

# Attachment Style, Mother Tongue Proficiency and Sociocultural Identity Amongst Second and Third Generation South Asian Immigrants in Hong Kong

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## Abstract

This study examined the relationship between attachment style, mother tongue (L1) and dominant language<sup>1</sup> (DL) proficiency, sociocultural identification with the culture of origin, and life satisfaction amongst second-generation and third-generation South Asian immigrants in Hong Kong. Participants included 69 women and 28 men who were permanent residents of South Asian ethnicity, and who had grown up in Hong Kong. The results identified significant associations between attachment insecurity and L1 and DL proficiency, as well as commitment to the origin culture. There was a positive association between life satisfaction and commitment levels to origin culture, indicating that high commitment levels to origin culture tend to coexist with high life satisfaction. This study adds to the existing literature with a focus on language skills, attachment and acculturation in immigrant populations.

## Introduction

Immigration is a global phenomenon that involves major changes in immigrants' and future generations' lives. As of 2019, 3.5% of the world's total population comprises immigrants (UN, 2019). In relation to second/third generation immigrant children who often grow up in a bilingual context, the importance of maintaining a first language (L1) is important for the development of a coherent ethnic identity (Tseng & Fuligni, 2000). Early linguistic and communicative development have been found to be affected by the infant's attachment relationship with their primary caregiver (Costantini, Cassibba, Coppola, & Castoro, 2011), linking attachment security to language development. Previous research has indicated that bilinguals and multilinguals report different emotions and behaviour when speaking different languages, acculturating into host cultures (Dewaele et al., 2020; Hammer, 2016; Panicacci & Dewaele, 2017), but little has been done to understand whether different attachment styles interact with language use and social identity amongst immigrants.

Hong Kong has been a home for South Asian immigrants since the early 19<sup>th</sup> Century during British occupancy, yet immigrant communities still report feeling acculturative stress and confusion over their ethnic identities (Tonsing, Tse, & Tonsing, 2016). This study aims to explore the relationship between attachment style, mother tongue (L1) and dominant language (DL) proficiency, sociocultural identification with the culture of origin, and life satisfaction amongst second-generation and third- generation South Asian immigrants in Hong Kong.

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<sup>1</sup> For the purpose of this study, the term "dominant language" refers to the participants' most proficient language (Kaushanskaya et al., 2019).

## ***Attachment and Language Development***

The development of language competencies in children is closely associated to parents' ability to support their children's social and cognitive development. The attachment relationship between infants and their parents is a central component in ensuring socio-emotional and cognitive development in children. In particular, the development of a secure attachment and affective bond to a primary caregiver represents a central challenge for ensuring functional development in children. Although the presence of attachment is universal, the quality of attachment differs from one infant-caregiver relationship to the next, with individual differences reflecting the history of interaction patterns (Weinfield, Sroufe, Egeland, & Carlson, 2011). Attachment can be defined as "a way of conceptualising the propensity of human beings to make strong affectionate bonds to particular others and of explaining the many forms of emotional distress and personality disturbance, including anxiety, anger, depression, and emotional detachment, to which unwilling separation and loss give rise" (Bowlby, 1979, p. 151).

Bowlby and Ainsworth (see Ainsworth, 1967; Bowlby, 1969) suggest that infants are biologically and evolutionarily predisposed to form proximal relationships, to ensure their survival during childhood. Within this context, the primary caregiver assumes the role of a 'secure base' that allows the child to explore their environment, until it returns to seek the proximity of the secure base for comfort if the experiences cause anxiety due to actual and direct environmental threats, stimuli that are not inherently dangerous (e.g., loud noises), or attachment-related threats (e.g., separation or loss from the attachment figure) (Bowlby, 1973). Differences in the development of attachment are associated with how the primary caregiver responds to the infants' comfort and reassurance-seeking 'attachment behaviours', including crying, clinging, and reaching out to be picked up by the primary care giver. Here the child is predisposed to elicit behaviours from the primary caregiver to satisfy its need for safety and security. A secure attachment is formed when the primary caregiver is available, recognises the child's distress, responds sensitively, provides emotional comfort to alleviate fear, and intervenes when needed. Insecure attachment develops when the parent is emotionally unavailable, and provides inconsistent and erratic responses to their child's comfort seeking behaviour. These infant-caregiver interactions shape the child's 'internal working model of attachment' depending on the level of providing a 'secure base' by responding to their child's verbal and nonverbal signals.

