



The Influence Region of Origin, Area of Residence Prior to Migration, Religion, and Perceived Discrimination on Acculturation Strategies Among sub-Saharan African Migrants in Australia

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Abstract

The study examined whether there was an influence of region of origin, area, or residence prior to migration, religion, and perceived discrimination on the acculturation strategies of sub-Saharan African migrants in Australia. These factors have been found to affect acculturation, given the multi-dimensionality of identity formation. Data were obtained on 425 sub-Saharan African migrants and refugees living in Victoria and South Australia. Acculturation was measured using the Vancouver Acculturation Index. Compared to migrants from central Africa, those from eastern Africa (adjusted odds ratio [AOR], 0.45; $p < 0.01$) were less likely to assimilate, while migrants who lived in large towns or the city prior to migration (AOR, 0.54; $p < 0.05$) were less likely to separate but more likely to assimilate (AOR, 2.26; $p < 0.01$) than those who came from refugee camps. Compared to Muslims, Christians (AOR, 0.57; $p < 0.05$) were less likely to integrate while those practising religions other than Islam or Christianity (AOR, 3.54; $p < 0.01$) were more likely to separate. Migrants reporting not fitting in/excluded were less likely to be in the culturally marginalised group (OR, 0.86; $p < 0.01$) but more likely to report being integrated (AOR, 1.14; $p < 0.01$), whereas those reporting personal discrimination (AOR, 1.12; $p < 0.01$) and societal discrimination (AOR, 1.13; $p < 0.01$) were more likely to separate or remain traditional. In order to promote cultural pluralism and facilitate cultural adaptations among sub-Saharan African migrants, educational programs, anti-racism policy, and legislative reforms need to reposition multiculturalism in a way that promotes tolerance and acceptance of ethnic, cultural, and religious diversity.

Keywords Religious affiliation · Discrimination · Cultural integration · Acculturation · sub-Saharan African migrants

Introduction

International migration is a global phenomenon, with the number of people living outside their countries of origin increasing from 173 million people in 2000 to 220 million in 2010 and 258 million or 3.4% of the world's population in 2017 (United

Nations, 2017). Australia is ranked 9th among the top 10 countries of destination (United Nations, 2017), hosting 7.3 million (2.8%) of all international migrants since the proactive migration policies of the post-WWII period (Australian Bureau of Statistics, 2019). In terms of African migration, the number of African migrants resettling within countries of the Organisation for Economic Co-operation and Development (OECD) has been increasing significantly in the last two decades. By 2004, there were 7.2 million African migrants in OECD member countries, equating to 13% of immigrants from non-OECD-member countries (Bossard, 2009). In 2011, 10.4 million migrants in OECD countries, and 16–20% of recent migrants, were originating from Africa (Organisation for Economic Co-operation and Development and United Nations Department of Economic and Social Affairs, 2014). Census data indicate that there were 272,520 migrants from sub-Saharan African migrants living in Australia in 2011, a number which increased to 317,182 in 2016, representing 5.1% of Australia's overseas-born population (Australian Bureau of Statistics, 2017).

People relocating to another country do inevitably go through acculturation processes regardless of their migration status. Acculturation refers to changes and adjustments that occur when two cultural groups come into contact with each other, including cultural, physical, and psychological changes (Berry, 1990b; Berry, 1997). The varying pathways that individuals navigate when adapting to a new culture are known as acculturation strategies (Berry, 1990b; Berry, 1997). Early research on acculturation conceptualised it as changes occurring at a group level, with the whole group experiencing structural, cultural, biological, psychological, economic, and political changes, where mutual changes occur in both groups: the dominant group (host society) and the acculturating groups (migrants or refugees) (Flannery et al., 2001). Data emerging in the last three decades suggests that acculturation also occurs at the individual level, with changes in both overt behaviours and covert traits occurring in individuals going through the collective acculturation process (Berry, 1990a; Berry, 1997; Renzaho, 2009; Sam & Berry, 2010).

Regardless of country of origin and migration status, two theoretical models have dominated the literature on migrants' acculturation: the linear or unidirectional model (UDM) and the bi-dimensional model (BDM). The primary assumption of the UDM is that it is not possible to simultaneously be a fully integrated member of two cultures with two differing sets of cultural values. As Flannery et al. (2001) explain: 'the UDM describes acculturation as the shedding off of an old culture and the taking on of a new culture ... [and] describes only one outcome of acculturation – assimilation' (p. 1035). The ultimate outcome of the UDM is assimilation, with an individual moving from adopting cultural separation (i.e. home country oriented) to assimilating (i.e. host country oriented). Therefore, the UDM model fails to recognise that it is possible for individuals going through acculturation to become bicultural. In contrast, the BDM considers two independent cultural orientations — migrants' culture of origin and the host culture which results in four possible acculturation orientations, also referred to as acculturation strategies (Berry, 1990a; Berry, 1990b; Berry & Kim, 1988; Flannery et al., 2001; MacLachlan, 1997; Renzaho, 2009; Renzaho et al., 2008): (1) traditional, also known as separation (keeps loyalty to traditional culture and does not recognise the host/dominant culture), (2) assimilation, also known as 'cultural shift' or the 'melting pot' theory of acculturation (rejects traditional culture and fully embraces the host/dominant culture), (3) integration, also known as bicultural orientation or cultural

incorporation (retains cultural identity at the same time moving to join the dominant society), and (4) marginalisation (rejects traditional culture and fails to connect with the host/dominant culture by exclusion or withdrawal). The bi-dimensional approach recognises that people may face a conflict in identity, between their home and host environment (Ward et al., 2011). Conflicts in identity exist in range of situations, for example, many working mothers also face conflicts between these two roles both potentially conflicting for their time and energy (Cadsby et al., 2013). These conflicting roles are linked to the intersectionality of identity.

There have been several studies on the acculturation strategies utilised by immigrants and factors associated with acculturation attitudes among migrant populations. However, these studies have produced different patterns. Some studies suggest that integration is the most adopted acculturation strategy, followed by separation, then assimilation, and lastly marginalisation (Berry, 2005; Berry et al., 2006; Yu & Wang, 2011) This observed order of acculturation strategy is not supported by other studies among sub-Saharan African (Renzaho et al., 2008; Renzaho & Polonsky, 2013), Chinese (Lu et al., 2012) and Iranian (Delavari et al., 2015) migrants in Australia, Chinese migrants in the USA (Tahseen & Cheah, 2012), Turkish and other migrants in Germany (Ince et al., 2014; Zagefka & Brown, 2002), and internal migrants in China (Han et al., 2016). For example, among sub-Saharan African migrants in Australia, integration was consistently the most prevalent acculturation strategy, and in second, third, and fourth places were, respectively, marginalisation, assimilation, and separation among sub-Saharan African migrant adults (Renzaho & Polonsky, 2013) and marginalisation, separation, and assimilation among sub-Saharan African migrant children (Renzaho et al., 2008). Among Chinese migrants, the majority identified with the separation category, followed by integration, assimilation, and marginalization (Lu et al., 2012), while among Iranian migrants, marginalization represented the majority approach, followed by integration, assimilation, and separation (Delavari et al., 2015). Among migrants in Germany, integration was the most frequently adopted acculturation strategy, and in second, third, and fourth places were assimilation, separation, and marginalisation, respectively (Zagefka & Brown, 2002). These findings suggest that acculturation strategies among migrant groups differ according to country of origin, country of migration and its multicultural policy, as well as migration status.

