Comparative Associations Between Achieved Bicultural Identity, Achieved Ego Identity, and Achieved Religious Identity and Adaptation Among Australian Adolescent Muslims

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Abstract
This study examined the comparative roles of biculturalism, ego identity, and religious identity in the adaptation of Australian adolescent Muslims. A total of 504 high school Muslim students studying at high schools in metropolitan Sydney and Melbourne, Australia, took part in this study which required them to complete a self-report questionnaire. Analyses indicated that adolescent Muslims’ achieved religious identity seems to play a more important role in shaping their psychological and socio-cultural adaptation compared to adolescents’ achieved bicultural identity. Adolescents’ achieved ego identity tended also to play a greater role in their psychological and socio-cultural adaptation than achieved bicultural identity. The relationships between the three identities and negative indicators of psychological adaptation were consistently indifferent. Based on these findings, we propose that the three identity-based forces—bicultural identity development, religious identity...
attainment, and ego identity formation—be amalgamated into one framework in order for researchers to more accurately examine the adaptation of Australian adolescent Muslims.

Keywords
Acculturation, religiosity, identity, culture, immigration

Introduction
Over the past decades, there has been increasing attention by acculturation theorists and researchers on how cultural minority adolescents psychologically adjust to their larger communities. Adjustment has been conceptualized as being composed of two distinct aspects, namely, psychological adaptation and socio-cultural adaptation. The former has origins within Stress and Coping Theory (SCT), denoting adaptation through emotions that evolve due to intercultural contact stress experiences (Berry, Phinney, Sam, & Vedder, 2006; Sam, Vedder, Liebkind, Neto, & Virta, 2008; Ward, Bochner, & Furnham, 2001), and the latter has its origins within Cultural Learning Theory (CLT), defining adaptation in terms of the acquisition of appropriate social and cultural skills needed to operate effectively in a cultural milieu (Berry et al., 2006; Sam et al., 2008; Ward & Kennedy, 1996; Ward et al., 2001).

Considerable social psychological research has been devoted to the understanding of factors that can facilitate or impair cultural minority adolescents’ psychological and socio-cultural adaptation to their mainstream societies. Berry’s (1997) two-dimensional acculturation model, in this regard, has received special attention in the literature despite critiques by Rudmin (2003). As clarified by Berry (2009, p. 366), the conceptualization and assessment of the two dimensions were initially based on cultural contact attitudes, but later research included other psychological features such as heritage culture/host culture identity and behaviors, leading to “a more comprehensive concept of acculturation.” In heritage culture/host culture identification terms, more specifically, the first dimension refers to identification a minority adolescent develops with their heritage culture, and the second dimension describes the degree of identification a minority adolescent develops with the mainstream culture. Included in such identifications are heritage/mainstream behaviors, heritage/mainstream affirmation and belonging, and heritage/mainstream identity achieved through a process of exploration and commitment (Abu-Rayya, 2006; Phinney, Horenczyk, Liebkind, & Vedder, 2001; Phinney, Romero, Nava, & Huang, 2001). It is contended that the two dimensions are conceptually distinct and vary independently (Berry, 1997); hence, four distinct acculturation styles are possible: integration (or achieved bicultural identity) identifies those adolescents who develop strong identification with both their heritage culture and the host culture; separation describes those adolescents who develop lower levels of identification with the mainstream culture.
while identifying strongly with their heritage culture; assimilation refers to those adolescents who develop strong identification with the mainstream culture while identifying weakly with their heritage culture; and marginalization refers to those adolescents who develop low identification with both cultures.

On a general level, psychological adjustment is considered as an outcome of the acculturation identification style, i.e., a basic postulate is that a cultural minority adolescent’s acculturation style will determine their successful or unsuccessful adjustment (Berry, 1997; Berry, Kim, Minde, & Mok, 1987; Castro, 2003; Sam & Berry, 1995, 2010). It is postulated further that achieved bicultural identity (integration) represents the optimally adaptive mode of acculturation, being most conducive to cultural minority adolescents’ psychological and socio-cultural adaptation, and that marginalization represents the most maladaptive mode of acculturation identification.

