



Heritage Language Use and Proficiency: Acculturation, Identities and Psychological Health

VIRGINIA L. LAM 

ALEXANDRA C. CATTO

*Author affiliations can be found in the back matter of this article

RESEARCH



ABSTRACT

The intricate links between heritage/home language (HL) use and heritage identity of heritage-bilinguals are well established. Less is known about the degree to which their language proficiency and use or acculturation contributes to heritage and host identities and psychological health. The present study investigated this with a diverse sample of heritage-bilingual students ($N = 220$; $M_{age} = 25.43$ years) across first, '1.5' (resettled as minors) and second generations in the United Kingdom. Participants completed self-report measures on their English and HL proficiency and that of family members, family language use, linguistic acculturation, biculturalism, cultural involvement and preference, host and heritage group identification, self-esteem and wellbeing. Data showed that different generations and language groups differed on HL proficiency and use, and that those with European HLs reported more bicultural orientations. Regression models showed that HL proficiency uniquely contributed to all acculturation outcomes and that family members' language proficiency and use uniquely contributed to cultural involvement. Cultural involvement and preference, but not language use or proficiency, contributed to host and heritage group identification, while more HL-oriented family language use and cultural preference contributed to self-esteem. Findings are discussed in relation to the literature on generation differences, linguistic distance, and adaptive acculturation and identity patterns.

CORRESPONDING AUTHOR:

Virginia L. Lam

University of Roehampton, UK

Virginia.Lam@Roehampton.ac.uk

KEYWORDS:

acculturation; bilingual; heritage; identity; proficiency; self-esteem

TO CITE THIS ARTICLE:

Lam, V. L., & Catto, A. C. (2023). Heritage Language Use and Proficiency: Acculturation, Identities and Psychological Health. *Journal of Home Language Research*, 6(1): 3, pp. 1–19. DOI: <https://doi.org/10.16993/jhlr.51>

Much literature has shown the links between the home/heritage language (HL; the language typically acquired during childhood from the family before or alongside the host country's majority language; Scontras et al., 2015) and heritage identity in ethnolinguistic minorities (Arrendondo et al., 2016; H. S. Kang, 2013; Shin, 2016). The insights, particularly from in-depth qualitative research, are highly illuminating on how speakers, as heritage-bilinguals, construct, negotiate or position themselves vis-à-vis their language practice in terms of how they use the languages. Less is known about the integral process of acculturation or adaptive strategy relating to their adjustment to the host culture and retention of the heritage culture (Lindner et al., 2020; Yağmur & van de Vijver, 2012). Of interest is also how far language practice or acculturation further contributes to the psychological health of these individuals (Marks et al., 2011; Müller et al., 2019). The present study aims to examine the role of HL and English use and proficiency and acculturation in heritage and host identities, self-esteem and wellbeing, with a diverse group of heritage-bilinguals settled in the UK.

HERITAGE AND HOST LANGUAGES AND IDENTITIES

A HL typically refers to a language other than that of the host country that is tied to the speaker's family or ancestral homeland and varies in personal relevance (Scontras et al., 2015; Shin, 2016). Research has shown that the HL helps the formation of ethnic heritage identity through its contributions to family relations and effective interactions with others from their community (H. S. Kang, 2013). For instance, good parent-child communications using the HL help to foster healthy attachments and related positive outcomes such as self-esteem (Müller et al., 2019). The reverse has also been documented where HL attrition can lead to misunderstandings within the family, alienation from the community, low self-esteem or identity confusion (Brown 2009; X. Chen & Padilla, 2019; Liu et al., 2009).

Established models of ethnic identity (Phinney, 1990; Phinney et al., 2001; Umaña-Taylor et al., 2014) posit that strong identification with the ethnic heritage consists of, among other things, a sense of belonging to, pride from and positive affect towards the group. Such sentiments develop over the lifespan through social experiences with the heritage community, a large part being interactions with the family but also others from that community who share cultural values (Arrendondo et al., 2016). Using the HL as an observable culture 'marker' and social behaviour (Umaña-Taylor et al., 2014) enables, particularly young people whose sense of identity is still developing, one to acquire knowledge about their heritage culture, identify 'who they are', and form a sense of belonging with others from that culture.

It is paramount to also observe the role of the majority language in the host society, in particular one that carries prestige and global currency, i.e., English (Cervatiuc, 2009). In the core set of English-speaking countries (the UK, US, Canada, Australia, and New Zealand, or the 'Anglosphere'; Wellings & Mycock, 2019), English as the medium in the world of work and education is a basic tool for young adults to establish independence outside of the home. Unlike the clear role of HL in heritage identity, though, developing strong identification with the host, despite English fluency or immersion in its culture, can be challenging to even the offspring of immigrants (Barrett, 2007; Phinney, 2003; Phinney & Baldelomar, 2011). The reported reasons for this relatively weaker host identity have included experiences of direct discrimination (Norton, 2000), and anti-immigrant sentiments (Renzaho et al., 2017) and the ambivalent public opinions about cultural diversity (Yağmur & van de Vijver, 2012). These issues appear to have persisted despite a long history of immigration and official policy for multiculturalism and integration across the Anglosphere (Wellings & Mycock, 2019).

Notwithstanding the foregoing issues, many bilingual immigrants have shown a well-developed host-culture identity, but that might come at the cost of a relatively weak heritage identity. Host and heritage identities tend to be negatively correlated or uncorrelated with one another (Yağmur & van de Vijver, 2012). Positive correlations are rare or may only apply in socioculturally unique contexts (e.g., bilingual education, Lam et al., 2019; areas with large, salient immigrant groups that have notable local impact; Phinney et al., 2001). Some research shows that even accommodating the values of the dominant culture at university by greater English (versus HL) use and literacy can invoke profound considerations of cultural identity by historically disadvantaged HL-speakers (Parkinson & Crouch, 2011). Still, where heritage

and other forms of bilingualism promote cultural diversity and intercultural competences (H. S. Kang, 2013; Nguyen & Brown, 2010; Shin, 2016), research on acculturation, as adaptive linguistic and cultural attitudes and behaviour, has proliferated.

LANGUAGE ACCULTURATION, IDENTITY AND PSYCHOLOGICAL WELLBEING

Acculturation generally refers to the outcomes or changes that occur when an acculturating group or person engages in long-term contact with a dominant group (typically the host) and adopts its values, behaviour and so on (Berry et al., 1986). Its sociolinguistic dimensions can include adoption of the norms, preferences, attitudes and behaviour, among various aspects, around the relevant language and culture (Phinney, 2003; Yağmur & van de Vijver, 2012). Since Berry's (1980) seminal work, it has often been accepted that insofar as the migrant is able to exercise some choice in how far they advance acculturation, they can both adopt the host culture and preserve the heritage culture. As such, increasing involvement with the host group should not entail a decline in involvement with the heritage culture. Acquiring a host language, as a component of its culture and part of the acculturative process, should not lead to HL loss. As far as adaptive strategies are concerned, it is widely agreed that integration, where individuals adopt the host culture while retaining the heritage culture, is more adaptive than other strategies, such as assimilation or complete absorption of the host culture with loss of the heritage culture (Berry, 2005; X. Chen & Padilla, 2019).

Where past research focused on how immigrants acculturated to the host language, both individual (such as proficiency) and group (such as perceived status) variables were reported as facilitatory to integration (Clément, 1986). In turn, factors related to the family appear to play a major role in the acculturation strategies of their offspring (Müller et al., 2019; Phinney, 2003). Family language socialisation is key to imparting the values attached to both the heritage and host cultures, and parental proficiency in the HL and host-language can help the offspring's psychosocial adjustment, such as self-esteem (Lindner et al., 2020). It is widely acknowledged that, while acquiring the host language is crucial for functioning in its society, maintenance of the HL and culture augments an adaptive identity (Clément et al., 2001; Laketa et al., 2021). Since earlier research framing this form of adaptation as 'flexible survival skills' (Szapocznik et al., 1980), 'biculturalism' has signified proficiency in both the HL and host language and comfort in both cultures (X. Chen & Padilla, 2019). A bicultural individual can be one that uses both languages and has friendships from, engages in or enjoys activities of both cultures (Schwartz & Unger, 2010). Some proponents have argued further that biculturalism goes beyond behaviour to include identifying with and upholding the values of both cultures for an integrated identity (Phinney et al., 2001). After the earlier work indicating bicultural orientations as contributory to school adjustment (Szapocznik et al., 1980), later research shows that minorities with positive multiple identities report higher self-esteem and fewer mental health issues compared to their minority peers with a singular or 'monocultural' identity (Marks et al., 2011; Phinney et al., 2001). Biculturalism is said to bring myriad psychological 'assets' for positive coping, such as social flexibility and cultural competence (X. Chen & Padilla, 2019).

Strong coexisting heritage and host cultural identities are rare, however, not least due to the challenges in identifying with the host group as reviewed earlier. Individuals may be linguistically and behaviourally assimilated to the host culture without identifying themselves strongly as a member of the group (Clément et al., 2001). That is, acculturative outcomes may not match identity patterns (S. M. Kang, 2006; Renzaho et al., 2017). Where further research, including this study, examines the relationships among acculturation, identities and wellbeing, in view of the considerable individual variations in acculturation (Berry, 2005) further group and individual factors that underpin such variations should be explored.