Based on an observational procedure by Ainsworth (1978) known as the 'Strange Situation' which assessed infants' reactions to their primary caregivers, three types of attachment styles were identified. As outlined by Holliman and Critten (2015), 'securely attached' children have an internal presentation of a loveable and worthwhile self, responsive and caring others, and an openness to exploration. Insecure attachment represents less securely attached forms to the primary caregiver. Insecure-resistant, or insecure-ambivalent attachment reflect a self-representation of an unlovable self and unpredictable others, whereas insecure-avoidant children have an internal presentation of an unworthy self and uncaring others.

The relationship between attachment and language development in children has been explored relatively infrequently in the empirical literature. A meta-analysis of 32

studies by IJzendoorn et al. (1995) examined the relationship between attachment quality, intelligence and language competence. Although the results identified intelligence to be only weakly associated with attachment, securely attached children were more competent in the language domain compared to insecure children, indicating that language development could be stimulated in secure attached child-parent relationships. As such, secure attachment provided a foundation for children to be willing to interact and explore language with the parents, who instruct and teach their children (i.e., attachment-teaching hypothesis). In contrast, insecurely attached children may have reduced language interactions with the primary caregiver, resulting in lower linguistic exposure and an impoverished language environment.

Based on the assumption that parents of securely attached children provide better support for children's linguistic development due to advanced linguistic input in interaction with their children, Costantini et al. (2011) explored the mechanism of how attachment security promotes language skills in children. The findings identified that the child's attachment security at 24 months of age could be predicted by the mother's number of utterances, supporting the attachment-teaching hypothesis (IJzendoorn et al., 1995). Additionally, the increased use of utterances in both child and mother is related to an increased number of episodes of joint attention (Tomasello & Farrar, 1986), resulting in more utterances and quality verbal exchanges, hence demonstrating that joint attention is also linked to secure attachment (Naber et al., 2007).

Secure attachment has been associated with maternal sensitivity, as it involves the ability of the primary caregiver to respond appropriately to verbal and non-verbal signals of the child (Bakermans-Karneburg et al., 2003). Maternal sensitivity has been also linked to language skills development, to the extent that sensitive parents may be more verbally responsive in early interaction processes (Leigh, Nievar, & Nathans, 2011; Neuhauser et al., 2018). Parental sensitivity can be defined as the operationalisation of "accurate, prompt, and contingent didactic and affective responses to children's signals, cooperation with the children, accessibility to children and expression of positive feelings and emotions toward the children" (Bornstein et al., 2020, p. 483). Several studies have demonstrated that parental sensitivity facilitates communicative development and competence at all stages of childhood, from toddlerhood or pre-school years onwards. For example, maternal sensitivity is associated with early intentional communication, such as the use of gesture and symbolic behaviour (Paavola et al., 2005; Wu & Gros-Lous, 2014), language skills (Leigh, Nievar, & Nathans, 2011), phonological awareness (Goldstein & Schwade 2008; Silvén et al., 2002), expressive language (Laranjo & Bernier, 2013; Nozadi et al., 2013), and increased rate of communication (Di Carlo et al., 2014).

### ***Acculturation and Attachment***

Acculturation refers to "the process of cultural and psychological change that results following meeting between cultures" (Sam & Berry, 2016, p. 472). The process of acculturation relates to the changes an acculturating individual who is a member of a non-dominant (migrating) group experiences towards a dominant (acculturating) group. As outlined by Berry (2003; Sam & Berry, 2016), acculturation involves various changes on an individual level that individuals experience when adapting to new situations, including behavioural (e.g., wearing different clothes), psychological

(e.g., altered sense of wellbeing) and sociocultural changes (e.g., acquiring a new language). These changes are often quite challenging, resulting in signs of acculturation stress, such as uncertainty, anxiety and depression.

From an attachment perspective, Van Eecke (2005) discussed how immigrants experience trauma as a result of the long-term effects of separation and loss from their culture of origin, such that they may end up becoming susceptible to mental health problems. Immigration may also be linked with attachment, as it affects the acculturation process. In fact, empirical research has shown that secure attachment is positively related to psychological adjustment, but insecure attachment is related to lower assimilation, integration and sociocultural adjustment from linguistics and attitudinal perspectives (Van Oudenhoven et al., 2006; Polek et al., 2010).