The majority of studies examining factors associated with acculturation strategies among migrant populations have predominantly focused on socio-demographic factors with contradictory results. Socio-demographic factors found to be associated with acculturation strategies include gender, age at migration, social support, length of residency in the host country, education attainment in the host country, pre- and post-migration employment status, and language acquisition and usage in the host countries (Baek Choi & Thomas, 2009; Delavari et al., 2015; Güzel & Glazer, 2019; Ho, 2006; Mahmud et al., 2008; Padilla & Perez, 2003; Shim & Schwartz, 2007; Yeh, 2003). For example, some studies have found no difference between gender and acculturation strategies (Oh et al., 2002; Yeh, 2003), while others have found that men are more likely to be classified in the separation grouping while women predominantly are classified in the integration grouping (Yu & Wang, 2011). In a recent study of Iranian migrants in Australia, Delavari et al. (2015) found that being in the assimilation grouping was associated with the younger age of participants and migration for work, whereas integration was associated with older age and migration

to escape political upheaval in country of origin. Those who were in the marginalised grouping were those migrating for educational attainment or family reunion. Lu et al. (2010) reported falling into the assimilation grouping was associated with full time employment status and longer length of residence in the host countries, and there was no relationship between age at migration and acculturation strategy. These observations are at odds with Lee et al. (2003)'s findings that the younger age at immigration and greater length of residence are both associated with people falling into the integration and assimilation categories, whereas Tahseen and Cheah (2012) found that younger age at migration and longer length of residence were associated more with falling into the integration grouping than the separation grouping. Finally higher educational attainment has been found to be associated with falling into the integration grouping due to their greater likelihood of integrating with the wider community (Garcia Coll et al., 2002; Tahseen & Cheah, 2012).

Studies examining the influence of pre-migration factors such as region of origin and religion, as well as post-migration community discrimination on acculturation strategies, are scarce. The few studies that exist have focused on how acculturative stress and discrimination (everyday, perceived, or experienced) relate to disease outcomes, substance use, and service utilisation (Bernstein et al., 2011; Bilal et al., 2019; Kulis et al., 2009; Nakash et al., 2012; Noh & Kaspar, 2003; Renzaho & Polonsky, 2013), whether the relationship between religion and discrimination is mediated by the acculturation or whether religious affiliation predict perceived discrimination after controlling for acculturation (Awad, 2010). Therefore, understanding how region of origin, religion, and various forms of discrimination influence acculturation strategy outcomes should constitute one of the steps required to design effective programs to address potential acculturative stress, that is, the psychological, somatic, and social difficulties that accompany the adaptation to a new culture. The aim of this study was to assess the influence of region of origin, area, or residence prior to migration, religion, and perceived discrimination on acculturation strategies among sub-Saharan African migrants in Australia.

Various studies have found that a strong command of or proficiency in the mainstream language of the migrant-receiving country and acculturation strategies are inter-related (Lu et al., 2012; Lu et al., 2015; Waniek-Klimczak, 2011). These studies have found that proficiency in the host country's national language facilitates assimilation and integration among migrants. Other studies suggest that media exposure increases English proficiency in non-English-speaking countries (García Ortega, 2011). It is possible that sub-Saharan African migrants from English speaking countries colonized by Britain (predominantly Eastern, Western, and Southern African regions) are likely to assimilate and integrate better than those from countries colonised by non-English-speaking countries. It is also possible that sub-Saharan African migrants in Australia from big cities in their home countries are more likely to be exposed to English television networks (i.e. cable news, BBC) and social media, hence more likely to assimilate and integrate than those from rural areas. We hypothesised that

- (i) Sub-Saharan Africans in the integration and assimilation groupings are more likely to have come from urban areas and English-speaking Western, Eastern, and Southern regions of Africa.

Census data indicate that Christianity remains the most common religion in Australia (Australian Bureau of Statistics, 2017). The relationship between religious identity and acculturation is starting to emerge (Phalet et al., 2018). A recent study in Greece hypothesised that religion is very important in the construction of national identity and found that migrants who adopt the religion of the majority (mainstream) were more likely to be accepted by Greeks and to assimilate (Grigoropoulou & Chrysoschoou, 2011). In a study examining how religions and related acculturation tensions affect consumption behaviour of Indian migrants in the UK, Lindridge (2009) found that, for Hindu migrants, religious identity was only an aspect of their life as they engaged selectively with the wider community, with religious-consumption limited to specific festivals or family gathering. In contrast, for Sikhs, religion provided a strong sense of identity regardless of whether or not they adhered to Sikh religious teachings. They argue that religion's role in acculturation is often oversimplified and understudied and stressed that religion, when examined through acculturation lenses, represents a normative political ideology and an involvement within the local community. However, religion is also a social framework that migrants use to negotiate their new environment (Mansouri et al., 2015). We hypothesised that

- (ii) Sun-Saharan African migrants who identified as Christians will be more likely to be classified in the assimilation and integration groupings than those from other religious denominations.

In terms of discrimination, Berry and Sabatier (2010) undertook a multi-country study to examine the relationship between discrimination and acculturation strategies. The study included France, a country that pursues assimilationist ideals and discourages maintenance of home country culture as it is seen as an obstacle to equality of chance, as well as also included Canada, a country that pursues cultural pluralism and multi-cultural policies. The study found that, in France, discrimination was highest among those who have fell into the separated and integrated categories and lowest among migrants who have assimilated and marginalised. In contrast, in Canada, discrimination was lowest for those in the integration group (while remaining high for those in the separation grouping). These findings suggest that the relationship between acculturation and perceived discrimination is context-specific and influenced by differences in both public policy and public attitudes towards migrants of the host countries. Given the similarity between Australian and Canada, we hypothesised that

- (iii) Sub-Saharan African migrants classified in the integration and assimilation groupings will experience less discrimination than those in the separation and marginalisation groupings.

Methods

Data reported in this paper were part of a large study looking at blood donation behaviours and patterns among sub-Saharan African migrants (excluding white migrants from Zimbabwe and South Africa due to their pre-migration advantage and cultural differences). The focus of the research was on issues around blood donation of

both donors and non-donors. Donation status was not an inclusion or exclusion criteria, and the sample was designed to cover a cross section of sub-Saharan African migrants living in Australia. The study design and protocol have been reported elsewhere (McQuilten et al., 2014; Polonsky, Brijnath, & Renzaho, 2011a; Polonsky, Renzaho, & Brijnath, 2011b; Renzaho & Polonsky, 2013; Renzaho & Polonsky, 2013). Briefly, participants were recruited using leaflets and posters in both English and Arabic distributed through sub-Saharan African community associations, Migrant Resource Centres, Community Health Organisations, and religious institutions. In some studies in Africa identified significant cultural meaning of blood donation, including sharing ones' self or their soul with the recipient (Tagny et al., 2008). This was not identified as an issue by the African migrants in Australia who assisted in the initial stages of the research (Polonsky, Brijnath, & Renzaho, 2011a).