These propositions have generally been widely supported (e.g., Abubakar, Van de Vijver, Mazrui, Arasa, & Murugami, 2012; Berry et al., 2006; Castro, 2003; Retortillo & Rodriguez, 2010; Sam & Berry, 2010; Sawikar & Hunt, 2005; Sonderegger & Barrett, 2004; Ward & Kus, 2012; Wilton & Constantine, 2003; Zheng, Sang, & Wang, 2004). For instance, Berry et al. (2006) studied cultural minority adolescents aged between 13 and 18 years from 13 countries such as Australia (n = 611), Canada (n = 396), New Zealand (n = 499), UK (n = 240), and USA (n = 609) and concluded that adolescents’ development of bicultural identity was the best for their psychological and socio-cultural adaptation and marginalization the worst. Likewise, a recent meta-analysis of 83 studies totaling 23,197 participants showed a significant positive association between biculturalism and psychological and socio-cultural adaptation (Nguyen & Benet-Martínez, 2013). This was further supported by a recent mini meta-analytic study showing a positive relationship between biculturalism (integration) and adaptation, even when perceived discrimination was taken into account (Abu-Rayya & Sam, 2017).

Cultural minority adolescents, however, are not just preoccupied with the attainment of an acculturation identification style, i.e., belonging to cultural social groups, particularly in religiously oriented societies or communities like Muslim minorities (e.g., Akbarzadeh & Saeed, 2001). During the developmental stage of adolescence in such contexts, adolescents are likely to face questions related to their religious identity, and they also encounter questions associated with their own distinctiveness and personal uniqueness from others regardless of the cultural belonging. Outcomes of these processes may well influence adolescents’ psychological adaptation. We argue that for social-developmental psychologists to better understand identity formation and its impact on adolescents’ adaptation, adolescents’ religious identity and personal identity are also potentially worthwhile factors to pursue empirically.

The lack of a religious identity concept within acculturation research on minority adolescents’ adaptation may have possessed a certain conceptual
merit, supposedly in positing an intrinsic link between culture and religion (e.g., Hutchinson & Smith, 1996). However, as Abu-Rayya and Abu-Rayya (2009) noted, culturally identifiers may not necessarily practice their religion and religious faith in the same way that religious individuals within a given culture may disapprove cultural habits and traditions of their group, particularly when these would clash with religion. In support of this distinction, Abu-Rayya and Abu-Rayya (2009) found a weak positive correlation between religious identification and cultural identification among Palestinian Muslim and Christian adolescents. Likewise, Abu-Rayya, Walker, White, and Abu-Rayya (2016) found a weak positive correlation between the two constructs among Australian Muslim adolescents. Relatedly, a considerable body of research has shown that religious identification relates positively to a range of psychological and social/behavioral adaptation parameters among adolescents from different religions, such as Christianity and Islam (e.g., Abu-Rayya & Abu-Rayya, 2009; Abdel-Khalek, 2011; Ano & Vasconcelles, 2005; Fife, Adegoke, McCoy, & Brewer, 2011; Headey, Schupp, Tucci, & Wagner, 2010; Ji, Perry, & Clarke-Pine, 2011; Leondari & Gialamas, 2009; Rasic, Kisely, & Langille, 2011; Rosmarin, Pargament, & Mahoney, 2009). On a general level, these research findings suggest that religious identification may compose a substantial component of cultural minority adolescents’ self-concept, something distinct from their cultural identification, and therefore crucial to the development and establishment of their self-meaning, potentially carrying benefits for their adaptation.

As far as adolescents’ personal distinctiveness and uniqueness from others are concerned, Marcia (1980) theorized four possible ego identity styles, contingent upon adolescents’ level of exploration and commitment to self-chosen aspirations, goals, and values to name a few. These identity styles are (a) diffusion/confusion: denotes adolescents who have not yet experienced an identity exploration nor made any personal commitment to a series of personal issues; (b) foreclosure: represents adolescents committed to externally indoctrinated aspirations, goals and beliefs without a personal exploratory involvement; (c) moratorium: denotes the status of adolescents actively struggling with their ego identity, yet have not made any commitment to a series of personal issues; and lastly (d) achievement: refers to adolescents who attained their ego identity through self-exploration and evaluation of various alternatives, resulting in personal commitments in various matters.

A plethora of research evidence suggests that adolescents in the ego identity achievement status share higher levels of desirable psychological attributes, compared to adolescents in the other statuses. This includes higher levels of self-esteem, sense of mastery in managing the surrounding environment, self-control and directedness, satisfying social relationships, satisfaction with life, engaging in less antisocial behaviors, and experiencing less depression and anxiety (Archer, 1989, 1993; Arseth, Kroger, Martinussen, & Marcia, 2009; Kosaka, 2010; Laghi, 2009; Li, Ling, & Liu, 2011; Muuss, 1996; Ryckman, 2000).
These findings offer immediate confirmation of the relevance of achieved ego identity to cultural minority adolescents’ self-meaning and the usefulness of Marcia’s (1980) theorization in studying their adaptation. It should be noted, however, that in previous research on the interconnections between ego identity statuses and psychological attributes, religion was considered part of the domains denoting ego identity; thus, the roles of ego identity (i.e., personal distinctiveness) and religious identity in adolescents’ functioning became confused.