GENERATION STATUS, AND LANGUAGE DISTANCE, ACQUISITION AND EDUCATION

As indicated earlier, those who have settled in the host country as adults and those born there or settled as children (the '1.5' generation; Shin, 2016; Venturin, 2019) can vary in language practice. This may be due to the relative difficulty in attaining 'nativelike' fluency in foreign languages in adulthood (T. Chen & Hartshorne, 2021). However, a wealth of research also points to a range of factors (e.g., inputs, aptitudes, motivation) beyond age or developmental

stage that affect acquisition and proficiency (Singleton & Leśniewska, 2021). Also, the idea of a 'native speaker' or native/non-native distinction can be highly arbitrary or reflect confidence or identity more than proficiency (Davies, 2004). Meanwhile, with each generation, fewer direct links to the heritage country and fewer others sharing a HL in the acculturative context tend to undermine HL maintenance (Li & Wen, 2015). Even recently-settled 1.5s have reported challenges in maintaining the HL in the face of English dominance (Connaughton-Crean & Duibhir, 2017). Such linguistic shifts often go alongside incremental adoption of the host culture, as reflected in the hyphenated host-heritage self-labelling of later generations (e.g., American-...; Shin, 2016), suggesting a 'hybrid' identity embodying both cultures.

In addition, languages themselves can vary in status (Laketa et al., 2021; Marian et al., 2007). The status of a language may in part be related to the status of its speakers; for instance, a group may be more similar to the host country's majority due to shared ethnicity or historic, and relatedly linguistic, roots (Clément, 1986). Linguistic distance refers to how similar languages are to each other genealogically and typologically (Laketa et al., 2021), and bilinguals who speak languages that are closer to one another reportedly have more balanced language practice and more integrated acculturation (Knopp, 2022). Groups also vary in the symbolic value they attach to the HL (Yağmur & van de Vijver, 2012). For some, the HL is a core marker of the identity. For others, particularly visible minorities that are distinguishable by observable features (such as race), the HL can be but *one* other marker (Umaña-Taylor et al., 2014). The emphasis on HL transmission and maintenance may thus vary by language group and impact acculturation, identity and other outcomes differently.

Individual differences among bilinguals may also cut across the above factors. While the age of English acquisition varies widely among immigrants, various countries across the Commonwealth (Wellings & Mycock, 2019) have substantial English elements in the school curriculum, education opportunities that can promote proficiency and linguistic acculturation (Singleton, & Leśniewska, 2021). As well, research shows that prior general education itself can facilitate language learning and wellbeing directly and indirectly (through, for instance, socioeconomics or lifestyle choice; Stewart-Brown et al., 2018; Tennant et al., 2007).

THE PRESENT STUDY

Considering the diversity of HLs, and individuals that maintain them as heritage-bilinguals, and the complexity of links among language, acculturation, identity and psychological health, the present study aims to address two key questions:

Do heritage-bilinguals across different generations, and those with HLs differing in similarity to the host-majority language, differ in HL maintenance, acculturation and identity patterns?

How far do those background factors and language acculturation contribute to their identities and psychological health?

Recognising the pivotal role of the family in language management and socialisation as reviewed, in this study heritage-bilinguals evaluated both their own HL and host-majority language (English) proficiency *and* that of their family members, and family language use. Acculturation was assessed across behavioural, attitudinal and preference aspects to explore how each may relate to language proficiency and use, identities or self-esteem and wellbeing. We have four hypotheses.

- 1) Based on the literature, the first generation should report higher HL proficiency, and HL use with family members, which should mean a stronger heritage identity if direct links between identity and language should hold. The later (1.5 and second) generations would report higher English proficiency and use, and stronger identification with the host.
- 2) Drawing on the premises of linguistic distance, those with European HLs, due to the relative proximity of their HLs to English that may favour HL maintenance would report higher HL proficiency and use, and more bicultural acculturation.
- 3) The level of proficiency and use of each language would contribute to the relevant acculturation and identity outcomes, thus higher proficiency and use of both languages could contribute to more bicultural acculturation and strong heritage *and* host identities.

- 4) Bicultural acculturation should also contribute to higher self-esteem and wellbeing, as indicated by the existing literature.

METHOD

PARTICIPANTS

The sample comprised 220 (169 female, 51 male) adult students in UK higher education who completed a self-report survey. They were aged 18 to 50 ($M = 25.43$, $SD = 7.11$), with over 77 per cent ($n = 171$) under 30 years. All self-identified as 'bilinguals' or 'multilinguals' and confirmed their other dominant language, besides English, as the heritage or home language (defined as the language '*that is tied to [their] ethnic cultural heritage that [they use] with family members*'). They were recruited via the researchers' study programmes or professional and social/friendship networks. Apart from using a HL, age over 18 years and studying in higher education, another inclusion criterion was permanent residence (not for sole study purposes) in the UK, which participants confirmed. The sample included undergraduates and postgraduates with previous qualifications ranging from secondary/high school completion (13.6%; $n = 11$), college/further education (39.1%; $n = 86$) to Bachelors (31.4%; $n = 69$) and Masters (15.9%; $n = 35$) degrees.

Thirty-eight per cent ($n = 84$) of participants were born in the UK (second generation) with at least one parent born abroad while the rest had lived there as the host country for two to 42 ($M = 16.49$; $SD = 8.09$) years. A similar proportion had resettled in the UK as 'first-generation' adults aged over 18 years (30.5%, $n = 67$) as distinct from the ones who resettled as minors before the age of 18 ('1.5' generation; 31.4%, $n = 69$).

The sample on average used 2.64 ($SD = 0.89$) languages. The majority (56.4%, $n = 124$) reported using two, English and their HL, while a substantial minority reported three (30.0%, $N = 66$). Students who reported using four (9.1%, $n = 20$) or more (five, 2.7%, $n = 6$; six, 1.8%, $n = 4$) made up less than 15 per cent of the sample. The HLs consisted of a substantial range, including a majority (61.4%, $n = 135$; 56 first, 46 '1.5', 33 second generation) with European origins (e.g., French, German, Italian, Polish, Portuguese, Spanish). The non-European HL variety ($n = 85$; 11 first, 23 '1.5', 51 second generation) included more ($n = 66$) with Asian origins (e.g., Arabic, Bengali, Farsi, Hindi, Urdu) than those ($n = 19$) used primarily in the African continent (e.g., Hausa, Somali, Swahili, Yoruba). Participants reported acquiring their HLs from age 0 (or typed-in answers, such as 'from birth') to 15 ($M = 2.19$; $SD = 3.29$) years and English from 0 to 30 ($M = 5.59$, $SD = 5.70$) years.

MEASURES AND MATERIALS

After filling in their demographics (reported above), self-esteem was measured by the widely used Rosenberg's (1965) *Self-esteem Scale* with ten items (e.g., *I feel that I have a number of good qualities*) on a 1-4 scale (from 'strongly disagree' to 'strongly agree'). Then wellbeing was assessed by the *Warwick-Edinburgh Mental Wellbeing Scale* (WEMWBS; Tennant et al., 2007), with 14 items (e.g., *I deal with problems well*) on a 1-4 scale ('strongly disagree' to 'strongly agree'). Both scales had a high reliability (inter-item consistency reflected by high Cronbach's alpha values of $>.7$; self-esteem, $\alpha = .81$; WEMWBS, $\alpha = .87$), in line with research sampled in diverse populations (Stewart-Brown et al., 2018). The item-scores for each scale were averaged to form the self-esteem and wellbeing scores for analysis.

To preface the identity measures (cf. Barrett, 2007), the survey included an open question, '*Different people describe themselves using different terms in relation to their ethnic cultural and/or national backgrounds such as African, Asian, African American, etc. How would you describe yourself?*' After that, heritage and host identities were assessed by Barrett's (2007) *Strength of Identification Scale* with five items: degree of identifying (*how much do you see yourself as a member of...*); importance (*how important is being...*); pride (*how proud are you about...*) for each identity (*heritage and host culture/English-language culture you live in*); and public collective esteem (two items starting with *how would you feel if someone said something good/bad about people from your heritage culture/ the UK*). The items were rated on a 5-point scale ('not at all' to 'very') with good reliabilities (heritage, $\alpha = .75$; host, $\alpha = .75$). The item-scores were averaged to form heritage and host identity scores.