The distribution of leaflets and posters was done by bilingual workers to ensure the materials could be communicated in collection, data quality, interview techniques, and ethical considerations (confidentiality, data recording and storage, as well as disclosure) and received a training manual documenting all aspects of the data collection procedure as a reference. The training was complemented with two supervised rounds of field interview practice to familiarise themselves with study instruments and maximise the functional equivalence of the concepts across languages (Renzaho et al., 2013). All study instruments were administered in either English or the participants' most appropriate language. In total, data were obtained on 483 sub-Saharan African migrants and refugees aged 16 years or older, with data on 58 participants discarded from the analysis due to incomplete responses on more than five per cent of the items. The total sample with complete data was 425 participants. Each participant received a \$15 gift voucher for participating in the study. The study was approved by the Australian Red Cross Blood Service and Deakin University Human Research Ethics Committees.

Study Variables

Before we discuss the variables in this study, it is important to clarify that in line with the orientations of the acculturation approach, this study views individual identities as shifting, complex, and multi-layered that are highly context-sensitive. This reflects the key assumptions underlying intersectionality (Crenshaw, 1991) where multiple individual characteristics such as religion, education, socio-economic status, gender, sexuality, and even location of rural and urban intersect and overlap simultaneously to shape how individuals experience social systems and in particular cultural oppression and institutional discrimination (Phillips, 2010).

Dependent Variable

Acculturation Strategies

Acculturation strategies were measured using the Vancouver Acculturation Index (VAI) (Ryder et al., 2000). The scale is bi-dimensional and assesses 10 dimensions of

culture, with each dimension having one item depicting home cultural orientation (e.g. 'I often participate in my home country cultural tradition' or 'If I were single I would be willing to marry a person from my home country culture') and another depicting the host cultural orientation (e.g. 'I often behave in ways that are Australian' or 'I am interested in having typical Australian friends'), scored using an endorsement format. The 10 dimensions are traditions, marriage, social activities, comfort with people in the workplace, enjoying entrainment, behaviour, importance of cultural practices, beliefs in values, enjoyment of humour, and interest in friends. Participants answered the questions on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). Using a media split of the two subscales (Home-African and Host-Australian) (Renzaho, Swinburn et al. 2008), four cultural orientations were derived: traditional (high African-low Australia), assimilated (high Australian-low African), integrated (high on both), and marginalized (low on both) (Flannery et al., 2001). Other scales also classify individuals into similar categories (Huynh et al., 2009). Most importantly, it is recognised that individuals' cultural orientations can in fact change over time; however our data are from a cross-sectional study, and hence we are only exploring these relationships at one point in time.

While there are a range of bi-cultural scales (Huynh et al., 2009), such as the Stephenson Multigroup Acculturation Scale (Stephenson, 2000), we used the VIA. The VIA was selected over other alternatives for three reasons. It has a strong theoretical bi-dimensional structure and has shown good reliability and validity in studies involving participants from different cultural groups across different countries, including migrants from sub-Saharan Africa, Iran, Morocco, Lebanon, Palestine, Syria, Korea, Turkey, as well as participants who are Russian-speakers (Doucerain et al., 2017; Ryder et al., 2000; Testa et al., 2019). The psychometric properties of the scale have been established and the two cultural dimensions had good internal consistency, with a Cronbach's alpha of 0.87 for Home-African orientation and 0.82 for Host-Australian orientation (; Renzaho & Polonsky, 2013). Testa et al. (2019) identified three advantages on the VIA and its superior properties when compared to other similar scales: (1) it uses an endorsement format, rather than a frequency format, which likely contributes to the orthogonality (conceptual independence) of its subscales, (2) it has a relatively small number of items, and (3) has demonstrated strong psychometric properties in studies involving participants from different cultural groups. Ryder et al. (2000) evaluated the strength of unidimensional or bi-dimensional using the VAI and concluded that 'although the unidimensional measure showed a coherent pattern of external correlates, the bi-dimensional measure revealed independent dimensions corresponding to heritage and mainstream culture identification' (p. 49). Studies comparing unidimensional and bi-dimensional models of acculturation have consistently shown that the heritage and mainstream cultural orientations are orthogonal and distinctly correlate with other key third variables, suggesting that a bi-dimensional acculturation scale allows for a better depiction of migrants' adaptation processes (Navas et al., 2005; Ryder et al., 2000). These findings suggest that the bi-dimensional acculturation scale provides a more valid and useful operationalisation of cultural orientation. The robustness of the Vancouver Acculturation Index's independence has also been confirmed by Kang (2006).

Principal Explanatory Variables

Religion

The literature is not conclusive on how to measure religion due to its complexity (McAndrew & Voas, 2011). Two concepts have emerged related to the measurement of religion: religiosity and religious affiliation. Religiosity is more about the degree of religious commitment and encompasses belief, knowledge, experience, practice, and consequences (Allum et al., 2014; McAndrew & Voas, 2011). In contrast, religious affiliation or adherence is purely nominal and allows individuals within religious groups to distinguish from each other (Allum et al., 2014; McAndrew & Voas, 2011). It has been suggested that religion should be measured along three dimensions: affiliation, attendance at religious services, and beliefs (Allum et al., 2014). However, data from industrialised countries suggest that religious affiliation ‘cannot of itself be taken as an indication of strong religious commitment, as for some people it may be simply an inherited category that has no substantial effect on their behaviour...’ p.7 (Allum et al., 2014). In sub-Saharan Africa, as it is among sub-Saharan African migrants, religious affiliation may be closely related to culture, and therefore religiosity is assumed in different cultural forms and shaped by cultural forces (Hefner, 1993). It is not unusual for people from sub-Saharan African backgrounds to turn up to church on Sunday to worship God while at the same time participating in cultural rituals (Falen, 2008). For example, Douglas (cited in Falen (2008) argues that marital choices in sub-Saharan Africa cannot necessarily be predicted by a person’s religiosity but are more about the cultural values, beliefs, and motives related to economics, prestige, and competition for power. Given that culture is at the centre of religious beliefs and practices and dictates religious affiliation in sub-Saharan African, measuring religiosity or religious commitment is almost impossible to establish, and thus within this research as in much of the literature religious affiliation becomes an adequate proxy of religiosity. This could explain why most studies and national surveys continue to measure religion using nominal religious affiliation due to the complexities associated with establishing religiosity as a results differing level of literacy and cultural beliefs (McAndrew & Voas, 2011). For these reasons, religious affiliation was used in the current study to examine the influence of religion on acculturation strategy. The following question was used: ‘What is your religion?’ and participants had tick-box options. Given that sub-Saharan African migrants are predominantly adherents of Christianity (mainly Roman Catholic), Islam, and to a lesser extent Traditional African religion, it was not possible to have a spread of religious affiliations; hence religious affiliation was grouped into Christian, Muslim, and other religions.

Discrimination

A perceived discrimination scale was constructed from an integrated measure of scales proposed by Phinney et al. (1998) and Verkuyten (1998). The scale consisted of 16-items, which were answered on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). We have tested the psychometric properties of the scale in our study population, and it was found to have strong construct validity and reliability (Renzaho & Polonsky, 2013), with six items excluded due to cross loading in the exploratory

factor analyses. The remaining 10 items were confirmed through confirmatory factor analyses and found to have strong construct validity and reliability for personal discrimination (4 items, loading > 0.65, $\alpha = 0.870$), societal discrimination (3 items, loading > 0.80, $\alpha = 0.827$), and exclusion (3 items, loading > 0.80, $\alpha = 0.920$).