The Current Study

According to the Australian 2011 Census, 476,291 Muslims from heterogeneous ethnic backgrounds (such as Lebanese, Turkish, Iraqi, Pakistani, and Bangladeshi) live in Australia and comprise 2.2% of the total population. Of the total Australian Muslim population, 38.5% were born in Australia, with almost 50% aged below 25 years (Australian Bureau of Statistics, 2011). Australian Muslims compose a cultural minority in a country that adopts explicitly a multiculturalism policy which affirms the importance of a culturally diverse and socially cohesive nation (Department of Immigration and Citizenship, 2011). Australian Muslim adolescents, as other minorities in the country, therefore, have opportunities to develop a bicultural identity encouraged by the overall general positive and socially inclusive public atmosphere in Australia (Berry et al., 2006). A recent qualitative study (Abu-Rayya et al., 2016) has demonstrated the importance Australian Muslim youth attach to their Australian identity alongside their ethnic affirmation and belonging, despite experiencing events of discrimination that generally arise during incidents of tension between extremist Australian Muslims and Anglo-Australians.

While much research exists in the literature in regard to discrete relationships between bicultural identity, religious identity, and ego identity and adaptation, research contrasting these identities in adolescents' adaptation is lacking. The present study comes to fill in this gap among Australian Muslim adolescents, a minority to whom the three identities are likely to apply as demonstrated above. The study was designed to answer the following research question: What is the
relative contribution of achieved bicultural identity, achieved ego identity, and achieved religious identity to the psychological and socio-cultural adaptation of Australian Muslim adolescents?

With the lack of previous studies contrasting these factors, our study is best described as explorative as no research hypothesis could be justifiably developed. To keep with the conceptual distinctiveness between the three identities, the relevant measures used in the current study were as distinct as possible. Previous research on the relationship between bicultural identity and adaptation has advocated the use of diverse positive and negative measures of psychological and socio-cultural adaptation (Abu-Rayya & Sam, 2017). The present study implemented this recommendation and deployed different positive and negative indicators of adaptation that have currency in international research to best assess the contribution of each identity to adolescents’ adaptation.

Method

Participants

A total of 504 high school Muslim students (234 males and 270 females) participated in this study. About 64% (n = 321) were studying at Muslim schools in metropolitan Sydney and Melbourne and the rest were public school students recruited from homework clubs (n = 108) and community groups (n = 75). The participants’ age ranged between 14 and 18 years with a Mean age = 15.80 years (SD = 1.16) and their average school grades ranged from 50 to 99 (Mean = 75; SD = 13.04). The majority of participants (73%) were Australian-born and the rest migrated to Australia before the age of five years. The participants were from diverse ethnic backgrounds including Turkish, Egyptian, Iraqi, Pakistani, Indian, and Lebanese, with the majority being Lebanese (about 33%) and Bangladeshi (14%). The vast majority (about 86%) stated that they lived in Australia in fairly ethnically mixed neighborhoods. Participants’ mothers had completed a Bachelor or higher degree in 52% of the cases with the rest completed a vocational (i.e., TAFE) certificate; in comparison, 69% of participants’ fathers had completed a Bachelor or higher degree and 31% had completed a vocational (i.e., TAFE) certificate.

Study procedure

Three Muslim schools in Sydney and Melbourne Metropolitan areas volunteered to participate in this study. Each school appointed one class from each of the years 9 to 11 that satisfied diversity in terms of academic achievements, ethnic belonging, gender, and socio-economic backgrounds. Muslim homework clubs’ organizers and Muslim community groups’ leaders were asked for the participation of public school Muslim students in the years 9 to 11. Muslim
school students completed the study questionnaire during one class session. Muslim students affiliated with homework clubs or community groups completed the study questionnaire on site in groups after mutual arrangements with their organizers or leaders. The questionnaire took between 30 and 45 minutes to complete. Participation consents were collected from students and their parents/guardians prior to completion of the study questionnaire. As all students had mastery of the English language, questionnaires were administered in English. Participating students were assured that any information provided would be treated confidentially through the non-reporting of their names, school/club/group names, or any revealing details in this study.

