substance use (OR = .73, 95% CI [.54, .99]). Namely, those who reported belonging to the Muslim community were less likely to report ever using substances in their lifetime.

Discussion

The present study examined the frequency of substance use patterns of Muslim American emerging adults, as well as the role of community belonging in predicting substance use among Muslim Americans. Findings from the present study provide evidence of the moderate use of substance use among Muslim American young adults, where nearly half of the sample in the present study (n = 80, 43.7%) reported using substances at least once in their lifetime. The

American identity centrality, a general psychological sense of belonging, and Muslim community and American society belonging. Although the correlation matrix showed that substance use was correlated with a weaker endorsement of Muslim identity centrality, as well as less belonging to the Muslim community, Muslim community belonging was the sole predictor of substance use for this sample of Muslim American emerging adults. These findings could be explained using the Reference Group Theory (Merton & Kitt, 1950). Namely, young Muslims who feel more belonging to the Muslim community may likely be around other Muslims who also abstain from substance use, influencing the participants' behaviors. This relationship can also be bidirectional; for example, the experiences of belonging may provide alternative coping resources or alternative recreational activities in community with others that can replace substance use behavior.

Additionally, the present study found significant relationships between key variables that are pertinent to the culturally informed care of American Muslim emerging adults. For example, male participants, older participants, and participants with higher reported socioeconomic status reported a greater general sense of psychological belonging. These findings provide evidence that more attention is needed to address the belonging needs of Muslim American emerging adults who are female, of younger age, and with a lower socioeconomic status.

Limitations

There are several limitations to note in the present study. Due to the staunch social and religious disapproval of substance use, social desirability bias is likely in our sample, with participants underreporting their substance use (Jozaghi et al., 2016). In fact, response bias, which is common in surveys of Muslim Americans' substance use behaviors, was also evident in our study (Arfken et al., 2013). Some potential participants opted out of responding to substance use questions in the survey and informed the researchers that they skipped the questions inquiring about their substance use patterns. Also, other potential participants refused to take the survey altogether because they felt documenting their substance use patterns could incriminate them, even after confidentiality was thoroughly explained.

In addition to the concerns related to collecting sensitive information, there were two sampling concerns to note. First, there is no comprehensive representative membership list of the Muslim American population in the United States or even at a state level; therefore, we used a snowball and convenience sampling method to collect data, which proved to be an effective sampling method for minorities despite its non-random nature (Hughes et al., 1995). Second, there is an overrepresentation of Muslim Americans of Middle Eastern, North African, and South Asian backgrounds and an underrepresentation of Black Muslim Americans. This breakdown makes the results of our study difficult to generalize to the Muslim American community, especially because ethnic and cultural differences within the Muslim American community can also be strong influences on behavior (Atterbeen et al., 2019).

Future Research

Future research must take careful methodological considerations when collecting substance use patterns for young adult Muslim Americans. Previous qualitative research indicates that methodological issues in collecting data on substance use for Muslim Americans can be complex due to the accuracy in reporting stigmatized behavior (Dotinga, 2005). Namely, researchers must be careful about confidentiality and messaging around collecting this information because

the identity of the researcher can impact social desirability in reports. This consideration must also extend to mental health resources for substance abuse among young Muslims. Arfken and Ahmed (2016) recommend utilizing online sources of prevention and intervention to reduce the stigma around substance abuse for Muslims. Demographic and cultural factors can be examined as moderators in the relationship between substance use and various health outcomes for Muslim Americans, such as gender. Additionally, ethnic and cultural factors, such as stigma and awareness of drug use, can be examined as risk or protective factors of substance use.

Previous research also showed that Muslim Americans are less likely to seek help for substance use issues than their non-Muslim peers (Abu-Ras et al., 2010). The low help-seeking intentions could be due to the lack of Muslim-specific interventions to address substance abuse concerns in a culturally sensitive and responsive manner. A report from the Substance Abuse and Mental Health Administration Services (2020) recommends increased availability of faith-based resources to enhance the protective effects of community belonging. To protect against the negative effects of substance use as a risk behavior for young Muslim Americans, culturally responsive interventions should focus on fostering a sense of belonging among emerging adults in the Muslim American community. Understanding how to regain that sense of belonging is especially key in addiction recovery, where the majority of effective therapy relies on building a community around the user that liberates them from the sense of shame to which they may have been exposed. Given the competing influences in social and cultural aspects of young adult Muslim life, future research should continue to examine the cultural context of Muslim Americans as it relates to the impact of belonging and community on other risk behaviors, such as suicidal ideation and help-seeking intentions.

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