In relation to language development, immigrant parents' increased level of acculturation distress, such as depression and stressors associated with lower socioeconomic status, may interfere with maternal sensitivity, which as previously noted has been shown to mediate language development in young children (Cycyk, Bitetti, & Hammer, 2015; Pungello et al., 2009). In particular, secure attachment has been linked to language development amongst bilingual children. For example, Oades-Sese & Li (2011) identified in a sample of low SES Hispanic American preschool children that secure child-parent attachment was associated with higher English language ability but not Spanish language skills. Children from bicultural or low-acculturated families had lower levels of English language skills but higher Spanish language skills, compared to those with highly acculturated parents. There is also research that confirms the importance of communicating in a child's first language (L1) as it carries a strong component of associated with their cultural heritage and identity when compared to communicating in their DL (Català, 2015). This highlights the importance of understanding how acculturation and attachment styles impact language development and language choice from a lifespan perspective. As outlined by Hammer (2016; see also Hong et al., 2013), the acculturation process and the adaptation of immigrants to a new culture has been compared to attachment theory. Here the development of emotional bonds with the host culture would mirror early child-caregiver attachment during L1 language acquisition. Such attachment to the host culture would increase intercultural adjustment and positive self-perception when using the host culture language.

### ***Hong Kong's South Asian Immigrant Population***

South Asian ethnic minorities have had a presence in Hong Kong since 1841 when it was first occupied by the British Empire (Erni & Leung, 2014). As described by Erni and Leung (2014), the term 'South Asians' refers to immigrants from Southern and Southeastern regions of Asia, including Indians, Pakistanis, Nepalis, Filipinos, Indonesians and Thais. The number of South Asian immigrants in Hong Kong has increased by over 30% over the past ten years, with more than forty thousand immigrants counted in 2016 (Hong Kong Census and Statistics Department, 2016). Although South Asian immigrants constitute the largest non-Chinese resident population in Hong Kong, South Asians in Hong Kong have reportedly often felt marginalised (Tonsing, 2013). In relation to their linguistic profile, South Asians residing in Hong Kong are mainly multilingual, including bi- or trilingual, and fluent in both English and a language associated with their origin culture (e.g., Hindi,

Punjabi, Sindhi), but only a minority are fluent in Cantonese (Tonsing, 2014). Although several studies have focussed on the acculturation process of South Asian immigrants in China (Kwok & Narain, 2003; Plüss, 2000; Tonsing, 2010), very few have focused on this population in relation to acculturation and language proficiency. For example, a quantitative paper by Tonsing (2014) studied first-generation and second-generation South Asians in Hong Kong, in order to better understand their acculturation strategy and adaptation style through their host-language competency. The findings identified that a lack of host language fluency, fewer interpersonal contacts with host members, more marginalisation and perceived discrimination related to higher levels of psychological distress, low self-esteem and lower sociocultural competence adaptation. In particular, second-generation South Asians in Hong Kong experienced pronounced marginalisation (i.e., separation from both host and origin cultures), rather than feeling integrated (i.e., maintenance of both origin and host cultures). Second-generation South Asians reported higher levels of host language proficiency but also experienced higher levels of perceived discrimination and psychological distress compared to the first-generation group. The study highlights the importance of unique experience in obtaining a better understanding of immigration and acculturation experiences and processes.

### ***Rationale for the Study***

With a focus on South Asian immigrants in Hong Kong, the purpose of this study was to obtain a better understanding of the relationship between attachment style, L1 and DL proficiency, life satisfaction and sociocultural identity in second-generation and third-generation South Asian immigrants in Hong Kong. An exploration of the relationship between these constructs will provide insight into how language and cultural identity relate to a sense of self and mental wellbeing in immigrant populations. Specifically, this study aims to answer the following research questions:

*1. Do early mother-child interactions relate to second and third generation South Asian immigrants' L1 and DL proficiency levels?*

H1. Insecure attachment will be negatively associated with both L1 and DL proficiency levels.

*2. Do early interactions between an infant and primary caregiver relate to second and third generation South Asian immigrants' life satisfaction and perceived sociocultural identity?*

H2. Insecure attachment will be negatively associated with exploration of and commitment towards the origin culture.

H3. Insecure attachment will be negatively associated with life satisfaction, indicating high psychological distress.

H4. Maintenance of the origin culture will be positively associated with life satisfaction.

*3. Does L1 proficiency relate to second and third generation South Asian immigrants' perceived sociocultural identity?*

H5. L1 and DL proficiency levels will be positively correlated with maintenance of origin culture.