Residence Prior to Migration and Region of Origin

Area lived in prior to migration was measured by one single question (0 = refugee camp; 1 = large city/town; 3 = village), while sub-Saharan African region of birth was based on country of birth (0 = central; 1 = eastern; 2 = western; 3 = southern). sub-Saharan African country of birth was used to define the region of birth based on the United Nations' classification of African regions and subregions in order to account for the cultural, social, economic, and political aspects of each region and the diversity between regions (UNSD, 2021). Within our sample of respondents, 18.9% lived in refugee camps prior to migration, and this is thus of relevance to the Australian African Migrant population. According to UNHCR, '60 percent of the refugee population live in cities instead of refugee camps', thus suggesting that up to 40% of refugees live in refugee camps, making this an important area of residence prior to migration (UNHCR, 2021).

Control Variables

As demonstrated in the introduction, issues strongly related to acculturation have sometimes been identified to include demographic characteristics. There are several demographic factors that might influence the acculturation process, and the most documented ones are age, gender, length of residence in the host country, migration status, and level of education (Baek Choi & Thomas, 2009; Delavari et al., 2015; Güzel & Glazer, 2019; Ho, 2006; Mahmud et al., 2008; Padilla & Perez, 2003; Shim & Schwartz, 2007; Yeh, 2003). There are also several other studies that have shown that there is no relationship between acculturation and demographics ((Oh et al., 2002; Yeh, 2003). Therefore, given the equivocal nature of results regarding demographics we have included control variables included participant's self-reported gender (0 = woman; 1 = man), age and length of stay in Australia in years, migration status (0 = refugees; 1 = family sponsored/reunion; 2 = others), and educational attainment (0 = secondary or less; 1 = tertiary/TAFE).

Data Analysis

Data were analysed using Stata, version 12. As is reported in Table 1, the composition of respondents across the acculturation strategies identified that integration was the largest group (33.65), followed by marginalisation (24.24%), assimilation (22.35%), and lastly traditional (19.76). Depending on country of origin, the participants were categorized into the following four regions: Southern Africa, Central Africa, Eastern Africa, and Western Africa. This was done to avoid small sample size for some countries in the study participants' demographics, which were presented as mean \pm SD or in percentages. Univariate and multiple logistic regressions analyses were used to

examine the influence of areas of residence prior to migration, region or origin, religious affiliation, and perceived discrimination on acculturation strategies. These demographic and socio-economic factors are known to be associated with cultural adjustment (Pasch et al., 2006).

Given that the relationship between acculturation and demographic characteristics of participants has varied across studies, with contradictory findings (Baek Choi & Thomas, 2009; Delavari et al., 2015; Güzel & Glazer, 2019; Ho, 2006; Mahmud et al., 2008; Padilla & Perez, 2003; Shim & Schwartz, 2007; Yeh, 2003); the first logistic regression model assessed the association between socio-demographic factors and acculturation strategies to determine which potential covariates to account for in the final model. A variable with a p value of 10% or less was considered as potential covariate to be entered in the multiple logistic regression model examining the influence of areas of residence prior to migration, region, or origin, religious affiliation, and perceived discrimination on acculturation strategies.

Results

The demographic data are summarised in Table 1. Almost three quarters of the sample (71.5%) were Christian, 23.1% were Muslim, and 5.4% practised a religion other than Christianity or Islam. Data on cultural adjustment suggest that 34% of our sample identified themselves as bicultural or integrated, 20% identified as traditional, 22% identified as assimilated, and 24% were found to be marginalised. The discrimination scores averaged (standard deviation) 9.2 (3.8) for personal discrimination, 11.4 (2.6) for exclusion, and 8.0 (3.2) for societal discrimination

Table 2 summarises the relationship between demographic and socio-economic factors known to be associated with cultural adjustment and acculturation strategies. The data show that, overall, older age was marginally associated with separation (i.e. being traditional), but in the adjusted model, acculturation strategies did not vary by gender, migration status, length of stay in Australia, and educational attainment. Nonetheless, the model testing our hypotheses (Table 3) suggests that post-migration acculturation strategy was associated with area of residence prior to migration, region of origin, discrimination, and religious affiliation. Compared to migrants from central Africa, those from eastern Africa (adjusted odds ratio [AOR], 0.45; 95% CI, 0.25, 0.81; $p < 0.01$) were less likely to assimilate, while migrants who lived in large towns or the city prior to migration (AOR, 0.54; 95% CI, 0.30, 0.99; $p < 0.05$) were less likely to separate (i.e. to be within the traditional grouping) but more likely to assimilate (AOR, 2.26; 95% CI, 1.13, 4.55; $p < 0.01$) than those who came from refugee camps. Compared to Muslims, Christians (AOR, 0.57; 95% CI, 0.35, 0.93; $p < 0.05$) were less likely to be integrated while those practising religions other than Islam or Christianity (AOR, 3.54; 95% CI, 1.30, 9.60; $p < 0.01$) were more likely to separate. Migrants reporting not fitting in/excluded were less likely to be in the culturally marginalised group (OR, 0.86; 95% CI, 0.79, 0.94; $p < 0.01$) but more likely to report being integrated (AOR, 1.14; 95% CI, 1.05, 1.24; $p < 0.01$), whereas those reporting personal discrimination (AOR, 1.12; 95% CI, 1.05, 1.19; $p < 0.01$) and societal discrimination (AOR, 1.13; 95% CI, 10.5, 1.23; $p < 0.01$) were more likely to separate or remain traditional.

Table 1 Socio-demographic and economic factors of the study participants

Variables	N	Statistics
All (%)	425	100
Gender (%)		
Women	186	43.76
Men	239	56.24
Migration status (%)		
Refugees	317	74.59
Sponsored/reunion	80	18.82
Others	28	6.59
Religion		
Christian	304	71.53
Muslim	98	23.06
Other religions	23	3.42
Education (%)		
Secondary or less	239	56.24
TAFE/tertiary	186	43.76
Length of stay in years (%)		
5 years or less	234	55.06
More than 5 years	191	44.94
Mean (SD)	425	6.5 (5.2)
Region of birth (%)		
Central Africa	146	35.78
Eastern Africa	159	38.97
Western Africa	78	19.12
Southern Africa	25	6.13
Age in years (%)		
16–24	127	29.9
25–44	224	52.7
> 45	74	17.4
Mean (SD)	425	33.0 (12.3)
Place lived in prior to migration (%)		
Refugee camp	80	18.9
Large city/town	291	68.6
Rural/village	53	12.5
Acculturation strategy (%)		
Integration	143	33.65
Traditional	84	19.76
Assimilation	95	22.35
Marginalisation	103	24.24
Perceived discrimination [mean (SD)]		
Personal discrimination	425	9.2 (3.8)
Not fitting in: exclusion	425	11.4 (2.6)
Societal discrimination	425	8.0 (3.2)

Table 2 Relationships between socio-demographic and economic factors with acculturation strategies