Ethics approval to conduct the study was obtained from the University of Sydney Human Ethics Committee.

**Measures**

The study self-report questionnaire included demographic questions and the following measures:

**Socio-cultural adaptation.** This measure assessed three main factors: (1) *School adjustment*, (2) *School/community behavioral problems*, and (3) *Social relations*. *School adjustment* was measured by the seven-item scale developed by Berry et al. (2006). An example item is “I feel uneasy about going to school in the morning.” All items were rated on a six-point Likert scale from *strongly disagree* (1) to *strongly agree* (6). *School/community behavioral problems* were measured employing Berry et al.’s (2006) 10-item scale. The measure gauges the frequency of engaging in negative activities (e.g., “Had a serious quarrel with a teacher”) during the last 12 months on a five-point Likert scale ranging from *never* (1) to *more than six times* (5). *Social relations* were measured using Ryff’s (1999) nine-item scale (e.g., “I enjoy personal and mutual conversations with family members or friends”). Participants were asked to respond by using a six-point Likert scale from *strongly disagree* (1) to *strongly agree* (6).

**Psychological adaptation.** Three measures of positive indicators of psychological adaptation (*self-acceptance, environmental mastery, and life satisfaction*) and three measures of negative indicators of psychological adaptation (*depression, anxiety, and psychosomatic symptoms*) were used. *Self-acceptance* and *environmental mastery* were assessed using Ryff’s (1999) 18-item Scale (9 for each construct). Example items for self-acceptance and environmental mastery are “In general, I feel confident and positive about myself” and “I often feel overwhelmed by many responsibilities,” respectively. *Life satisfaction* was measured with five items, e.g., “I am satisfied with my life” (Diener, Emmons, Larsen, & Griffin, 1985). *Depression, anxiety, and psychosomatic symptoms* were measured employing Berry et al.’s (2006) 15-item scale, 5 items per factor, e.g., “I feel
unhappy and sad” for depression, “I feel restless” for anxiety, and “I feel dizzy and faint” for psychosomatic symptoms. On all of the psychological adaptation measures, participants responded on a six-point Likert scale from strongly disagree (1) to strongly agree (6).

**Acculturation identification styles.** The Bilineal method was used. Here, *heritage cultural identification* was measured by the 14-item Multi-group Ethnic Identity Measure (Phinney, 1992, 1993), assessing cultural behaviors, cultural affirmation and belonging, and cultural identity achievement, with a high score on the scale indicating an achieved heritage cultural identification. An example item of heritage culture affirmation and belonging is “I have a strong sense of belonging to my own ethnic group.” *Australian cultural identification* was measured similar to heritage cultural identification, but the items referred specifically to participants’ Australian culture, with a high score on the scale indicating an achieved Australian cultural identification. In both cases, items were rated on a six-point Likert scale from strongly disagree (1) to strongly agree (6). Berry’s (1997) four acculturation styles were empirically defined after testing first that heritage cultural identification and Australian cultural identification were statistically unrelated, and employing second a bipartite split, using the theoretical median of each dimension (3.5 for heritage cultural identification and 3.5 for Australian cultural identification) as is common in the field of acculturation research (e.g., Abu-Rayya & Abu-Rayya, 2009; Donà, & Berry, 1994; Ward & Kus, 2012; Ward & Rana-Deuba, 1999; Zheng et al., 2004). Participants scoring above the theoretical medians for both identification dimensions were assigned to the achieved *bicultural* identification style; those scoring above the median for heritage cultural identification and below the median for Australian cultural identification were assigned to the *separation* identification style; those scoring below the median for heritage cultural identification and above the median for Australian cultural identification were assigned to the *assimilation* identification style; and lastly, those scoring below the medians for both identification dimensions were assigned to the *marginalization* identification style.

**Ego identity.** The current study employed a modified version of the 64-item widely used Extended Version of the Objective Measure of Ego Identity Status (Bennion & Adams, 1986). The modification sought to exclude 16 items related to sex-roles and religion because the domain of sex-roles (within marriage) was not relevant to school-aged adolescents being tested here, and the items measuring religion were excluded because, as noted previously, the study sought to prevent theoretical interlinks between ego identity and religious identification. Besides, based on cultural sensitivity analyses, items related to dating were modified to socialization because Muslims’ dating would be perceived as morally problematic from a religious point of view. Thus, only 48 items of this measure were administered to participants. An example item of Achievement is “I have
chosen one or more recreational activities to engage in regularly from lots of things and I’m satisfied with those choices”; an example item of Moratorium is “There are so many different political parties and ideas. I can’t decide which to follow until I figure it all out”; an example item of Foreclosure is “I only pick friends my parents would approve of”; and an example item of Diffusion is “There is no single lifestyle which appeals to me more than another.” The participants were asked to respond to a six-point Likert scale from strongly disagree (1) to strongly agree (6). Each participant was given four overall scores, one score for each status derived from the items representing the status. The highest of the four scores (under the condition that it was also above the scale theoretical median, i.e., 3.5) was used to represent the ego identity status by which an individual was classified.