‘Biculturalism’ and ‘cultural involvement’ were gauged by Szapocznik et al.’s (1980) *Bicultural Involvement Questionnaire* (BIQ) as two distinct, but complementary, dimensions: biculturalism ranged from more monocultural to bicultural and cultural involvement signified low to high involvement with both heritage and host cultures. Items first gauged the degree of ‘comfort’ (*How comfortable are you...*) with which individuals felt using the language in five contexts (at home, in school, at work, with friends, and in general), from ‘not at all’ to ‘very’ comfortable in a 1-5 scale. ‘Enjoyment’ (*How much do you enjoy*) in seven activities (music, dances, cultural places, other recreations, and broadcast, print, electronic media) was scored on the same scale for each language. These scales also showed high internal reliabilities: HL comfort, $\alpha = .84$; English comfort, $\alpha = .81$; HL enjoyment, $\alpha = .89$; English enjoyment, $\alpha = .78$. Biculturalism was delivered by the absolute difference between HL and English scores, with differences close to 0 denoting high levels of biculturalism (Szapocznik et al., 1980). Cultural involvement was given by summing the HL and English scores, with higher scores indicating more bicultural involvement. An additional construct, with ‘heritage culture’ at the lower end and ‘host/English-language culture’ at the higher end (i.e., a bipolar scale), assessed ‘cultural preference’ across nine items (food and drinks, communications, entertainment, friends, close relations, arts and cultures, celebrating birthdays, weddings, other celebrations; adapted from Szapocznik et al., 1980). These began after the statement *Sometimes life is not as we really want it. If you could have your way, how would you like these areas of life to be like?*. The item-scores, with a high reliability ($\alpha = .85$), were averaged as the cultural preference score.

‘Linguistic acculturation’ was gauged by adapting Berry et al.’s (1986) *Acculturation Assessment* scales on language use in ten contexts: ‘general speaking’; ‘general thinking’; friendships—‘friends in general’, ‘close friends’, ‘whom I enjoy spending time with’ and ‘whom I prefer to befriend’; media and communications—broadcast (‘TV and radio’), print (‘newspapers, magazines, books, etc.’), digital (‘surfing the internet’) and electronic (‘text, email, social media, etc.’). For each, participants chose from ‘only in or using’ HL to English on a 1-5 scale, with higher scores denoting more host-language/English use and lower scores more HL use. The items yielded a high internal reliability ($\alpha = .91$) and were averaged to form the linguistic acculturation score.

HL and English proficiency and use were measured by items adapted from Marian et al.’s (2007) *Language Experience and Proficiency Questionnaire* (LEAP-Q). Self-ratings on key oral and literate aspects (speaking, listening, reading and writing) were scored on a 1-10 (from ‘very poor’ to ‘very good’) scale. Perceived English and HL proficiency of the nuclear family members (mother, father, each sibling) was scored on the same scale. Language use in this family unit was rated on a 10-point scale, from ‘HL all the time’ to ‘English all the time’. Internal reliabilities were high: own HL proficiency, $\alpha = .85$, family HL proficiency, $\alpha = .73$; own English proficiency, $\alpha = .88$, family English proficiency, $\alpha = .79$; family language use, $\alpha = .84$. The item-scores were averaged to form the proficiency (participants’ own and their family members, in HL and English) and family language use scores.

PROCEDURE

The measures and procedure were approved by the university’s ethics subcommittee before data collection. Potential participants (estimated at close to 700 recipients) were invited to take part with an open invitation to universities’ intranet and mail-groups and social media, with a short briefing containing the selection criteria and the link to a survey containing the measures administered by the platform Qualtrics. Participants chose to take part in their own time. The order of measures followed the order described above (from psychological health to language proficiency and use) to reduce demand characteristics. All the HL- and English-equivalent measures were counterbalanced, and items randomised within each section. The survey took 20 to 30 minutes to complete.

RESULTS

The Qualtrics dataset (original $N = 275$) was first exported to IBM SPSS (version 28.0). The sample was finalised at $N = 220$ after deleting cases with incomplete data (>5% items or any full section omitted). The distribution of each key measure was inspected (see Table 1), with most shown to violate assumptions of the normal distribution (Shapiro-Wilk, $ps < .01$), except

Table 1 Sample descriptives for language proficiency and use, acculturation, identity and psychological health measures, and their correlations with participants' age, heritage-language (HL) and English age of acquisition (AoA), number of languages used and education level.

†lower – more HL-related, higher – more English-related; ††closer to 0 – more bilingual; †††higher – more involvement with both cultures.

Sig. correlations; * $p < .05$, ** $p < .01$, *** $p < .001$ (2-tailed exploratory).

MEASURE (SCALE)	RANGE	MEAN (SD)	95% CIs	SKEW-NESS	KURT-OSIS	AGE	HL AOA	E AOA	NO. LANGUAGES	EDUCATION
Own HL proficiency (1–10)	2.50–10.00	8.18 (1.87)	7.95, 8.41	–0.83	–0.21	.02	–.05	.42***	.13	–.12
Own English proficiency (1–10)	3.50–10.00	9.25 (1.07)	9.11, 9.40	–1.56	3.11	–.09	.13	–.54***	.05	–.01
Family HL proficiency (1–10)	1.00–10.00	8.31 (2.00)	8.04, 8.55	–1.46	1.87	.04	–.46***	.36***	.03	–.03
Family English proficiency (1–10)	1.33–10.00	7.03 (2.34)	6.71, 7.36	–0.57	–0.53	–.18**	.23***	–.61***	–.08	.03
Family language use (1–10)†	1.00–10.00	4.17 (2.56)	3.81, 4.54	0.43	–0.91	–.05	.29***	–.53***	–.12	.07
Linguistic acculturation (1–5)†	1.00–5.00	3.71 (0.73)	3.62, 3.81	–0.77	0.92	.04	–.07	–.23***	–.01	.10
Culture preference (1–5)†	1.22–5.00	3.21 (0.62)	3.13, 3.29	–0.06	1.09	–.05	–.07	–.19**	–.17*	–.00
Biculturalism (0–48)††	0–43	9.77 (7.93)	8.78, 10.90	1.20	1.98	–.01	–.05	–.23***	–.06	.16*
Cultural involvement (24–120)†††	64–120	96.69 (12.82)	95.11, 98.33	–0.17	–0.42	.08	.05	.03	.03	–.02
Heritage identity (1–5)	1.80–5.00	3.92 (0.75)	3.82, 4.03	–0.47	–0.30	.17*	–.02	–.02	–.09	.10
Host identity (1–5)	1.80–5.00	3.51 (0.74)	3.41, 3.61	0.10	–0.47	.22**	.11	–.17*	–.18**	.12
Self-esteem (1–4)	1.70–4.00	2.92 (0.56)	2.84, 3.00	0.22	–0.66	.43***	.08	.10	.14*	.34***
Wellbeing (1–5)	1.64–5.00	3.47 (0.58)	3.40, 3.55	0.28	0.02	.34***	–.11	–.03	.06	.29***

for cultural involvement ($p = .20$). However, most skewness and kurtosis values (for departure from normal symmetry and curve) values fell within the acceptable range (George & Mallery, 2016) except for English proficiency. Bootstrapping was used with bias corrected accelerated (BCa) 95% confidence intervals (CIs), and effect sizes (η^2_p) and observed powers ($1-\beta$) where relevant for analysis, inspected.

Initial exploratory analyses found that age, HL and English ages of acquisition (AoA), number of languages used and education (scored 1 school completion to 4 postgraduate) were correlated with most measures (see Table 1). Age was positively correlated with both heritage and host identities, self-esteem and wellbeing and negatively with reported family members' English proficiency. Table 1 further shows that HL and English AoAs were correlated with proficiency and language use of both HL and English and in the reverse directions. Further, higher English AoA was also negatively correlated with lower English proficiency, English-oriented linguistic acculturation and cultural preference, weaker host identity, and higher HL proficiency and biculturalism. The number of languages used and education were correlated positively with self-esteem, while the former was also correlated with HL-oriented cultural preference and identity, and education with lower biculturalism and higher wellbeing (see Table 1). Such demographics, where relevant, were entered as covariates in further analyses.

GENERATION AND LANGUAGE GROUP DIFFERENCES

Before comparing language use, acculturation, identities and psychological health across the generations, exploratory analyses to observe whether the three groups differed in background factors found that the first generation were older ($M = 28.66$, $SD = 7.29$) than the 1.5 ($M = 23.65$, $SD = 7.19$) and second ($M = 24.32$, $SD = 6.05$) generations ($ps < .001$). The second generation in turn had lower English AoAs ($M = 2.13$, $SD = 2.62$) versus the first ($M = 8.78$, $SD = 7.48$) and 1.5 ($M = 6.70$, $SD = 3.98$) generations while the latter groups (first, $M = 1.43$, $SD = 3.16$; 1.5, $M = 1.49$, $SD = 1.86$) had lower HL AoAs versus the second generation ($M = 3.68$, $SD = 4.74$; $ps < .01$). In addition, the European HL group ($M = 7.06$, $SD = 6.01$) reported higher English AoAs than the non-European group ($M = 3.26$, $SD = 4.26$; $p < .001$). These factors were controlled as covariates when examining group differences by Analyses of Covariance.

Table 2 shows the group means from language to psychological health measures. It can be seen that the first generation reported higher HL proficiency than the 1.5 and second generations, who reported higher English proficiency for and use with their family members than the first generation did. The European HL group also reported higher HL proficiency versus the non-European group, who in turn reported higher English use in the family. In addition, the European HL group reported higher biculturalism and cultural involvement compared with the non-European group. As there were more second-generation members in the non-European HL group and more first-generation members in the European group, additional analyses were performed adding generation as another covariate. The HL-group differences still held: HL proficiency, $F(1,216) = 62.18$, $p < .001$, $\eta^2_p = .22$, $1-\beta > .99$; family language use, $F(1,215) = 3.93$, $p < .05$, $\eta^2_p = .02$, $1-\beta = .51$; biculturalism, $F(1,216) = 8.86$, $p = .04$, $\eta^2_p = .22$, $1-\beta = .84$; cultural involvement, $F(1,217) = 5.16$, $p = .02$, $\eta^2_p = .02$, $1-\beta = .62$ (generation effect, $ps < .01$, except for biculturalism).