## Method

### *Participants*

A total of 119 South Asians participated in the study, with 99 participants completing all sections of the survey. Of these, 97 participants fulfilled the inclusion criteria. There were 69 female (71.72%) and 28 male (28.28%) participants, ranging from age 18 to 58, with a mean age of 29.33 (SD = 10.21). 84.5% of the total sample were of Indian ethnicity, 9.30% of Pakistani ethnicity and 6.20% of Nepalese ethnicity. Punjabi (51.5%) was the most frequent first language, followed by Hindi (14.4%), English (12.4%), Nepali (5.20%), Sindhi (5.20%), Urdu (5.20%), Tamil (1.00%), and other (5.20%). English (67.00%) was most frequently named as the DL, followed by Cantonese (12.40%), Punjabi (13.40%), Hindi (3.10%), Urdu (3.10%) and Nepali (1.00%). Of those, 28.90% of the participants identified their L1 to be the same language as their DL, compared to 71.10% of the participants whose L1 and DL were not the same language.

Immigrants are permanent residents in a host society through voluntary relocation, and tend to assimilate into the host culture to a greater extent than sojourners (Berry, 2019). For this reason, the participants included in this study were permanent residents who had grown up in the Hong Kong culture and had a L1 that was not one of the host culture languages. Not all of the standardised measures used in this study have translated versions, hence English fluency was an inclusion criterion; participants were asked to confirm their English fluency prior to accessing the survey questions. This criterion may have resulted in a bias towards people who speak English; however, this research is set in the context of second-generation and third-generation South Asian immigrants who are assumed to be bilingual or multilingual, especially since English is one of Hong Kong's official languages. As such, the inclusion criteria were that participants were a) second or third generation South Asians whose L1 that is not one of the host culture languages, b) permanent residents who were born or grew up in Hong Kong, and c) fluent in the English language.

### *Measures*

Attachment style was gauged using the 36-item *Experiences in Close Relationships-Revised* (ECR-R) Questionnaire (Fraley, Waller, & Brennan, 2000), which measures adult attachment styles using two subscales (i.e., avoidance and anxiety). Higher scores on the ECR-R indicate greater attachment insecurity. The ECR-R has established a Cronbach's alpha of over .90, with test-retest reliability between .50 and .75 (Ravitz, Maunder, Hunter, Sthankiya, & Lancee, 2010).

The 6-item *Multigroup Ethnic Identity Measure-Revised* (MEIM-R) (Phinney & Ong, 2007) measured participants' level of identification towards their ethnic group, using a 5-point Likert scale to evaluate their levels of exploration and commitment. Higher scores in the two factors indicate greater ethnic identification. This measure has been found to show adequate internal consistency ( $\alpha = .70$ ), which helps identify meaningful individual and group differences amongst participants from diverse backgrounds (Brown et al., 2014).

Linguistic skills in the L1 were assessed using the *Language Experience and Proficiency Questionnaire (LEAP-Q)* (Marian, Blumenfeld, & Kaushanskaya, 2007),

which asks participants to reflect on their language learning styles and experience. The following factors are included in the LEAP-Q; language competency ( $\alpha = .85$ ), age of language acquisition, language exposure ( $\alpha = .92$ ) and language preference ( $\alpha = .75$ ) (Marian, Blumenfeld, & Kaushanskaya, 2007).

Participants' perceptions and judgments of their wellbeing was measured using the *Satisfaction with Life Scale* (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985). In this measure, participants' judgments of their affective and cognitive welfare are gauged using 5 items with a 7-point Likert scale, in order to obtain perceptions of life satisfaction. A meta-analysis that studied 416 articles on the reliability of the SWLS (Vassar, 2007) concluded that the questionnaire displayed internal consistency ( $\alpha = .78$ ) and showed higher reliability when the test was administered in English than in other languages.

### **Procedure**

Data were collected through self-administered online questionnaire surveys, which were chosen as they have been proven to help with process control of mandatory questions and consent collection (Saris, 2014). The online survey platform 'Qualtrics' was used to host the online survey. The data were collected through convenience and snowballing sampling, as the inclusion criteria were specific to a minority group and needed to connect people coming from a similar background (Barker, Pistrang & Elliott, 2016). To invite participation, calls containing a direct weblink to the online survey were posted on social media and further distributed via South Asian social networks in Hong Kong. Once participants clicked on the weblink, a participant information sheet provided information about the purpose of the study and their ethical rights to withdraw, and gave the participants the opportunity to ask questions about the study. Participants were also informed that the study would be confidential and that all data would be anonymised. All participants provided informed consent and confirmed their agreement for the interviews to be digitally recorded. The study was reviewed by and received ethical approval from the School of Health in Social Science's Ethics Committee at the University of Edinburgh.