Study variables	Integration			Traditional			Assimilation			Marginalisation		
	UOR	95% CI	AOR	95% CI	UOR	95% CI	AOR	95% CI	UOR	95% CI	AOR	95% CI
Age (years)	1.00	0.98	1.01	1.00	0.98	1.01	1.00	0.98	1.00	0.98	1.00	0.98
Length of stay (yrs)	1.02	0.98	1.06	1.06	0.99	1.04	1.04	0.99	1.04	1.00	0.96	1.05
Women	Ref		Ref		Ref		Ref		Ref		Ref	
Men	1.22	0.81	1.83	1.23	0.82	1.85	1.25	0.75	1.22	0.77	1.94	0.82
Refugees	Ref		Ref		Ref		Ref		Ref		Ref	
Family reunion	0.94	0.56	1.59	0.90	0.53	1.52	1.12	0.59	0.30	1.20	1.39	0.79
Other	1.09	0.49	2.44	1.06	0.46	2.44	1.44	0.43	0.12	1.52	0.82	0.29
≤ Secondary	Ref		Ref		Ref		Ref		Ref		Ref	
TAFE/Tertiary	1.16	0.77	1.73	1.13	0.73	1.73	0.20	0.38	0.82	0.49	1.38	0.97

UOR unadjusted odds ratios, AOR adjusted odds ratios—adjusted for variables in the table

Table 3 relationship between region of origin, religious affiliation, areas of residence prior to migration, and perceived discrimination on acculturation strategies

Study variables	Integration ^a			Traditional ^b			Assimilation ^c			Marginalisation ^c																												
	UOR	95%CI	AOR	95%CI	UOR	95%CI	AOR	95%CI	UOR	95%CI	AOR	95%CI																										
Muslim	0.56*	0.35	0.90	0.57*	0.35	0.93	1.21	0.66	2.22	1.19	0.62	2.25	1.56	0.87	2.80	1.65	0.90	3.05	1.19	0.69	2.05	1.15	0.65	2.04														
Christian	0.56	0.21	1.48	0.57	0.21	1.51	3.94**	1.47	10.54	3.54**	1.30	9.60	0.71	0.19	2.68	0.72	0.19	2.73	0.52	0.14	1.91	0.52	0.14	1.93														
Other religions																																						
Personal																																						
discrimination	0.960	0.901	0.10	0.950	0.901	0.11	1.09**	1.031	1.61	1.12**	1.051	1.190	0.950	0.891	0.11	0.20	0.961	0.810	0.20	0.961	0.810	0.20	0.961	0.810	0.20													
0.960	0.881	0.050	0.970	0.891	0.071	0.040	0.951	1.41	0.40	0.951	1.40	0.86**	0.800	0.940	0.86**	0.790	0.94	0.980	0.921	0.50	0.980	0.921	0.51	1.2**	1.041	1.211	1.3**	1.051	1.230	0.950	0.881	0.020	0.95					
0.881	0.020	0.970	0.911	0.040	0.970	0.901	0.04	Area of residence prior to migration	Refugee camp	Ref Large city/town	0.940	0.561	0.590	0.790	0.471	0.340	0.49**	0.280	0.890	0.54*	0.300	0.992	0.22**	1.1	1.14	41												
2.26**	1.134	551	2.20	672	2.21	2.60	692	32	Rural/village	0.090	0.492	0.440	0.710	0.341	0.481	1.40	0.532	0.451	1.30	0.522	0.450	0.950	0.342	0.640	5	10.352	741	330	0.593	0.001	0.340	0.593	0.04	Region of birth				
0.170	0.960	0.420	0.171	0.021	0.050	0.561	0.951	0.060	0.571	0.980	0.980	0.521	0.840	0.970	0.521	0.83	Southern Africa	0.810	0.302	0.170	0.830	0.312	0.231	0.101	0.352	0.912	0.500	0.689	2	10.900	0.332	0.410	0.990	0.362	0.711	0.340	0.533	35

^a Adjusted for age and length of stay; ^b adjusted for age and migration status; ^c adjusted for age, gender, and length of stay

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Discussion

The study examined the influence of region of origin, religious affiliation, areas of residence prior to migration, and perceived discrimination on acculturation strategies. We first hypothesised that sub-Saharan African migrants in the integration and assimilation groupings would be more likely to come from urban areas and English-speaking Western, Eastern, and Southern regions of African. This hypothesis was partially confirmed. sub-Saharan African migrants from towns or cities prior to migration were less likely to be traditional but more likely to assimilate than those who came from refugee camps. However, sub-Saharan African migrants from eastern Africa were less likely to assimilate than those from central Africa, and no difference was found between region of origin and integration, traditional, and marginalisation groupings.

There are many theories that can explain these findings. First, pre-migration experiences may influence post-migration cultural adaptations. However, prior to migration, there have been rapid cultural changes linked to both rapid urbanisation (Cockx et al., 2019) and digital transformation (Srinivasan et al., 2019). For example, changes in religion, traditional knowledge, or nutrition such as preferences for more Western diets higher in fat and sugar over traditional foods are closely linked to urbanisation (Cockx et al., 2019). These changes are accelerated by the digital transformations taking place across the African sub-continent (Srinivasan et al., 2019). Sub-Saharan Africa has experienced a significant penetration of digital technology, and popular sport channels such as SuperSport; international news networks such as the BBC, MTV, CNN, or Al Jazeera; and popular social media platforms such as Facebook, WhatsApp, YouTube, or Twitter can be accessed everywhere on the continent, but the penetration is far greater in urban than rural areas (Srinivasan et al., 2019). The exponential growth of social media usage plays an important role in culture changes and is a driver of acculturation outcomes. Available evidence (Kizgin et al., 2018; Laroche et al., 2009; Li & Tsai, 2015) suggests the maintenance of heritage cultures in offline contexts is closely linked to migrants' preferences for their heritage languages online, while migrants' language proficiency allow them to navigate their new environment effectively including locating social and economic resources, which in turn facilitates adaptation to the host society. Research shows that migrants who prefer the Dutch language in online networking contexts tend to socialize with Dutch friends or colleagues, listen to Dutch music, and use the Dutch language in offline contexts (Kizgin et al., 2018; Laroche et al., 2009). Therefore, our findings that sub-Saharan African migrants from towns or cities prior to migration were more likely to assimilate than those who came from refugee camps suggest that those from towns or cities had started the assimilation prior to migration as a result of urbanisation and social media and continued the process post-migration. In contrast, our findings that sub-Saharan African migrants from eastern Africa — which is predominantly English speaking — were less likely to assimilate than those from central Africa means that they had already assimilated prior to migration as most of the sport media television and international news networks are already in English. Research shows that preferences for using an assimilation language on social media is negatively linked to enculturation, migrants in the assimilation category being less likely than those in other categories to prefer ethnic cultural engagement (Kizgin et al., 2018). Similarly, English social media usage help

migrants develop strong orientation towards the mainstream culture, while social media in the language of origin reinforce traditional cultural identification (Li & Tsai, 2015).

We hypothesised that sub-Saharan African migrants who identified as Christian will be more likely to be classified in the assimilation and integration groupings than those from other religious denomination. Our findings suggest that Christians were less likely to integrate, while those practising religions other than Islam or Christianity were more likely to separate when compared to Muslims. Therefore, our hypothesis was not supported. One explanation for this could be that Christian migrants saw no need to *integrate* into the Australian culture, given the universality of the Christian religious culture and the assumption that Australia is a Christian country and therefore identified themselves as a part of the Australian culture; hence there was no need to replace their already existing Christian cultural identity for an Australian Christian culture. It is possible that they were less motivated to pursue a Christian cultural identity that they already had. However, our findings contradict the persistent literature suggesting that Muslim migrants often maintain a strong adherence to their Islamic identity, have low levels of conformity to social norms of their host countries, and are less likely to sacrifice religious values to acculturate by opposing behaviours they view as a threat to Islamic values (Abdo, 2005; Bagasra & Mackinem, 2019). Exclusion encourages ethnic minority migrants to remain separated from the mainstream receiving culture (Berry, 1980; Schwartz et al., 2010); hence this is no different from sub-Saharan African migrants practising religions other than Islam or Christianity.