Religious identity. The Multi-religion Identity Measure (Abu-Rayya, Abu-Rayya, & Khalil, 2009) was used. The measure includes 15 items divided equally between three aspects of adolescents’ religious identity: religious affirmation and belonging, religious identity achievement, and religious faith and practices, with a high score on the scale indicating an achieved religious identity. An example item of religious faith and practices is “My belief in God is important to me.” Items were rated on a seven-point Likert scale from not at all (1) to absolutely (7).

Results

Preliminary Analyses

Absolute Pearson’s correlations between the socio-cultural adaptation measures (school adjustment, school/community behavioral problems, and social relations) ranged from .50 to .62. Likewise, absolute Pearson’s correlations between the psychological adaptation measures (self-acceptance, environmental mastery, life satisfaction, depression, anxiety, and psychosomatic symptoms) ranged from .37 to .59. The correlations between the socio-cultural adaptation measures and psychological adaptation measures were generally low, ranging from .11 to .35. Given the moderate relationships among socio-cultural adaptation measures and among psychological adaptation measures, as well as the weak relationships between socio-cultural and psychological adaptation measures, it was considered reasonable to maintain this distinction throughout the analyses (Ward et al., 2001). Means, standard deviations, and Cronbach’s $\alpha$s of each study measure are shown in Table 1. As shown in the table, all $\alpha$s were acceptable.

A series of initial analyses regressing psychological and socio-cultural adaptation measures on demographic variables (data collection site—school, homework club, community group—gender, age, length of residence in Australia, average school grade, mother’s/father’s education, neighborhood
ethnic composition—the majority/all people from a different ethnic group than the participant’s, about an equal mix of people from the participant’s ethnic group and other groups, the majority/all people from the participant’s ethnic group—and country of birth—Australia, overseas) revealed that school adjustment and social relations were not connected with any of these factors. Participants’ gender was associated with school/community behavioral problems ($z = -2.86, p = .005$), self-acceptance ($z = -2.67, p = .009$), and environmental mastery ($z = -2.31, p = .02$), with males reporting more school/community behavioral problems ($M = 1.67, SD = .57$), self-acceptance ($M = 4.59, SD = .77$), and environmental mastery ($M = 4.41, SD = .78$) than females’ school/community behavioral problems ($M = 1.43, SD = .48$), self-acceptance ($M = 4.16, SD = .94$), and environmental mastery ($M = 3.96, SD = .97$). Participants’ gender was also associated with depression ($z = 2.73, p = .008$), anxiety ($z = 2.22, p = .03$), and psychosomatic symptoms ($z = 2.54, p = .01$), with females reporting higher depression ($M = 3.39, SD = 1.07$), anxiety ($M = 3.63, SD = 1.04$), and psychosomatic symptoms ($M = 3.31, SD = 1.02$), than males’ depression ($M = 2.80, SD = .93$), anxiety ($M = 3.13, SD = 1.03$), and psychosomatic symptoms ($M = 2.80, SD = .89$). Likewise, participants’ average school grade was positively associated with self-acceptance ($z = 2.41, p = .02$), environmental mastery ($z = 2.75, p = .006$), and life satisfaction