To examine participants' identities by generation further, their responses to the open-ended question were analysed according to whether the self-descriptions contained ethnic heritage terms only (e.g., Arab, Italian; 58%, $n = 120$), the host labels only (British, English; 8.2%, $n = 17$) or a combination of host and heritage labels (e.g., 'Anglo-Iranian', 'British Asian', 33.8%, $n = 70$). Cross-tabulations (see Figure 1) with Chi Square tests found the descriptions to be associated with generation, $\chi^2_{(4)} = 36.30$, $p < .001$ (effect size Cramer's $V = .30$). Follow-up tests found that heritage-only descriptions among the first generation, and host and heritage combined descriptions among the second generation differed significantly from chance ($ps < .001$).

Hypothesis 1 is partly supported according to the results: the first-generation reported higher HL proficiency and family use versus the later generations, but English proficiency or use, acculturation and strength of identities did not differ by generation. However, more first generations self-labelled with the heritage term only while more second generations used the host or host-heritage labelling. Hypothesis 2 is supported; the European-HL group reported higher HL use and proficiency and bicultural orientations versus the non-European group.

Table 2 Generation and heritage-language group means (standard deviations) for self-reported language proficiency and language use with family members, acculturation, identity and psychological health measures.

†lower – more HL-related, higher – more English-related; ††closer to 0 – more bicultural; †††higher – more involvement with both cultures.

Sig. differences in **bold**; a > b (alpha values Bonferroni adjusted to .016).

*p. < .05; **p < .01; ***p < .001 (1-tailed).

MEASURE (SCALE)	FIRST (N = 67)		1.5 (N = 69)		SECOND (N = 84)		F		η ² _p 1-β		EUROPEAN (N = 135)		F		NON-EUROPEAN (N = 85)		η ² _p 1-β	
Own HL proficiency (1-10)		9.22 (1.34)^a	8.36 (1.79)^b	7.20 (1.81)^b			11.59***	.10	.99		9.04 (1.20)			6.82 (1.93)		78.67***	.27	.99
Own English proficiency (1-10)		8.79 (1.15)	9.29 (0.96)	9.25 (1.07)			0.17	.02	.38		9.12 (1.07)			9.47 (1.05)		0.09	.00	.06
Family HL proficiency (1-10)		9.11 (1.52)	8.59 (1.60)	7.43 (2.29)			0.07	.03	.53		8.45 (2.15)			8.07 (1.71)		0.93	.00	.16
Family English proficiency (1-10)		5.52 (2.66)^b	6.87 (1.79)^a	8.37 (1.56)^a			9.22***	.08	.98		6.58 (2.54)			7.74 (1.76)		2.18	.01	.31
Family language use (1-10)†		2.61 (2.32)^b	4.16 (2.47)^a	5.42 (2.10)^a			7.34***	.06	.94		3.59 (2.62)			5.09 (2.17)		8.64**	.04	.83
Linguistic acculturation (1-5)†		3.50 (0.61)	3.81 (0.78)	3.79 (0.74)			2.16	.02	.44		3.61 (0.72)			3.87 (0.71)		2.54	.01	.36
Cultural preference (1-5)†		3.15 (0.64)	3.27 (0.64)	3.21 (0.60)			1.42	.01	.30		3.11 (0.62)			3.36 (0.60)		3.67	.02	.48
Biculturalism (0-48)		9.12 (9.47)	9.61 (6.61)	10.43 (7.62)			0.29	.00	.10		8.28 (6.35)			12.14 (9.50)		7.12**	.03	.76
Cultural involvement (24-120)††		96.40 (13.61)	97.61 (12.30)	96.17 (12.69)			0.26	.00	.09		98.16 (11.94)			94.35 (13.86)		4.69*	.02	.58
Heritage identity (1-5)		3.90 (0.88)	3.86 (0.73)	3.98 (0.65)			0.85	.01	.20		3.85 (0.79)			4.03 (0.68)		2.83	.01	.39
Host identity (1-5)		3.35 (0.68)	3.50 (0.79)	3.64 (0.72)			2.15	.02	.44		3.43 (0.75)			3.63 (0.70)		0.20	.00	.07
Self-esteem (1-4)		3.08 (0.56)	2.78 (0.54)	2.91 (0.55)			0.93	.01	.21		2.93 (0.59)			2.90 (0.52)		0.52	.00	.11
Wellbeing (1-5)		3.54 (0.54)	3.39 (0.52)	3.52 (0.64)			1.06	.01	.23		3.43 (0.57)			3.54 (0.59)		1.03	.01	.17

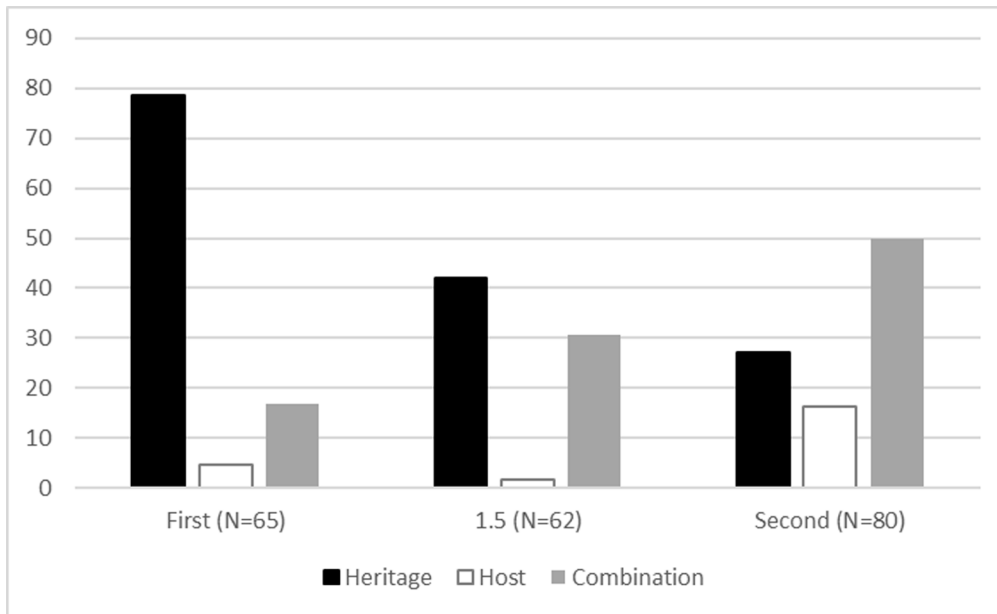


Figure 1 Percentages of heritage-only, host-only and combined host-heritage self-descriptions given by first, 1.5 and second-generation heritage-bilinguals.

PREDICTING ACCULTURATION, IDENTITIES AND PSYCHOLOGICAL HEALTH

To explore the contribution of participant background, language proficiency and family use to acculturation, and the contribution of these measures to heritage and host identification or psychological health, two sets of hierarchical regression (different factors in separate blocks) were used to view the relative prediction of each block and factor (predictor). The first set had each acculturation measure (linguistic acculturation, cultural preference, biculturalism, and cultural involvement) as a dependent variable (outcome), with demographics and language proficiency/use in two blocks (see Table 3). The second set had heritage and host identities, self-esteem, and wellbeing as the dependent variables, with the demographic and language blocks, and acculturation and identities in further blocks, as predictors (see Table 4).

The collinearity statistics did not indicate problems of multicollinearity (first set VIF 1.22–1.79; tolerance .56–.96; second set VIF 1.10–1.76, tolerance .56–.82). Significance was determined by the bootstrapped p-values after inspecting the BCa 95% CIs of B-values. Table 3 shows the coefficients of demographic and language proficiency and use measures in the models for acculturation outcomes. It can be seen that all models explained a significant amount of the outcome's variance (15% cultural preference to 31% linguistic acculturation). The demographics block accounted significantly for all outcomes but cultural involvement, while language proficiency and use accounted for all outcomes. For linguistic acculturation and cultural involvement, language proficiency and use (22%, 11%) accounted for twice the amount of variance as demographics (10%, 5%), but for cultural preference and biculturalism the reverse applied (demographics 9%, 11%; language proficiency, 6%, 10%).

Also in Table 3, participant HL proficiency uniquely predicted all outcomes, with higher proficiency associated with more HL-oriented linguistic acculturation and cultural preference, and higher biculturalism and cultural involvement. Further, participant English proficiency uniquely predicted linguistic acculturation to a similar degree as HL proficiency did and in the reverse direction (more English preference), while higher English proficiency and higher HL use reported of family members uniquely predicted cultural involvement, with English proficiency being the stronger predictor. Within the demographics, later generations were associated with more English-oriented cultural preference and biculturalism, age with cultural involvement, and later HL AoAs with more HL-oriented linguistic acculturation.