We finally hypothesised that sub-Saharan African migrants classified in the integration and assimilation groupings will experience less discrimination than those in the separation and marginalisation groupings. We found that sub-Saharan African migrants reporting not fitting in/excluded were less likely to be in the culturally marginalised group but more likely to report being integrated, whereas those reporting personal discrimination and societal discrimination were more likely to separate or remain traditional. This hypothesis was not confirmed. Interpreting these findings is a challenge due to the various, no consistent measure of discrimination. However, the available evidence suggests that migrants in the assimilation and marginalisation groupings significantly reported lower levels of perceived personal discrimination than those in the other acculturation categories (Tutu et al., 2018) and integration is significantly associated with higher perceived personal discrimination when compared to migrants who are less integrated (Horverak et al., 2013; Tutu et al., 2018). It has been hypothesised that longer length of stay in host communities facilitates assimilation, and in turn the passage of time precipitates the assimilation process and enhance the acquisition of knowledge of customs and the local language, leading to attitudinal changes characterised by the acceptance of the host culture (Djamba & Kimuna, 2012; Frank & Heuveline, 2005; Jun & Ha, 2015). Some studies show that marginalization is significantly associated with lower perceived personal discrimination, and it is possible that rejecting the host community's activities may not expose migrants to hurts through contact (Tutu et al., 2018; van Doorn et al., 2013).

Limitation and Conclusion

Despite the relevance of the results, several limitations are worth mentioning. First, the cross-sectional nature of the study makes it difficult to make firm assertions about

causality between the variables. Longitudinal studies may be required to confidently document the directions of the associations between area of residence prior to migration, region of origin, religion, perceived discrimination, and acculturation strategies. Second, it is possible that the results may have been affected by the evolving idea of spirituality among sub-Saharan African migrants who identify as spiritual but not religious. This group of people have been described as those who may not be affiliated with any organised religion but meditate, contemplate, express gratitude, have a sense of self-transcendent, and generally engage in altruistic activities (Wong & Vinsky, 2009). Further studies should account for the differences between 'spiritual' and 'religious' migrants in terms of their respective acculturation strategies, and how insights from such research could complement our current results. This limitation also raises questions about the operationalisation of the religion variable which was assessed in the current study using a categorical question instead of a standardised measure of religiosity. While the current study mostly provides exploratory results for further research, testing for the relationship between religion and acculturation strategies using standardised measures of religiosity may yield different significant results. Third, whilst the VAI was the most appropriate scale for our study, it only measures sociocultural outcomes, focusing on questions that depict acculturation orientations and acculturation outcomes in three domains of acculturation: values, social relationships, and adherence to traditions. It does not measure acculturation conditions such as perceived intergroup relations (e.g. discrimination versus acceptance) (Celenk & Van de Vijver, 2011). Similarly, there is research to suggest that for some individuals their acculturation strategy may change over time. As such this research focused on individuals at one point in time. Future work might seek to undertake longitudinal work and examine the factors that result in changing orientations, as well as examining how frequently acculturation orientations change. Notwithstanding these limitations, within host environments seeking to promote broader cultural pluralism and facilitate cultural adaptations among African migrants, initiatives such as educational programs, anti-racism policy, and legislative reforms are needed to reposition multiculturalism. Such initiatives could assist migrants in engaging with host culture as well as promote tolerance and acceptance of ethnic, cultural, and religious diversity in the wider community.

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References

- Abdo, G. (2005). Islam in America: separate but unequal. *Washington Quarterly*, 28, 5–17.
- Allum, N., Sibley, E., Sturgis, P., & Stoneman, P. (2014). Religious beliefs, knowledge about science and attitudes towards medical genetics. *Public Understanding of Science*, 23, 833–849.
- Australian Bureau of Statistics (2017). Census of population and housing: reflecting Australia - stories from the Census, 2016. Cat. No. 2071.0. In: Canberra: ABS.
- Australian Bureau of Statistics (2019). Migration, Australia, 2017-18. Cat. No. 3412.0 In: ABS.
- Awad, G. H. (2010). The impact of acculturation and religious identification on perceived discrimination for Arab/Middle Eastern Americans. *Cultural Diversity and Ethnic Minority Psychology*, 16, 59–67.

- Baek Choi, J., & Thomas, M. (2009). Predictive factors of acculturation attitudes and social support among Asian immigrants in the USA. *International Journal of Social Welfare*, *18*, 76–84.
- Bagasra, A., & Mackinem, M. (2019). Assessing aspects of acculturation in a Muslim American sample: development and testing of the acculturation scale for Muslim Americans. *Religions*, *10*, 26.
- Bernstein, K. S., Park, S.-Y., Shin, J., Cho, S., & Park, Y. (2011). Acculturation, discrimination and depressive symptoms among Korean immigrants in New York City. *Community mental health journal*, *47*, 24–34.
- Berry, J. W. (1980). Acculturation as varieties of adaptation. In A. Padilla (Ed.), *Acculturation: Theory, models, and some new findings* (pp. 9–25). Westview.
- Berry, J. H. (1990a). Psychology of acculturation: understanding individuals moving between cultures. In R. W. Brislin (Ed.), *Applied cross-cultural psychology*. Sage.
- Berry, J. W. (1990b). Acculturation and adaptation: health consequences of culture contact among Circumpolar peoples. *Act Med Res*, *49*, 142–150.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review*, *46*, 5–68.
- Berry, J. W. (2005). Acculturation: living successfully in two cultures. *International Journal of Intercultural Relations*, *29*, 697–712.
- Berry, J. W., & Kim, U. (1988). Acculturation and mental health. In P. Dasen, J. W. Berry, & N. Sartorius (Eds.), *Health and cross-cultural psychology*. Sage.
- Berry, J. W., & Sabatier, C. (2010). Acculturation, discrimination, and adaptation among second generation immigrant youth in Montreal and Paris. *International Journal of Intercultural Relations*, *34*, 191–207.
- Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). *Immigrant youth in cultural transition*. Lawrence Erlbaum Associates.
- Bilal, P. I., Chan, C. K. Y., & Somerset, S. M. (2019). Acculturation and perceived ethnic discrimination predict elevated blood glucose level in sub-Saharan African immigrants in Australia. *Journal of Immigrant and Minority Health*.
- Bossard, L. (2009). The future of international migration to OECD countries regional note West Africa. In: OECD.
- Cadsby, C. B., Servátka, M., & Song, F. (2013). How competitive are female professionals? A tale of identity conflict. *Journal of Economic Behavior & Organization*, *92*, 284–303.
- Celenk, O., & Van de Vijver, F. J. (2011). Assessment of acculturation: issues and overview of measures. *Online Readings in Psychology and Culture*, *8*, 1–22.
- Cockx, L., Colen, L., De Weerdt, J., & Paloma, G. Y. (2019). *Urbanization as a driver of changing food demand in Africa: evidence from rural-urban migration in Tanzania*. European Union.
- Crenshaw, K. (1991). Mapping the margins: intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, *43*(6), 1241–1299. <https://doi.org/10.2307/1229039>.
- Delavari, M., Sønderlund, A., Mellor, D., Mohebbi, M., & Swinburn, B. (2015). Migration, acculturation and environment: determinants of obesity among Iranian migrants in Australia. *International journal of environmental research and public health*, *12*, 1083–1098.
- Djamba, Y. K., & Kimuna, S. R. (2012). The labor force participation and earnings gap among African immigrant women in the USA. *Journal of international migration and integration*, *13*, 481–501.
- Doucerein, M. M., Deschênes, S. S., Gouin, J.-P., Amiot, C. E., & Ryder, A. G. (2017). Initial mainstream cultural orientations predict early social participation in the mainstream cultural group. *Personality and Social Psychology Bulletin*, *43*, 245–258.
- Falen, D. J. (2008). Polygyny and Christian marriage in Africa: the case of Benin. *African Studies Review*, *51*, 51–74.
- Flannery, W. P., Reise, S. P., & Yu, J. (2001). An empirical comparison of acculturation models. *Personality and Social Psychology Bulletin*, *27*, 1035–1045.
- Frank, R., & Heuveline, P. (2005). A crossover in Mexican and Mexican-American fertility rates: evidence and explanations for an emerging paradox. *Demographic research*, *12*, 77–104.
- García Coll, C., Akiba, D., Palacios, N., Bailey, B., Silver, R., DiMartino, L., & Chin, C. (2002). Parental involvement in children's education: Lessons from three immigrant groups. *Parenting: Science and Practice*, *2*, 303–324.
- García Ortega, S. (2011). Media exposure and English language proficiency levels. A Comparative Study in Iceland and Spain. University of Iceland, School of Humanities, Department of English. Available at: http://skemman.is/stream/get/1946/10035/25085/1/Thesis_12.sept.pdf Accessed 12 Aug 2018.
- Grigoropoulou, N., & Chrysoschoou, X. (2011). Are religious minorities in Greece better accepted if they assimilate? The effects of acculturation strategy and group membership on religious minority perceptions. *Journal of Community & Applied Social Psychology*, *21*, 499–514.