### **Statistical Analysis**

A series of Shapiro-Wilk tests of normality identified that the majority of variables were not normally distributed,  $p > .05$ . Subsequently, a series of non-parametric Spearman's rank order correlation coefficients (Spearman, 1910) were calculated to analyse the significance of association between attachment style, language use and sociocultural identity.

## **Results**

### **Descriptive Statistics**

Table 1 outlines the descriptive statistics of mean, median and standard deviation values from the Experiences in Close Relationships-Revised (ECR-R) Questionnaire for measuring attachment styles, Multigroup Ethnic Identity Measure-Revised (MEIM-R) for measuring sociocultural identity, Satisfaction with Life Scale (SWLS) for life satisfaction and Language Experience and Proficiency Questionnaire (LEAP-Q) for language competency.

**Table 1.** Descriptive statistics of study variables.

( <i>n</i> = 97)	<b>M</b>	<b>Mdn</b>	<b>SD</b>
ECR-R PA Insecurity	5.66	5.22	2.01
MEIM-R Exploration	3.84	4.00	0.86
LEAP-Q L1 preference (%)	31.65	30.00	25.84
LEAP-Q DL preference (%)	56.29	50.00	26.40
LEAP-Q L1 proficiency	7.25	7.33	2.75
LEAP-Q DL proficiency	9.90	10.33	1.50
SWLS Life Satisfaction	24.09	23.00	5.92

### ***Attachment Style and L1 and DL Proficiency***

The first hypothesis predicted that attachment style would be associated with L1 and DL proficiency levels. Insecure attachment had a significant negative association with both L1 proficiency ( $r_s = -0.22$ ,  $p < .05$ ) and DL proficiency ( $r_s = -0.23$ ,  $p < .05$ ) amongst the participants, thus confirming the first hypothesis (H1).

### ***Attachment Styles, Sociocultural Identity and Life Satisfaction***

The second hypothesis was partially confirmed by the data, as there was a significant negative association between attachment insecurity and commitment to the origin culture ( $r_s = -0.40$ ,  $p < .01$ ). However, insecure attachment style did not show a significant negative association with exploration of origin culture. Consistent with the third hypothesis, there was a significant negative association between insecure attachment and life satisfaction ( $r_s = -0.37$ ,  $p < .01$ ). The fourth hypothesis, which predicted that high levels of commitment and exploration of origin culture would be positively associated with higher life satisfaction, was partially confirmed. There was a significant positive association between life satisfaction and commitment levels to origin culture ( $r_s = 0.29$ ,  $p < .01$ ), implying that high commitment levels to origin culture tend to coexist with high life satisfaction, however there was no significant association between exploration levels and perceived life satisfaction.

### ***L1 and DL Proficiency and Sociocultural Identity***

The fifth hypothesis, which predicted that high L1 and DL proficiency levels would be positively associated with high levels of commitment and exploration of origin culture, was rejected. The results did not yield significant positive associations between L1 proficiency with level of commitment or exploration. Of all the language and identity variables, there was only a significant association between DL preference and exploration of the origin culture ( $r_s = 0.24$ ,  $p < .05$ ), suggesting that higher exploration of the origin culture tended to coincide with a higher preference toward DL.

## **Discussion**

This study investigated the relationship between attachment style, L1 and DL proficiency levels, sociocultural identity and life satisfaction. The findings of this study identified significant correlations between insecure attachment style, L1 and DL proficiency, and commitment level to origin culture, and between life satisfaction level and commitment level to origin culture. The first research hypothesis for this study was confirmed, reflecting that higher attachment insecurity was associated with lower language proficiencies in both L1 and DL. Secure attachment is defined as

involving low levels of avoidance and anxiety (Fraley, Waller, & Brennan, 2000), and the results indicate that attachment security is significantly associated with higher L1 proficiency amongst immigrants. As for DL proficiency, participants with low levels of attachment insecurity exhibited higher proficiency. These findings support previous research that reports secure attachment assists language competency in both monolingual (e.g., Bornstein et al., 2020; IJzendoorn et al., 1995) and bilingual speakers (Constantini et al., 2012; Oades-Sese & Li, 2011), possibly due to the mediating role of maternal sensitivity in language development (Bornstein et al., 2020; Neuhauser et al., 2018). The secure child-caregiver attachment and maternal sensitivity would have facilitated an emotionally supportive environment, allowing the child and caregiver to share experiences and engage in quality conversational interactions that would aid language development.