<table>
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<th></th>
<th>Mean</th>
<th>SD</th>
<th>Cronbach’s α</th>
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<tbody>
<tr>
<td>School adjustment</td>
<td>4.29</td>
<td>.89</td>
<td>.79</td>
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<tr>
<td>School/community problems</td>
<td>1.54</td>
<td>.54</td>
<td>.80</td>
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<tr>
<td>Social relations</td>
<td>4.63</td>
<td>.85</td>
<td>.84</td>
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<tr>
<td>Self-acceptance</td>
<td>4.37</td>
<td>.88</td>
<td>.87</td>
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<tr>
<td>Environmental mastery</td>
<td>4.14</td>
<td>.91</td>
<td>.86</td>
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<tr>
<td>Life satisfaction</td>
<td>3.99</td>
<td>1.21</td>
<td>.87</td>
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<tr>
<td>Depression</td>
<td>3.11</td>
<td>1.06</td>
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<tr>
<td>Anxiety</td>
<td>3.40</td>
<td>1.06</td>
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<tr>
<td>Psychosomatic symptoms</td>
<td>3.11</td>
<td>.98</td>
<td>.81</td>
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<tr>
<td>Cultural identity</td>
<td>4.01</td>
<td>1.23</td>
<td>.92</td>
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<tr>
<td>Australian identity</td>
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<td>.82</td>
<td>.87</td>
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<tr>
<td>Achievement status</td>
<td>4.10</td>
<td>.74</td>
<td>.81</td>
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<tr>
<td>Moratorium status</td>
<td>3.56</td>
<td>.78</td>
<td>.80</td>
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<tr>
<td>Foreclosure status</td>
<td>2.96</td>
<td>.85</td>
<td>.86</td>
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<tr>
<td>Diffusion status</td>
<td>3.11</td>
<td>.68</td>
<td>.81</td>
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<tr>
<td>Religiosity</td>
<td>5.90</td>
<td>.97</td>
<td>.90</td>
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Participants’ average school grade was also negatively associated with depression ($z = -2.24, p = .027$), anxiety ($z = -2.49, p = .01$), and psychosomatic symptoms ($z = -2.15, p = .03$).

Gender and/or average school grade were therefore the only factors controlled for, where relevant, in subsequent multiple regression analyses, comparing the relative relationships between achieved bicultural identity, achieved ego identity, and achieved religious identification and adaptation.

**Frequency of Acculturation Styles**

Heritage cultural and Australian cultural identifications were statistically unrelated, $r = .07, p = .32$. As noted in the Method section, the assignment of participants to the four acculturation identification styles was therefore possible (Berry, 1997). A large proportion of participants (59.5%; 95% CI = 52.2%–66.8%) were assigned to the achieved bicultural identification style, separation was less prevailing (22.7%; 95% CI = 15.8%–29.6%), followed by assimilation (9.3%; 95% CI = 5.1%–13.5%) and marginalization (6.5%; 95% CI = 2.7%–10.3%).

Analysis of variance (ANOVA) test did not show any statistically significant religious identification difference between the four acculturation styles.

**Frequency of Ego Identity Statuses**

A larger proportion of participants (61.7%; 95% CI = 56.3%–72.5%) were assigned to the achieved ego identity status. The second prevailing status was moratorium (21.8%; 95% CI = 14.0%–29.6%), followed by diffusion (5.2%; 95% CI = 2.4%–8.0%) and foreclosure (7.1%; 95% CI = 3.7%–10.5%). There were 4.2% ($n = 21$) who could not be classified in any of these statuses and therefore excluded from further analyses. ANOVA revealed that ego identity statuses did not statistically significantly differ in levels of religious identification, and Chi-square analyses revealed non-significant relationships between acculturation identification styles and ego identity statuses.

**Comparative Associations**

To compare the relative relationships between achieved bicultural identity, achieved ego identity, and achieved religious identification and adaptation, a series of multiple regression analyses was undertaken. Gender and/or average school grade were entered in the regressions as controls, where relevant, and standardized religious identification scores were entered together with dummy codes for achieved bicultural identity and achieved ego identity as the independent variables.

For socio-cultural adaptation, the analyses revealed that achieved religious identity was more strongly positively associated with school adjustment, $\beta = .35$, ($z = 3.55, p = .001$).
\[ z = 4.44, \ p < .001, \] than either achieved bicultural identity, \( \beta = .19, \ z = 2.43, \ p = .014, \) or achieved ego identity, \( \beta = .15, \ z = 1.99, \ p = .048. \) Similarly, achieved religious identity was more strongly negatively associated with school/community problems, \( \beta = -.42, \ z = -5.33, \ p < .001, \) than either achieved bicultural identity, \( \beta = -.19, \ z = 2.25, \ p = .025, \) or achieved ego identity, \( \beta = -.14, \ z = 2.01, \ p = .045. \) In the case of social relations, however, achieved ego identity, \( \beta = .35, \ z = 4.55, \ p < .001, \) had a stronger positive association with this adaptation measure, than either achieved religious identity, \( \beta = .22, \ z = 2.64, \ p = .01, \) or achieved bicultural identity, \( \beta = .18, \ z = 2.35, \ p = .02 \) (refer to Table 2).