Table 4 shows the coefficients of four blocks, demographics, language proficiency and use, acculturation and identities, in the models for each identity or psychological health outcome. All models explained a significant amount of the outcome variance (25% wellbeing to 38% heritage identity). It can be seen that the demographic block accounted significantly for all outcomes except heritage identity, acculturation accounted significantly for all except wellbeing, and language proficiency and use accounted significantly for only self-esteem. Heritage and host identities did not predict one another, self-esteem or wellbeing. Moreover,

Table 3 Regression models for acculturation outcomes: linguistic acculturation, cultural preference, biculturalism and cultural involvement.

†lower – more HL-related, higher – more English-related; ‡ closer to 0 – more bicultural; ††† higher – more involvement with both cultures. Sig. individual predictors in **bold**; * $p < .05$, ** $p < .01$, *** $p < .001$ (1-tailed; CIs observed).

LINGUISTIC ACCULTURATION†					CULTURAL PREFERENCE‡				BICULTURALISM††				CULTURAL INVOLVEMENT‡‡‡			
BLOCK	B	SE	β	T	B	SE	β	T	B	SE	B	T	B	SE	B	T
Demographic	R²Δ = .10, FΔ = 3.19**															
(Constant)	1.96	0.64	-	3.04**	4.46	0.61	-	7.26***	22.95	7.51	-	3.06**	54.00	12.55	-	4.30***
Age	0.01	0.01	.05	0.69	-0.00	0.01	-.04	-.55	-0.08	0.08	-0.07	-0.93	0.37	0.14	.21	2.70**
HL AoA	-0.03	0.01	-.18	-2.42*	-0.00	0.01	-.00	-0.04	-0.16	0.17	-0.07	-0.93	0.03	0.28	.01	0.11
English AoA	0.01	0.01	.10	1.15	-0.01	0.01	-.11	-1.13	-0.07	0.13	-0.05	-0.55	0.00	0.21	.00	0.01
No. languages	0.05	0.05	.06	0.87	-0.09	0.05	-.13	-1.80	-0.05	0.61	-0.01	-0.08	-0.54	1.01	-.04	-0.53
Education	0.03	0.05	.03	0.47	-0.01	0.05	-.02	-0.22	1.13	0.63	.13	-0.48	-0.48	1.06	-.04	-0.46
Generation	-0.05	0.14	-.03	-0.39	-0.30	0.13	-.20	-2.32*	-4.03	1.60	-.21	-2.52*	3.17	2.67	.10	1.19
HL (non-Euro/Euro)	0.19	0.11	.13	1.66	-0.05	0.11	-.04	-0.46	-0.29	1.31	-0.02	-0.22	0.40	2.19	.02	0.18
L proficiency & use	R²Δ = .22, FΔ = 13.05***															
Own HL proficiency	-0.15	-0.03	-.39	-4.99***	-0.09	-0.03	-.28	-3.24**	-1.48	0.35	-.35	-4.19***	2.31	0.59	.34	3.91***
Own E proficiency	0.26	0.05	.38	5.40***	0.01	0.05	.02	0.20	0.17	0.56	.02	0.31	0.66	0.93	.06	0.71
Family HL proficiency	0.01	0.03	.03	0.34	0.03	0.03	.09	1.07	-0.02	0.33	-.00	-0.05	-0.20	0.55	-.03	-0.36
Family E proficiency	0.01	0.03	.02	0.18	0.00	0.03	.01	0.14	0.42	0.33	.12	1.29	1.70	0.55	.31	3.12**
Family language use†	0.04	0.03	.13	1.42	0.02	0.03	.09	0.85	0.23	0.31	.07	0.72	-1.11	.53	-.22	-2.11*
Model total	R² = .31, F(12,207) = 7.83***															
	R² = .15, F(12,207) = 2.92***															
	R² = .21, F(12,207) = 4.60***															
	R² = .16, F(12,207) = 3.22***															

Table 4 Regression models for identities and psychological health: heritage and host-culture identities, self-esteem and wellbeing.
 †lower – more HL-related, higher – more English-related; ††closer to 0 – more bicultural; †††higher – more involvement with both cultures.
 Sig. individual predictors in **bold**; * $p < .05$, ** $p < .01$, *** $p < .001$ (1-tailed; CIs observed).

BLOCK	HERITAGE IDENTITY					HOST CULTURE IDENTITY					SELF-ESTEEM					WELLBEING				
	B	SE	β	T		B	SE	β	T		B	SE	β	T		B	SE	β	T	
Demographic	$R^2\Delta = .05, F\Delta = 1.66$					$R^2\Delta = .16, F\Delta = 5.90^{***}$					$R^2\Delta = .21, F\Delta = 8.23^{***}$					$R^2\Delta = .18m F\Delta = 6.41^{***}$				
(Constant)	2.87	0.79	-	3.64***		0.70	0.83	-	0.84		3.58	0.62	-	5.78***		2.86	0.69	-	4.15***	
Age	0.01	0.01	.09	1.31		0.02	0.01	.23	3.24**		0.03	0.01	0.01	0.27		0.21	0.01	0.26	3.31**	
HL AoA	0.00	0.01	.01	0.14		0.01	0.02	.03	0.43		0.00	0.01	0.01	0.2		-0.04	0.01	-0.23	-2.94**	
English AoA	-0.00	0.01	-.03	-0.33		-0.00	0.01	-.01	-0.14		-0.01	0.01	0.01	-0.07		-0.02	0.01	-0.15	-1.66	
No. languages	-0.14	0.05	-.16	-2.55**		-0.12	0.05	-.14	-2.17*		0.01	0.04	.01	0.20		0.05	0.05	.07	1.05	
Education	0.06	0.05	.08	1.17		0.03	0.06	.04	0.50		0.11	0.04	.17	2.55**		0.10	0.05	.16	2.21*	
Generation	-0.08	0.14	-.04	-0.56		0.09	0.14	.05	0.63		-0.11	0.11	-0.08	-0.99		0.11	0.12	.08	0.89	
HL (non-Euro/Euro)	-0.34	0.11	-.22	-2.99**		0.04	0.12	.02	0.31		-0.03	0.09	-0.02	-0.31		0.02	0.10	.02	0.18	
Language proficiency/use	$R^2\Delta = .06, F\Delta = 2.55$					$R^2\Delta = .02, F\Delta = 0.96$					$R^2\Delta = .07, F\Delta = 3.74^{**}$					$R^2\Delta = .04, F\Delta = 1.93$				
Own HL proficiency	0.01	0.03	.04	0.44		-0.06	0.03	-.16	-0.16		-0.03	-0.03	-0.10	-1.26		-0.03	0.03	-0.10	-1.07	
Own E proficiency	0.08	0.05	.12	1.58		0.04	0.05	.06	0.73		0.01	0.04	.02	0.28		0.02	0.04	.04	0.48	
Family HL proficiency	0.03	0.03	.07	0.91		-0.04	0.03	-.12	-1.51		-0.05	0.02	-0.17	-2.19		-0.04	0.02	-0.15	-1.79	
Family E proficiency	-0.01	0.03	-.02	-0.21		0.02	0.03	.05	0.55		0.02	0.02	.08	0.86		-0.02	0.03	-0.07	-0.73	
Family language use†	0.03	0.03	.08	0.91		0.00	0.03	.02	0.16		-0.08	0.02	-.34	-3.63***		-0.05	0.02	-0.20	-1.95	
Acculturation	$R^2\Delta = .28, F\Delta = 22.78^{***}$					$R^2\Delta = .15, F\Delta = 11.60^{***}$					$R^2\Delta = .07, F\Delta = 5.42^{***}$					$R^2\Delta = .03, F\Delta = 1.78$				
Linguistic acculturation†	-0.00	0.08	-.00	-0.01		-0.14	0.08	-.14	-1.73		-0.01	0.06	-0.01	-0.11		-0.02	0.07	-0.02	-0.26	
Cultural preferencet	-0.35	0.09	-.29	-4.18***		0.38	0.09	.32	4.41***		-0.28	0.07	-.31	-4.17***		-0.06	0.08	-0.07	-0.82	
Biculturalism††	-0.02	0.01	-.19	-2.41**		-0.00	0.01	-.05	-0.54		-0.00	0.01	-0.01	-0.16		-0.00	0.01	-0.04	-0.45	
Cultural involvement†††	0.02	0.00	.26	3.45**		0.02	0.00	.34	4.55***		0.00	0.00	.06	0.79		0.00	0.00	.08	0.91	
Identities	$R^2\Delta = .00, F\Delta = 0.09$					$R^2\Delta = .00, F\Delta = 0.09$					$R^2\Delta = .02, F\Delta = 2.57$					$R^2\Delta = .01, F\Delta = 1.81$				
Heritage identity	-	-	-	-		0.02	0.07	.02	0.30		-0.07	0.05	-0.10	-1.38		-0.01	0.06	-0.01	-0.08	
Host identity	0.02	0.07	.02	0.30		-	-	-	-		0.10	0.05	.12	1.83		0.11	0.06	.14	1.90	
Model total	$R^2 = .38, F(17,202) = 7.40^{***}$					$R^2 = .33, F(17,202) = 5.97^{***}$					$R^2 = .37, F(18,201) = 6.41^{***}$					$R^2 = .25, F(18,201) = 3.75^{***}$				

acculturation (28%) explained considerably more variance of heritage identity than all other blocks, but it (15%) explained a similar amount as the demographics (16%) for host identity. Acculturation and language proficiency and use explained an equal amount of variance (7%) of self-esteem, but this was considerably less than that explained by the demographics (21%). Only the demographic block explained a significant amount of variance (18%) for wellbeing.