- Güzel, H., & Glazer, S. (2019). Demographic correlates of acculturation and sociocultural adaptation. *Journal of International Students*, 9, 1074–1094.
- Han, L., Berry, J. W., & Zheng, Y. (2016). The relationship of acculturation strategies to resilience: the moderating impact of social support among Qiang ethnicity following the 2008 Chinese earthquake. *PLoS one*, 11, e0164484.
- Hefner, R. W. (1993). *Conversion to Christianity: historical and anthropological perspectives on a great transformation*. University of California Press.
- Ho, C. (2006). Migration as feminisation? Chinese women's experiences of work and family in Australia. *Journal of Ethnic and Migration Studies*, 32, 497–514.
- Horverak, J. G., Sandal, G. M., Pallesen, S., & Timmerman, M. E. (2013). Hiring rankings of immigrant job applicants: immigrants' acculturation strategies and managers' personality trait perception. *Journal of international migration and integration*, 14, 493–510.
- Huynh, Q. L., Howell, R. T., & Benet-Martínez, V. (2009). Reliability of bidimensional acculturation scores: a meta-analysis. *Journal of Cross-Cultural Psychology*, 40(2), 256–274.
- Ince, B. Ü., Fasssaert, T., de Wit, M. A., Cuijpers, P., Smit, J., Ruwaard, J., & Riper, H. (2014). The relationship between acculturation strategies and depressive and anxiety disorders in Turkish migrants in the Netherlands. *BMC psychiatry*, 14, 252.
- Jun, H.-J., & Ha, S.-K. (2015). Social capital and assimilation of migrant workers and foreign wives in South Korea: The case of Wongok community. *Habitat International*, 47, 126–135.
- Kang, S.-M. (2006). Measurement of acculturation, scale formats, and language competence: their implications for adjustment. *Journal of Cross-Cultural Psychology*, 37, 669–693.
- Kizgin, H., Jamal, A., Dey, B. L., & Rana, N. P. (2018). The impact of social media on consumers' acculturation and purchase intentions. *Information Systems Frontiers*, 20, 503–514.
- Kulis, S., Marsiglia, F. F., & Nieri, T. (2009). Perceived ethnic discrimination versus acculturation stress: influences on substance use among Latino youth in the Southwest. *Journal of health and social behavior*, 50, 443–459.
- Laroche, M., Pons, F., & Richard, M.-O. (2009). The role of language in ethnic identity measurement: a multitrait-multimethod approach to construct validation. *The Journal of social psychology*, 149, 513–540.
- Lee, S.-K., Sobal, J., & Frongillo, E. A. (2003). Comparison of models of acculturation: the case of Korean Americans. *Journal of Cross-Cultural Psychology*, 34, 282–296.
- Li, C., & Tsai, W.-H. S. (2015). Social media usage and acculturation: a test with Hispanics in the US. *Computers in Human Behavior*, 45, 204–212.
- Lindridge, A. (2009). Acculturation, religion and consumption in normative political ideology. *Advances in Consumer Research*, 36, 16–17.
- Lu, Y., Samaratunge, R., & Härtel, C. (2010). Acculturation strategy and its impact on job satisfaction: the case of professional Chinese immigrants in the Australian workplace. 24th Annual Australian and New Zealand Academy of Management Conference: Managing for Unknowable Futures, 8-10 December 2010 Adelaide, SA, Australia 24th ANZAM Conference.
- Lu, Y., Samaratunge, R., & Härtel, C. E. (2012). The relationship between acculturation strategy and job satisfaction for professional Chinese immigrants in the Australian workplace. *International Journal of Intercultural Relations*, 36, 669–681.
- Lu, Y., Samaratunge, R., & Härtel, C. (2015). *Skilled migration, expectation and reality: Chinese professionals and the global labour market*. Gower Publishing Limited.
- MacLachlan, M. (1997). *Culture and health*. John Wiley & Sons Ltd..
- Mahmud, S., Alam, Q., & EJ, H. C. (2008). Skill shortage and underutilization of educated immigrants in the Australian labour market: a paradox. *European Journal of Management*, 8, 155–167.
- Mansouri, F., Lobo, M., & Johns, A. (2015). Addressing the “Muslim Question”. *Journal of Muslim Minority Affairs*, 35, 165–170.
- McAndrew, S., & Voas, D. (2011). *Measuring religiosity using surveys*. *Survey Question Bank: Topic Overview 4*. UK Data Archive, University of Essex.
- McQuilten, Z., Waters, N., Polonsky, M., & Renzaho, A. (2014). Blood donation by African migrants and refugees in Australia: the role of demographic and socio-economic factors. *Vox sanguinis*, 106, 137–143.
- Nakash, O., Nagar, M., Shoshani, A., Zubida, H., & Harper, R. A. (2012). The effect of acculturation and discrimination on mental health symptoms and risk behaviors among adolescent migrants in Israel. *Cultural Diversity and Ethnic Minority Psychology*, 18, 228–238.
- Navas, M., García, M. C., Sánchez, J., Rojas, A. J., Pumares, P., & Fernández, J. S. (2005). Relative acculturation extended model (RAEM): new contributions with regard to the study of acculturation. *International Journal of Intercultural Relations*, 29, 21–37.