For positive indicators of psychological adaptation, the analyses revealed that achieved religious identity, \( \beta = .32, \ z = 4.26, \ p < .001, \) and achieved ego identity, \( \beta = .31, \ z = 4.19, \ p < .001, \) were positively associated with self-acceptance, and both were more strongly associated with self-acceptance than achieved bicultural identity, \( \beta = .15, \ z = 2.04, \ p = .046. \) For environmental mastery, achieved ego identity, \( \beta = .33, \ z = 4.39, \ p < .001, \) had a stronger positive association with this adaptation measure, than either achieved religious identity, \( \beta = .26, \ z = 3.25, \ p = .001, \) or achieved bicultural identity, \( \beta = .19, \ z = 2.26, \ p = .024. \) Lastly, for life satisfaction, achieved religious identity, \( \beta = .39, \ z = 5.36, \ p < .001, \) had a stronger positive association with this adaptation measure than either achieved ego identity, \( \beta = .23, \ z = 3.21, \ p = .002, \) or achieved bicultural identity, \( \beta = .14, \ z = 1.98, \ p = .048. \)

For negative indicators of psychological adaptation, the analyses revealed that, as shown in Table 2, the three identities did not correlate with each of the negative indicators in a statistically significantly different manner.

**Discussion**

In agreement with local research on Australian Muslim and non-Muslim minority groups (e.g., Sonderegger & Barrett, 2004; Yagmur & Van de Vijver, 2012; Zheng et al., 2004) or international research on minorities (e.g., Abubakar et al., 2012; Berry et al., 2006; Castro, 2003; Retortillo & Rodriguez, 2010; Sam & Berry, 2010; Sawrikar & Hunt, 2005; Wilton & Constantine, 2003; Ward & Kus, 2012), Australian adolescent Muslims with an achieved bicultural identity (59.5%) were advantaged in terms of their psychological and socio-cultural adaptation. This also converges with findings of the recent meta-analysis of 83 studies totaling 23,197 participants which showed a significant positive association between biculturalism and psychological and socio-cultural adaptation (Nguyen & Benet-Martínez, 2013). The present study revealed also that adolescents assigned to the achieved ego identity status (61.7%) tended to show advantaged psychological and socio-cultural adaptation. This finding is consistent with international research showing that ego identity achievement carries advantaged benefits for the psychological functioning of adolescents (e.g., Arseth et al., 2009; Kosaka, 2010; Laghi, 2009; Li et al., 2011). Likewise, in line with
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<tr>
<th>Achieved religious Identity</th>
<th>School adjustment</th>
<th>School problems</th>
<th>Social relations</th>
<th>Self-acceptance</th>
<th>Environmental mastery</th>
<th>Life satisfaction</th>
<th>Depression</th>
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<td>Achieved ego identity</td>
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Adjusted $R^2$ 22% 24% 24% 34% 33% 38% 17% 15% 15%  
Adjusted $R^2$ change 22% 20%# 24% 28%### 23%#### 27%##### 12%#### 11%#### 11%####

$F_{(9, 305)}$ 13.85** 11.59** 15.26** 14.29** 13.45** 19.93** 6.04** 5.53** 5.41**

Notes. *p < .05. **p < .01. Identity coefficients with different superscripts in each column were statistically significantly different using Steiger’s z test (Hoerger, 2013): a,b p < .006; c,d p < .001; e,f p < .03; g,h p < .004; i,j p < .02; k,l p < .001. "Dummy = 1 (achieved), dummy = 0 (otherwise). $Dummy = 1$ (bicultural), dummy = 0 (otherwise). #Gender was entered in the first step. ###Gender and average school grade were enter in the regression. ####Average school grade was entered in the regression.
previous research showing the positive role of adolescents’ achieved religious identity in their adaptation and general sense of wellbeing (e.g., Abdel-Khalek, 2009, 2011; Ano & Vasconcelles, 2005; Fife et al., 2011; Ji et al., 2011; Rasic et al., 2011), the present study has shown that Muslim adolescents’ achieved religious identity can be beneficial for their psychological and socio-cultural adaptation.

The comparative relations between achieved bicultural identity, achieved ego identity, and achieved religious identity and adaptation was the main issue of the current study. The study findings demonstrated that Australian adolescent Muslims’ achieved religious identity was more strongly associated with two out of three socio-cultural adaptation measures, namely school adjustment and less school/community problems than either achieved bicultural identity or achieved ego identity. Additionally, achieved ego identity had a notably stronger positive association with social relations than either achieved religious identity or achieved bicultural identity.