In terms of individual predictors, in the acculturation block more HL-oriented cultural preference, biculturalism and cultural involvement predicted a stronger heritage identity, with cultural preference as the strongest predictor here followed by cultural involvement. English-oriented cultural preference and cultural involvement also uniquely predicted a stronger host identity, both to a similar degree, while only more HL-oriented cultural preference uniquely predicted higher self-esteem. In addition, a non-European HL was associated with a stronger heritage identity, age with a stronger host identity, and the number of languages with weaker heritage and host identities. Age and education were also associated with higher self-esteem and wellbeing, while higher family HL use was associated with higher self-esteem and later HL AoA with lower wellbeing (see [Table 4](#)).

According to the results, hypothesis 3 is partially supported. HL proficiency and use contributed to HL-oriented linguistic acculturation and cultural preference, whereas English proficiency contributed to English-oriented linguistic acculturation. Proficiency and use did not predict either identity; rather, more HL-oriented cultural preference was associated with a stronger heritage identity, and more English-oriented cultural preference with a stronger host identity. Cultural involvement was positively associated with both identities. Hypothesis 4 is rejected; neither bicultural orientations nor identities contributed to psychological health, but higher family HL use and HL-oriented cultural preference contributed to self-esteem.

DISCUSSION

This study examined whether heritage-bilinguals of different generations or HL backgrounds differ in language use and proficiency, acculturation or identity pattern, and how far language proficiency, use and acculturation contribute to identities and psychological health. The group differences partially supported our hypotheses, where the first generation reported higher HL proficiency and use, and those with European HLs reported higher HL proficiency and bicultural orientations. However, identification with neither the host nor heritage culture differed among groups. We also found that language proficiency contributed to linguistic acculturation relevantly (e.g., HL proficiency predicted HL-oriented cultural preference), but not the identities, which were accounted for by acculturation only and that partially supported our hypothesis. The hypothesis that bicultural orientations contributed to better psychological health was not supported, with the only relevant results being that higher HL use with family members and HL-oriented cultural preference contributed to self-esteem.

GROUP DIFFERENCES IN LANGUAGE AND ACCULTURATION

The finding that the first generation reported higher HL proficiency and family use than later generations did is in line with previous reports of generational decline in HL maintenance or gradual attrition ([Li & Wen, 2015](#); [Liu et al., 2009](#)). The fact that even the 1.5, who acquired their HL as early as the first generation, reported lower proficiency and family use, is in line with the accounts of both 1.5 offspring and their parents in qualitative studies ([Connaughton-Crean & Duibhir, 2017](#); [Venutrin, 2019](#)). Apart from having fewer direct ties to the heritage country, factors including the lack of formal HL education and perceptions of English as the mainstream language also underscore challenges in HL maintenance ([Scontras et al., 2015](#)). The higher English proficiency of family members (also reported in this study) settled in the host country may also increase English use even within the home ([Lindner et al., 2020](#)).

Generation variations in acculturative or identity measures were not found, however. This suggests that different levels of HL maintenance, at least as reported proficiency and use with nuclear family members, across generations of heritage-bilingual adults are not reflected in the identity patterns, unlike in younger bilinguals (cf. [Arrendondo et al., 2016](#)). The lack of substantive contribution of language proficiency or family use to either identity also suggests

this (in the next section). It may be that individual variations in the wider context of language practice contribute to the identities or a sense of belonging to the communities (Brown, 2009; Umaña-Taylor et al., 2014). However, spontaneous self-descriptions differed by generation, with the first generation more likely labelling themselves using heritage terms only and the second generation more likely using host or combined host-heritage terms, in line with research showing incremental adoption of the host culture (H. S. Kang, 2013; Shin, 2016). Hence, different generations of heritage-bilinguals may self-identify ‘as’ different subjects, even if the strength of their identification ‘with’ the heritage or host group does not differ.

The findings that bilinguals with a European HL reported higher HL proficiency and family use, biculturalism and cultural involvement, versus those with a non-European HL, are in line with the literature regarding linguistic distance (Knopp, 2022). The differences may in part be due to the relative linguistic and cultural proximity of those HLs to the host majority-language enabling more retention, leading to a more balanced linguistic profile and bicultural acculturation (Laketa et al., 2021). Another explanation may be the differing symbolic value different HLs carry (Yağmur & van de Vijver, 2012). The European-HL group likely shared more ethnic similarities with the host majority-group (White English) and their HL might be a distinctive culture marker (Nguyen & Brown, 2010). The non-European HL group, in this sample at least, likely included more visible minorities with other distinguishing features or practices (e.g., race, religion). This highlights the varying centrality of HL and degree of HL preservation (Umaña-Taylor et al., 2014) among ethnolinguistic minorities.

The groups did not differ in English proficiency, however. Indeed, relatively high levels of proficiency were reported which may reflect the ubiquity of this majority language (Cervatiuc, 2009), particularly within its homeland (Wellings & Mycock, 2019). The lack of variations by generation also undermines the concept of a ‘critical’ developmental period for establishing (at least perceived) host-language proficiency (Singleton, & Leśniewska, 2021). The groups also did not differ in linguistic acculturation or cultural preference. This is in line with the original premises of acculturation (Berry, 1980, 2005) that acquiring a host language or engaging in its culture should not deter involvement in the HL culture. In essence, the key group variations here concern HL maintenance and bicultural orientations. The links between these dimensions are further explored through individual differences below.

LANGUAGE ACCULTURATION, IDENTITIES AND PSYCHOLOGICAL HEALTH

The regression models confirmed the role of HL proficiency in all acculturation aspects here: higher proficiency contributing to higher use across contexts, HL-oriented cultural preference and bicultural orientations. This supports the role of HL maintenance in effective interactions in the heritage community (H. S. Kang, 2013; Müller et al., 2019) and, with competence in the host-language, integrated acculturation (Clément et al., 2001; Szapocznik et al., 1980). Proficiency in English also contributed to linguistic acculturation, though in the opposite direction (more English use), and family English proficiency and HL use predicted cultural involvement. The former finding is in line with research (X. Chen & Padilla, 2019; Jiang et al., 2009) that reports greater immersion in English-medium personal and social realms by proficient speakers. The results on reported family members’ English proficiency and HL use supports the role of family practice in bicultural adaptation, corresponding with research on the significance of parental language competence and policy for the cultural values and adjustment of young heritage-bilinguals (Lindner et al., 2020). Of note here is that having English-proficient family members, while using more HL with them, contributed to involvement across the heritage and host communities.

Of the demographics that individually predicted acculturation, apart from age being associated with higher cultural involvement, higher HL AoAs contributed to HL-oriented linguistic acculturation, and later generations to more HL-oriented cultural preference and biculturalism. The unique contribution of generation status, relative to other variables, to acculturation is intriguing as the direct cross-generation comparisons (in the last section) did not reflect this. These results also suggest that the later bilinguals acquired their HL, the more they used it across contexts as adults, and later generations (often with fewer direct ties to the heritage country) preferred the HL culture over the host culture. One possible reason for these findings is that, despite their earlier exposure to the host culture, some later generations have

accumulated experience of marginalisation growing up in its society (Norton, 2000; Phinney & Baldelomar, 2011). This may lead to revaluations of the adopted host norms and a gradual shift in positions towards the heritage community, as discrimination and marginalisation can influence acculturation (Clément et al., 2001; Parkinson & Crouch, 2011). This explanation needs verification by further research, particularly as, controlling for the language factors, these demographics explained more of cultural preference and biculturalism, but language factors explained considerably more of linguistic acculturation and cultural involvement.

In terms of contribution to the identities, it is notable that language use or proficiency did not contribute to identification with either the heritage or host group, unlike qualitative studies that highlight the role of HL or host language in the relevant identity (Arrendondo et al., 2016; H. S. Kang, 2013; Shin, 2016). While not an exception (cf., Brown, 2009), this result might be a by-product of the sample with relatively high English proficiency and high variations in HL proficiency, which contributed to acculturation that *in turn* contributed to the identities. It could be that the impact of language use or proficiency on identity is more indirect among heritage-bilingual adults, unlike children (Arrendondo et al., 2016) and adult HL-learners (H. S. Kang, 2013). The key contributors here were cultural preference, with HL and English-oriented preference contributing to heritage and host identity respectively, as well as cultural involvement, which also contributed to both identities. The latter indicates the significance of having high levels of comfort in using both languages and enjoyment engaging with both communities for a strong 'bicultural' identity, in line with other research (X. Chen & Padilla, 2019; Schwartz & Unger, 2010). Biculturalism was another unique predictor for heritage identity: the more similar the levels of comfort and enjoyment across the communities, the stronger the identity. It should be noted that, relative to other factors, acculturation measures accounted considerably more for heritage identity, but the measures accounted for host identity by a similar amount as demographics. This indicates the relative importance of language-related acculturation for the formation of a strong heritage identity (Lam et al., 2019; Müller et al., 2019).