The second research hypothesis was partially confirmed, as attachment insecurity was negatively associated with commitment to the origin culture, but there was no significant association between attachment style and exploration of origin culture amongst the South Asian immigrants in Hong Kong. As such, the results of this study seem consistent with previous assertions that secure attachment and commitment to origin culture relate to positive parenting practices that involve emotional warmth and nurturing, which reflect stronger ethnic identities amongst immigrant children (Su & Costigan, 2009). This finding also supports the idea that higher levels of insecure attachment in relation to low commitment to origin culture are associated with sociocultural identity crises (Fraley, 2002; Wang & Mallinckrodt, 2006). Conversely, the lack of a significant relation between secure attachment and exploration of origin culture, as identified in the current study, does not confirm previous findings that indicate a secure attachment increases immigrants' sense of a secure base and exploration of both the origin and host culture (Sochos & Diniz, 2011).

Consistent with the third research hypothesis, life satisfaction was also negatively associated with attachment insecurity. This result is partly consistent with previous research conducted in the United States with Mexican immigrants. Ponciano, Wang and Jin (2020) reported that Mexican immigrants with high levels of insecure attachment (i.e., avoidance) correlated with lower life satisfaction due to the lack of interpersonal connectedness. Merz and Consedine (2012) found that attachment insecurity led to lower well-being in later life amongst multiple ethnic groups in the United States. They also established that ethnicity moderates the link between attachment style and well-being as ethnic groups have different cultures and values. This may help explain the current study's findings that South Asian immigrants in Hong Kong with insecure attachment also display lower life satisfaction. In relation to the fourth research hypothesis, the results of this study showed significantly positive associations between life satisfaction and commitment levels to origin culture, suggesting that immigrants who are close to their origin cultures have higher life satisfaction. The findings of this study did not confirm the fifth research hypothesis, that L1 and DL proficiency levels would be associated with the sociocultural identity of the participants. The only aspect of language proficiency and experience that was related to sociocultural identity was the association between an increased preference towards their DL and high levels of exploration of origin culture.

## **Limitations and Future Research**

Although this study confirmed and extended the research repertoire, in allowing us to better understand the importance of attachment style in immigrants' language use, life satisfaction and sociocultural identity, the study had several limitations. For example, due to the correlational design of this study, it is not possible to assert causality between the variables. Since this assessment of the relationship between attachment style, L1 and DL proficiency and sociocultural identity only involved a South Asian immigrant population in Hong Kong, it is also not possible to generalise the results to immigrant populations in other geographic parameters. As such, future research could use the construct of this study to explore other immigrant populations. Whereas previous studies have focused primarily on acculturation attitudes towards the host culture, this study emphasised sociocultural identity in terms of identification with the culture of origin, and further research should explore both aspects: identification with culture of origin and identification with host culture. Future research could also apply a qualitative framework to better understand immigrant experiences of early parental relationships, DL proficiency, their senses of sociocultural identity and psychological wellbeing. Future research could also to assume a more detailed insight to determine DL use individually to the extent that bilinguals' language preferences may differ according to situations interlocutors and purposes. As such, bilingual speakers could be dominant in one language for one domain, and dominant in another language for another domain (Gorsjean, 2012). In addition, it needs to be acknowledged that attachment theory uses Western concepts to describe and understand attachment. As such, it is necessary to use developmental concepts that describe attachment processes within culture-sensitive frameworks, in order to obtain a better understanding of child development in other cultures (Keller, 2013, 2017). Therefore, the existing attachment framework may be ecologically limited to represent attachment in a South Asian population. Similarly, this study did not explore transgenerational transmission of attachment and how it may be related to language development in second and third-generation immigrants.

## **Conclusion**

This study identified that for second and third generation South Asian immigrants in Hong Kong, attachment style is relevant to L1 and DL use and proficiency, as well as to their sense of sociocultural identify and life satisfaction. These findings highlight the need to further explore the function of attachment style on immigration and acculturation process, as attachment formulates in early years and has implications for later life for immigrants. Future research could investigate how attachment influences immigrants' behaviour, so that future immigrants can be eased into the process of adapting to new cultures.

## **Authors' Contributions**

KKD conceived the population focus, design and conducted the study, analysed the data and drafted the manuscript; LAC conceived the research idea, supervised the study, guided the analysis of the data and contributed to the writing and editing of the manuscript.

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