- Noh, S., & Kaspar, V. (2003). Perceived discrimination and depression: moderating effects of coping, acculturation, and ethnic support. *American journal of public health, 93*, 232–238.
- Oh, Y., Koeske, G. F., & Sales, E. (2002). Acculturation, stress, and depressive symptoms among Korean immigrants in the United States. *The Journal of social psychology, 142*, 511–526.
- Organisation for Economic Co-operation and Development, & United Nations Department of Economic and Social Affairs. (2014). World Migration in Figures. Available at: www.oecd.org/els/mig/World-Migration-in-Figures.pdf [Accessed 10/08/2018].
- Padilla, A. M., & Perez, W. (2003). Acculturation, social identity, and social cognition: a new perspective. *Hispanic Journal of Behavioral Sciences, 25*, 35–55.
- Pasch, L. A., Deardorff, J., Tschann, J. M., Flores, E., Penilla, C., & Pantoja, P. (2006). Acculturation, parent-adolescent conflict, and adolescent adjustment in Mexican American families. *Family Process, 45*, 75–86.
- Phalet, K., Fleischmann, F., & Hillekens, J. (2018). Religious identity and acculturation of immigrant minority youth. *European Psychologist, 23*, 32–43.
- Phillips, C. (2010). Institutional racism and ethnic inequalities: an expanded multilevel framework. *Journal of Social Policy, 40*(1), 173–192.
- Phinney, J. S., Madden, T., & Santos, L. J. (1998). Psychological variables as predictors of perceived ethnic discrimination among minority and immigrant adolescents 1. *Journal of Applied Social Psychology, 28*, 937–953.
- Polonsky, M. J., Brijnath, B., & Renzaho, A. M. N. (2011a). "They don't want our blood": social inclusion and blood donation among African migrants in Australia. *Social Science & Medicine (1982), 73*, 336–342.
- Polonsky, M. J., Renzaho, A. M. N., & Brijnath, B. (2011b). Barriers to blood donation in African communities in Australia: the role of home and host country culture and experience. *Transfusion., 51*, 1809–1819. <https://doi.org/10.1111/j.1537-2995.2010.03053.x>.
- Renzaho, A. (2009). Immigration and social exclusion: examining health inequalities of immigrants through acculturation lenses. In A. Taket, B. Crisp, A. Nevill, G. Lamaro, M. Graham, & S. Barter-Godfrey (Eds.), *Theorising Social Exclusion* (pp. 117–126). Routledge.
- Renzaho, A. M., & Polonsky, M. J. (2013). The influence of acculturation, medical mistrust, and perceived discrimination on knowledge about blood donation and blood donation status. *Transfusion, 53*, 162S–171S.
- Renzaho, A., Swinburn, B., & Burns, C. (2008). Maintenance of traditional cultural orientation is associated with lower rates of obesity and sedentary behaviours among African migrant children to developed countries. *International Journal of Obesity, 32*, 594–600.
- Renzaho, A., Polonsky, M., McQuilten, Z., & Waters, N. (2013). Demographic and socio-cultural correlates of medical mistrust in two Australian States: Victoria and South Australia. *Health & place, 24*, 216–224.
- Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of personality and social psychology, 79*, 49–65.
- Sam, D. L., & Berry, J. W. (2010). Acculturation: when individuals and groups of different cultural backgrounds meet. *Perspectives on psychological science, 5*, 472–481.
- Schwartz, S. J., Unger, J. B., Zamboanga, B. L., & Szapocznik, J. (2010). Rethinking the concept of acculturation: implications for theory and research. *American Psychologist, 65*, 237–251.
- Shim, Y. R., & Schwartz, R. C. (2007). The relationship between degree of acculturation and adjustment difficulties among Korean immigrants living in a Western society. *British Journal of Guidance & Counselling, 35*, 409–426.
- Srinivasan, S., Diepeveen, S., & Karekwaivanane, G. (2019). Rethinking publics in Africa in a digital age. *Journal of Eastern African Studies, 13*, 2–17.
- Stephenson, M. (2000). Development and validation of the Stephenson Multigroup Acculturation Scale (SMAS). *Psychological assessment, 12*(1), 77–88.
- Tagny, C. T., Mbanya, D., Tapko, J. B., & Lefrère, J. J. (2008). Blood safety in sub-Saharan Africa: a multifactorial problem. *Transfusion, 48*(6), 1256–1261.
- Tahseen, M., & Cheah, C. S. (2012). A multidimensional examination of the acculturation and psychological functioning of a sample of immigrant Chinese mothers in the US. *International Journal of Behavioral Development, 36*, 430–439.
- Testa, S., Doucerain, M. M., Miglietta, A., Jurcik, T., Ryder, A. G., & Gattino, S. (2019). The Vancouver Index of Acculturation (VIA): new evidence on dimensionality and measurement invariance across two cultural settings. *International Journal of Intercultural Relations, 71*, 60–71.
- Tutu, R. A., Boateng, J., Ameyaw, E. E., & Busingye, J. D. (2018). "Togetherness in difference": Perceived personal discrimination and acculturation preferences among internal migrants in a poor urban community in Accra. *Journal of Asian and African Studies, 53*, 297–313.

- UNHCR (2021). *Refugee Camps*. Accessed 1/2/2021 <https://www.unrefugees.org/refugee-facts/camps/>
- United Nations. (2017). Trends in international migrant stock: The 2017 revision. United Nations database, POP/DB/MIG/Stock/Rev.2017 In. New York: Department of Economic and Social Affairs, United Nations.
- UNSD (2021). *Methodology*. Accessed 01.02.2021 <https://unstats.un.org/unsd/methodology/m49/overview/>
- van Doorn, M., Scheepers, P., & Dagevos, J. (2013). Explaining the integration paradox among small immigrant groups in the Netherlands. *Journal of international migration and integration*, 14, 381–400.
- Verkuyten, M. (1998). Perceived discrimination and self-esteem among ethnic minority adolescents. *The Journal of social psychology*, 138, 479–493.
- Waniek-Klimczak, E. (2011). Acculturation strategy and language experience in expert NSL speakers: an exploratory study. *Studies in Second Language Learning and Teaching*, 1, 227–245.
- Ward, C., Stuart, J., & Kus, L. (2011). The construction and validation of a measure of ethno-cultural identity conflict. *Journal of personality assessment*, 93(5), 462–473.
- Wong, Y., & Vinsky, J. (2009). Speaking from the margins: a critical reflection on the 'spiritual-but-not-religious' discourse in social work. *The British Journal of Social Work*, 39, 1343–1359.
- Yeh, C. J. (2003). Age, acculturation, cultural adjustment, and mental health symptoms of Chinese, Korean, and Japanese immigrant youths. *Cultural Diversity and Ethnic Minority Psychology*, 9, 34–48.
- Yu, W., & Wang, S. (2011). An investigation into the acculturation strategies of Chinese students in Germany. *Intercultural Communication Studies*, 20, 190–210.
- Zagefka, H., & Brown, R. (2002). The relationship between acculturation strategies, relative fit and intergroup relations: immigrant-majority relations in Germany. *European Journal of Social Psychology*, 32, 171–188.

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