Adolescents’ achieved religious identity was more strongly associated with two out of three psychological adaptation measures, namely self-acceptance and life satisfaction. Adolescents’ achieved ego identity was also more strongly associated with two out of three psychological adaptation measures, namely self-acceptance and environmental mastery. For negative indicators of psychological adaptation, achieved religious identity, ego identity achievement, and achieved bicultural identity did not have a different pattern of relationship.

Collectively, these findings indicate that adolescent Muslims’ achieved religious identity seems to play a more important role in shaping their psychological and socio-cultural adaptation compared to adolescents’ achieved bicultural identity. Adolescents’ achieved ego identity tends also to play a greater role in their psychological and socio-cultural adaptation than achieved bicultural identity.

The important roles religious identification and ego identity achievement play in adolescents’ adjustment are new to previous acculturation research which dismissed these factors (e.g., Berry, 1997; Berry et al., 2006; Castro, 2003; Nguyen & Benet-Martínez, 2013; Retortillo & Rodriguez, 2010; Sam & Berry, 2010). For instance, Berry et al.’s (2006) study which was conducted in 13 countries did not theorize any effect of religious identification and ego identity development on adolescent’s adaptation in their framework. Likewise, the recent meta-analysis of the interconnections between biculturalism and adaptation included 83 acculturation studies \( n = 23,197 \) and no control was made on participants’ religious identification and levels of ego identity, presumably because none of the studies included such factors.

The current study proposes that a strong sense of religious identification can foster in adolescent Muslims a consolidated sense of self and promote essential intrapsychic resources to cope with the stress and learning processes associated with their psychological and socio-cultural adaptation to Australian
mainstream culture. Similarly, findings of the current study suggest that Muslim adolescents with a consolidated sense of ego identity seem to have a strengthened sense of self attesting to a higher self-confidence, which may equip them with better intrapsychic resources to cope with stress and participate in social encounters that facilitate learning of the Australian mainstream society.

It became apparent therefore that as far as the adaptation of adolescent Muslims to Australian mainstream culture is concerned, the amalgamation of the three identity-based forces—bicultural identity, religious identity attainment, and ego identity formation—within a single theoretical framework has a great potential for explaining the routes and mechanisms by which Muslim adolescents come to develop adaptive or maladaptive psychological and socio-cultural attributes. More specifically, Muslim adolescents can maximize their psychological and socio-cultural adaptation through development of an achieved bicultural identity style of acculturation coupled with a sense of religious identity attainment and an achieved ego identity. Likewise, they can be at elevated risks for a range of psychological and socio-cultural maladaptive problems in the incident they do not develop a bicultural identity style of acculturation and simultaneously have an immature sense of religious identity and ego identity. Additionally, much research has consistently shown that cultural marginality is detrimental to adolescents’ adjustment (e.g., Abubakar et al., 2012; Berry, 1997; Berry et al., 2006; Castro, 2003; Retortillo & Rodriguez, 2010; Sam & Berry, 2010; Sawrikar & Hunt, 2005; Sonderegger & Barrett, 2004; Verkuyten & Kwa, 1994; Wilton & Constantine, 2003; Zheng et al., 2004; Ward & Kus, 2012). While the present study did not examine the interconnections between cultural marginality and adaptation, the study findings indicate that culturally marginalized Muslim adolescents may show some levels of adjustment through an achieved religious identity and/or an achieved ego identity. For instance, culturally marginalized adolescents who have a sense of religious identity coupled with an achieved ego identity can still be in a better adjustment position compared to those who are culturally marginalized and yet show just a degree of religious identification or an achieved ego identity, or compared to those who are culturally marginalized and simultaneously have an immature sense of religious identification and ego identity.

Further research is needed to cross-validate the present study findings with Australian Muslims and Muslims living in other Anglo-cultures such as the USA, UK, and Canada. In addition, the current study findings could be strengthened by the inclusion of qualitative methods (e.g., youth narratives) that would highlight the nuances of their unique experiences within multicultural Australia (and other Anglo-contexts) not captured within this study which was only based on quantitative measurements. This would contribute richly to the cross-validation of the study findings as well as explain complex variations that could emerge between Muslims across different contexts.
Limitations

Two study caveats must be noted. First, although the study was carried out on a relatively large sample recruited from different sites (schools, homework clubs, and community groups), generalizability of the results to Australian Muslim adolescents may not be possible. Second, the correlational nature of the study implies that the study conclusions should not be understood in cause-effect terms.

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