Regarding demographic factors that contributed to identity, apart from the increase in identification with the host with age, the number of languages was negatively associated with heritage and host identities: the more languages used, the weaker the identification with both host and heritage groups. It might be that languages beyond the HL and English align with neither culture, but the speaker acculturates to a group that contributes to its identity. Yet this implies that identities conflict with each other, while heritage and host identities were independent of one another, here and in other research (Yağmur & van de Vijver, 2012). More studies are clearly required to examine multilingual speakers' identities. Furthermore, the European HL predicted a weaker heritage identity. Since direct comparisons of the HL-groups did not show this, but instead that the European-HL group reported more bicultural orientations, this result is also intriguing. It might be that the linguistic and cultural proximity of European HLs to English facilitated more 'intermixing' of cultural streams (Schwartz & Unger, 2010), thus a more hybridised heritage identity. In view of the psychological benefits that identifying with both heritage and host cultures can bring (X. Chen & Padilla, 2019), more research on the complex nature of relationships among language, acculturation and identity is needed.

Our data, however, found that language proficiency, biculturalism or identity did not contribute to psychological health, unlike in other research (X. Chen & Padilla, 2019; Marks et al., 2011; Phinney et al., 2001). Rather, family HL use and HL-oriented cultural preference contributed to self-esteem. This finding is in line with other literature (e.g., Liu et al., 2009; Müller et al., 2019) indicating the role of family HL practice and heritage culture affiliation in a healthy sense of self. As self-esteem is denoted by balanced feelings about the self and is subject to the prevailing cultural influences (Rosenberg, 1965), in this study the students' diverse social context (where their HL culture could be represented) might account for the cultural preference-self-esteem relationship. Wellbeing, which focuses on positive mental health, is sensitive to health-promoting initiatives (Tennant et al., 2007). Thus, factors like education and age may exert greater potential impact through healthy behaviour, as found in other research (Stewart-Brown et al., 2018). It should also be noted that HL AoA contributed uniquely to wellbeing: the earlier one acquired their HL, the higher one's wellbeing. This direct connection is of interest; while host-language AoA can impact acculturation and in turn adjustment, less is known about HL

CONCLUSIONS

Extensive qualitative work has illustrated how the home/heritage language plays a key role in family relationships, cultural practice and heritage identity. This study adds to this knowledge by examining the relationships among language proficiency and use, acculturation, host and heritage identification and psychological health in a diverse sample. The data suggests that, notwithstanding the variations in language use and proficiency by generation and HL group, maintenance of the HL contributes to most forms of acculturation, including biculturalism. The data also shows that reported proficiency of, and language use with, family members contribute to involvement across heritage and host cultures, which can in turn contribute to identification with both groups. Finally, family HL use can contribute directly to self-esteem. In the light of existing studies that highlight the role of family language practice, benefits of biculturalism, or challenges in HL maintenance, this study carries implications for informing acculturation strategies, particularly those involving later generations, that can promote HL use, bicultural adaptation and identities, and psychosocial adjustment.

LIMITATIONS

The limitations of this study include not least its sample. While diversity is often a strength in research, the high heterogeneity among participants could pose issues to the interpretation of results. While relative to the non-European languages, the European HLs share more features with each other and English, their origins still span considerably with varying typology (Laketa et al., 2021). Such variations are even greater among the non-European HLs with origins across continents, and more participants in this group were of later generations, with origins in the Commonwealth that share historic ties with the UK (Wellings & Mycock, 2019). These factors point to how the HL group primarily explored gross relative differences, and that language groups do not only vary linguistically, but also often ethnoculturally, while various within-group variations exist (Knopp, 2022; Li & Wen, 2015).

Sampling from universities also means that participants are exposed to a high degree of diversity and English use through education. Also, gender imbalance in the sample, which may reflect the higher female participation in higher education (HESA, 2022), can be seen in this study, especially after a low opt-in rate through open recruitment in this sector. While not unique to this study, these issues, together with the fact that many studies with bilinguals are conducted in English-speaking countries, compromise generalisability to contexts that differ sociohistorically. Part of the sample heterogeneity such as generation status, prior education and AoAs was captured, with effects analysed or controlled for, but other factors including socioeconomics also impact language acquisition and proficiency (Singleton & Leśniewska, 2021), family language practice (Renzaho et al., 2017), identity (Parkinson & Crouch, 2011) and wellbeing (Steward-Brown et al., 2018) and should be included in future research.

Other limitations include measurement despite the high reliabilities of the measures. For family language use and the acculturation measures, bipolar scales were used where more English use or preference indicated less HL use or preference, and vice-versa. While a bipolar measure is optimum for language use given the finite period per usage (S. M. Kang, 2006), it may be less so for preference measures. For cultural preference, the 'heritage-host' spectrum entailed mutual exclusion of two sides that may not conflict. Bidimensional scales counter this but may lack orthogonality in measures that are independent (Yağmur & van de Vijver, 2012). In addition, the derivation of biculturalism would include 'bicultural' individuals that found using *both* languages 'uncomfortable' or their activities 'unenjoyable', entailing the cultural involvement construct, which had higher variability and predictiveness. Lastly, while much research with bilinguals, including this study, uses self-report proficiency scales, few have good validity, which the LEAP-Q shows (see Marian et al., 2007). Nevertheless, future work should also use behavioural measures of proficiency as more objective assessment.

ACKNOWLEDGEMENTS

We would like to thank all colleagues, students and friends that have assisted in this research.

FUNDING INFORMATION

This research was funded by the University of East London Research and Development Services (ReDS) internship grant (project ID ETH1819-0139).

COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR AFFILIATIONS

Virginia L. Lam  orcid.org/0000-0001-8408-3664
University of Roehampton, UK

Alexandra C. Catto
University of East London, UK

REFERENCES

- Arrendondo, M. M., Rosado, M., & Satterfield, T.** (2016). Understanding the impact of heritage language on ethnic identity formation and literacy for U.S. Latino children. *Journal of Cognition and Culture*, 16, 245–266. <https://doi.org/10.1163/15685373-12342179>
- Barrett, M.** (2007). *Children's knowledge, beliefs and feelings about nations and national groups*. Psychology Press.
- Berry, J. W.** (1980). Acculturation as varieties of adaptation. In A. M. Padilla (Ed.), *Acculturation: theory, models and some new findings* (pp. 9–25). Westview.
- Berry, J. W.** (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, 29(6), 697–712. <https://doi.org/10.1016/j.ijintrel.2005.07.013>
- Berry, J. W., Trimble, J., & Olmedo, E.** (1986). Assessment of acculturation. In W. J. Lonner & J. W. Berry (Eds.), *Field methods in cross-cultural research* (pp. 291–349). Sage.
- Brown, C. L.** (2009). Heritage language and ethnic identity: A case study of Korean-American college students. *International Journal of Multicultural Education*, 11(1), 1–16. <https://doi.org/10.18251/ijme.v11i1.157>
- Cervatiuc, A.** (2009). Identity, good language learning, and adult immigrants in Canada. *Journal of Language, Identity, and Education*, 8(4), 254–271. <https://doi.org/10.1080/15348450903130439>
- Chen, T., & Hartshorne, J. K.** (2021). More evidence from over 1.1 million subjects that the critical period for syntax closes in late adolescence. *Cognition*, 214, 104706. <https://doi.org/10.1016/j.cognition.2021.104706>
- Chen, X., & Padilla, A. M.** (2019). Role of bilingualism and biculturalism as assets in positive psychology: Conceptual dynamic GEAR model. *Frontiers in Psychology*, 10, 2019. <https://doi.org/10.3389/fpsyg.2019.02122>
- Clément, R.** (1986). Second language proficiency and acculturation: An investigation of the effects of language status and individual characteristics. *Journal of Language and Social Psychology*, 5(4), 271–290. <https://doi.org/10.1177/0261927X8600500403>
- Clément, R., Noels, K. A., & Deneault, B.** (2001). Interethnic contact, identity, and psychological adjustment: The mediating and moderating roles of communication. *Journal of Social Issues*, 57(3), 559–577. <https://doi.org/10.1111/0022-4537.00229>
- Connaughton-Crean, L., & Duibhir, P. O.** (2017). Home language maintenance and development among first generation migrant children in an Irish primary school: An investigation of attitudes. *Journal of Home Language Research*, 2, 22–39. <https://doi.org/10.16993/jhlr.29>
- Davies, A.** (2004). The native speaker in applied linguistics. In A. Davies, & C. Elder (Eds.). *The handbook of applied linguistics* (pp. 431–500). John Wiley & Sons. <https://doi.org/10.1002/9780470757000.ch17>
- George, D., & Mallery, P.** (2016). *IBM SPSS statistics 23 step by step: A simple guide and reference* (14th ed.). Routledge.
- Higher Education Statistics Agency (HESA).** (2022). *Who's studying in HE?* <https://www.hesa.ac.uk/data-and-analysis/students/whos-in-he>
- Jiang, M., Green, R. J., Henley, T. B., & Masten, W. G.** (2009). Acculturation in relation to the acquisition of a second language. *Journal of Multilingual & Multicultural Development*, 30(6), 481–492. <https://doi.org/10.1080/01434630903147898>

- Kang, H. S. (2013). Korean American college students' language practices and identity positioning: 'Not Korean, but not American'. *Journal of Language, Identity, and Education*, 12(4), 248–261. <https://doi.org/10.1080/15348458.2013.818473>
- Kang, S. M. (2006). Measurement of acculturation, scale, formats, and language competence: Their implications for adjustment. *Journal of Cross-Cultural Psychology*, 37(6), 669–693. <https://doi.org/10.1177/0022022106292077>
- Knopp, E. (2022). Effects of dominance in exposure and linguistic distance in the bilingual proficiency profiles of Dutch-German and Greek-German school-age bilinguals. *Journal of Home Language Research*, 5(1) 2, 1–20. <https://doi.org/10.16993/jhlr.42>
- Lam, V. L., Chaudry, F. R., Pinder, M., & Sura, T. (2019). British Sikhs in complementary schooling: the role of heritage language proficiency and 'culture learning' in ethnic identity and bicultural adaptation. *Language and Education*, 34, 81–96. <https://doi.org/10.1080/09500782.2019.1634095>
- Laketa, A., Studenica, A., Chrysochoou, E., Blakey, E., & Vivas, A. B. (2021). Biculturalism, linguistic distance, and bilingual profile effects on the bilingual influence on cognition: A comprehensive multipopulation approach. *Journal of Experimental Psychology: General*, 150(11), 2273–2292. <https://doi.org/10.1037/xge0000794>
- Li, G., & Wen, Y. (2015). East Asian heritage language education for a plurilingual reality in the United States: Practices, potholes, and possibilities. *International Multilingual Research Journal*, 9(4), 274–290. <https://doi.org/10.1080/19313152.2015.1086623>
- Lindner, K., Hipfner-Boucher, K., Yamashita, A., Riehl, C. M., Ait Ramdan, M., & Chen, X. (2020). Acculturation through the lens of language: Syrian refugees in Canada and Germany. *Applied Psycholinguistics*, 41(6), 1351–1374. <https://doi.org/10.1017/S0142716420000454>
- Liu, L. L., Benner, A. D., Lau, A. S., & Kim, S. Y. (2009). Mother-adolescent language proficiency and adolescent academic and emotional adjustment among Chinese American families. *Journal of Youth and Adolescence*, 38(4), 572–586. <https://doi.org/10.1007/s10964-008-9358-8>
- Marian, V., Blumenfeld, H. K., & Kaushanskaya, M. (2007). The Language Experience and Proficiency Questionnaire (LEAP-Q): Assessing language profiles in bilinguals and multilinguals. *Journal of Speech, Language, and Hearing Research*, 50(4), 940–967. [https://doi.org/10.1044/1092-4388\(2007\)067](https://doi.org/10.1044/1092-4388(2007)067)
- Marks, A. K., Patton, F., & Garcia Coll, C. (2011). Being bicultural: A mixed-methods study of adolescents' implicitly and explicitly measured multi-ethnic identities. *Developmental Psychology*, 47(1), 270–288. <https://doi.org/10.1037/a0020730>
- Müller, L. M., Howard, K., Wilson, E., Gibson, J., & Katsos, N. (2019). Bilingualism in the family and child well-being: A scoping review. *International Journal of Bilingualism*, 24(5–6), 1049–1070. <https://doi.org/10.1177/1367006920920939>
- Nguyen, J., & Brown, B. B. (2010). Making meanings, meaning identity: Hmong adolescent perceptions and use of language and style as identity symbols. *Journal of Research on Adolescence*, 20(4), 849–868. <https://doi.org/10.1111/j.1532-7795.2010.00666.x>
- Norton, B. (2000). Investment, acculturation and language loss. In S. L. McKay & S. L. C. Wong (Eds.), *New immigrants in the United States: Readings for second language educators*. Cambridge language teaching library (pp. 443–461). Cambridge University Press.
- Parkinson, J., & Crouch, A. (2011). Education, language, and identity amongst students at a South African university. *Journal of Language, Identity, and Education*, 10(2), 83–98. <https://doi.org/10.1080/15348458.2011.563644>
- Phinney, J. S. (1990). Ethnic identity in adolescents and adults: Review of research. *Psychological Bulletin*, 108(3), 499–514. <https://doi.org/10.1037/0033-2909.108.3.499>
- Phinney, J. S. (2003). Ethnic identity and acculturation. In K. M. Chun, P. B. Organista, & G. Marin (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 63–81). American Psychological Association. <https://doi.org/10.1037/10472-006>
- Phinney, J. S., & Baldelomar, O. A. (2011). Identity development in multiple cultural contexts. In L. A. Jensen (Ed.), *Bridging cultural and developmental approaches to psychology: New syntheses in theory, research, and policy* (pp. 161–186). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195383430.003.0008>
- Phinney, J. S., Horenczyk, G., Liebkind, K., & Vedder, P. (2001). Ethnic identity, immigration, and wellbeing: An interactional perspective. *Journal of Social Issues*, 57(3), 493–510. <https://doi.org/10.1111/0022-4537.00225>
- Renzaho, A. M. N., Dhingra, N., & Gergegeou, N. (2017). Youth as contested sites of culture: The intergenerational acculturation gap amongst new migrant communities—Parental and young adult perspectives. *PLOS ONE*, 12(2), e0170700. <https://doi.org/10.1371/journal.pone.0170700>
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press. <https://doi.org/10.1515/9781400876136>
- Schwartz, S. J., & Unger J. B. (2010). Biculturalism and context: What is biculturalism, and when is it adaptive? *Human Development*, 53(1), 26–32. <https://doi.org/10.1159/000268137>

- Scontras, G., Fuchs, Z., & Polinsky, M.** (2015). Heritage language and linguistic theory. *Frontiers in Psychology*, 6, 1545. <https://doi.org/10.3389/fpsyg.2015.01545>
- Shin, S. J.** (2016). Hyphenated identities of Korean heritage language learners: marginalization, colonial discourses and internalized whiteness. *Journal of Language, Identity and Education*, 15(1), 32–43. <https://doi.org/10.1080/15348458.2016.1113815>
- Singleton, D., & Leśniewska, J.** (2021). The critical period hypothesis for L2 acquisition: An unfalsifiable embarrassment? *Languages*, 6(3), 149. <https://doi.org/10.3390/languages6030149>
- Stewart-Brown, S., Samaraweera, P. C., Taggart, F., Kandala, N. B., & Stranges, S.** (2018). Socioeconomic gradients and mental health: Implications for public health. *The British Journal of Psychiatry*, 206(6), 461–465. <https://doi.org/10.1192/bjp.bp.114.147280>
- Szapocznik, J., Kurtines, W. M., & Fernandez, T.** (1980). Bicultural involvement and adjustment in Hispanic-American youths. *Public Health Sciences*, 4(3–4), 353–365. [https://doi.org/10.1016/0147-1767\(80\)90010-3](https://doi.org/10.1016/0147-1767(80)90010-3)
- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. L.** (2007). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): Development and UK validation. *Health and Quality of Life Outcomes*, 5(1), 63. <https://doi.org/10.1186/1477-7525-5-63>
- Umaña-Taylor, A. J., Quintana, S. M., Lee, R. M., Cross, W. E., Jr., Rivas-Drake, D., Schwartz, S. J., Syed, M., Yip, T., Seaton, E., & The Ethnic and Racial Identity in the 21st Century Study Group.** (2014). Ethnic and racial identity during adolescence and into young adulthood: An integrated conceptualization. *Child Development*, 85(1), 21–39. <https://doi.org/10.1111/cdev.12196>
- Venturin, B.** (2019). ‘I don’t fit in here and I don’t fit in there:’ Understanding the connections between L1 attrition and feelings of identity in 1.5 generation of Russian Australians. *Heritage Language Journal*, 16(2), 238–268. <https://doi.org/10.46538/hlj.16.2.6>
- Wellings, B., & Mycock, A.** (Eds.) (2019). *The Anglosphere: Continuity, dissonance and location*. Oxford University Press. <https://doi.org/10.5871/bacad/9780197266618.001.0001>
- Yağmur, K., & van de Vijver, F. J. R.** (2012). Acculturation and language orientations of Turkish immigrants in Australia, France, Germany, and the Netherlands. *Journal of Cross-Cultural Psychology*, 43, 1110–1130. <https://doi.org/10.1177/0022022111420145>

TO CITE THIS ARTICLE:

Lam, V. L., & Catto, A. C. (2023). Heritage Language Use and Proficiency: Acculturation, Identities and Psychological Health. *Journal of Home Language Research*, 6(1): 3, pp. 1–19. DOI: <https://doi.org/10.16993/jhlr.51>

Submitted: 24 October 2022

Accepted: 23 May 2023

Published: 04 July 2023

COPYRIGHT:

© 2023 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <http://creativecommons.org/licenses/by/4.0/>.

Journal of Home Language Research is a peer-reviewed open access journal published by Stockholm University Press.

