

Acculturation and Cross-Cultural Adaptation:

The Moderating Role of Social Support

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Abstract

Previous studies have consistently demonstrated the beneficial impacts of the acculturation strategy of integration and the detrimental impacts of the acculturation strategy of marginalization on adaptation outcomes. This study attempts to extend the existing literature by examining the potential moderating role of social support in the relationships between acculturation strategies and cross-cultural adaptation. Specifically, it was hypothesized that social support from family, local friends, and non-local friends would enhance the positive effects of the integration strategy and buffer the negative effects of the marginalization strategy on sociocultural and psychological adaptation. Participants were 188 Mainland Chinese sojourning university students in Hong Kong. Consistent with our predictions, social support from local friends was found to significantly moderate the effects of the integration and marginalization strategies on sociocultural and psychological adaptation. Unexpectedly, it was shown that social support from non-local friends significantly weakened the positive effect of the integration strategy on psychological adaptation. In addition, further analyses on the potentially domain-specific effects of acculturation strategies and social support on psychological adaptation showed that social support from local friends and non-local friends and acculturation strategies of integration and marginalization interacted to influence only one specific domain of psychological adaptation (mutual trust and acceptance). Implications of this study and possible explanations for the discordant findings are discussed.

Keywords: integration; marginalization; psychological adaptation; sociocultural adaptation; social support

Introduction

In the current era of globalization, there have been an increasing number of students pursuing higher education outside their home cultures (Rienties & Tempelaar, 2013). The educational experiences in host cultures provide sojourning students with opportunities to expand their intercultural competence and worldview, which in turn enhance their personal development and future career prospects (Rienties, Luchoomun, & Tempelaar, 2013). Nevertheless, adapting to a new culture can be a difficult and stressful process (Berry, 2005; Ward, Bochner, & Furnham, 2001). Compared with domestic students, sojourning students have been shown to encounter more adjustment problems (Li & Gasser, 2005; Pedersen, 1991). It has been suggested that sojourning students may experience a number of acculturative stressors such as language barriers, discrimination, loneliness, homesickness, financial concerns, problems in daily life tasks, and academic difficulties due to the new educational environment (Mallinckrodt & Leong, 1992; Smith & Khawaja, 2011; Wang & Mallinckrodt, 2006).

The enrollment of Mainland Chinese students pursuing higher education in Hong Kong has soared since the transfer of sovereignty over Hong Kong from the United Kingdom to the People's Republic of China (Pan, Wong, Joubert, & Chan, 2007). The number of Mainland Chinese students admitted to government-funded undergraduate and postgraduate programmes skyrocketed from 916 in 1997 to 11,890 in 2015, accounting for about 76% of non-local students in Hong Kong (University Grants Committee Hong Kong, 2016).

Although Hong Kong is a special administrative region of China, the British colonial rule from 1842 to 1997 had affected all aspects of residents' lifestyle and made Hong Kong a distinctive region in China (Ng, 2007; Ng, Ng, & Ye, 2016). Mainland Chinese generally perceive themselves as less Westernized than Hong Kong Chinese in terms of values, and their perceived value incongruence with Hong Kong Chinese leads to negative intergroup

attitude towards Hong Kong Chinese (Guan et al., 2011). Besides, Mandarin is the official spoken language of Mainland China, while Cantonese is the most commonly used spoken language in Hong Kong. This language barrier has been a prominent acculturative stressor for Mainland Chinese in Hong Kong (Chen, Benet-Martínez, & Bond, 2008). Pan and colleagues (2007) revealed that Mainland Chinese university students in Hong Kong encountered various acculturative problems. However, this group of sojourners has received less research attention compared with Chinese sojourners in other cultures.

Past research has documented the impacts of acculturation strategies on cross-cultural adaptation (Berry, 2005; Ward & Kennedy, 1994). The present study endeavors to advance the literature by examining the potential moderating roles of social support from family, local friends, and non-local friends in the effects of the acculturation strategies of integration and marginalization on sociocultural and psychological adaptation among Mainland Chinese sojourning university students in Hong Kong.

Sociocultural Adaptation and Psychological Adaptation

Acculturation researchers have distinguished between two distinct but related dimensions of cross-cultural adaptation or adjustment: sociocultural adaptation and psychological adaptation (Searle & Ward, 1990). Sociocultural adaptation refers to the competence of handling daily life problems and social interactions in a new cultural context, whereas psychological adaptation refers to an array of psychological outcomes related to a clear sense of personal and cultural identity, subjective well-being, and emotional satisfaction in a new cultural environment (Searle & Ward, 1990; Ward & Kennedy, 1994).

Empirical studies have shown that sociocultural adaptation and psychological adaptation are correlated with each other (Berry, 1997, 2005). However, there are both conceptual and empirical reasons to differentiate between them. One reason is that they are predicted by different factors. Sociocultural adaptation is predicted by the cultural distance

between the home and host cultures, duration of residence in the mainstream society, cultural knowledge and competence, and contact with host nationals, whereas psychological adaptation is predicted by personality variables, life changing events, and social support factors (Ward, 1996; Ward & Kennedy, 1994; Wilson, Ward, & Fischer, 2013). Another reason is that while sociocultural adaptation is better understood within a social skills or culture learning framework, psychological adaptation is better analyzed from stress and psychopathology approaches (Berry, 1997; Ward, 1996).

Acculturation Strategies

To understand the ways immigrants and sojourners live with their heritage and foreign cultures, Berry (1997, 2005) proposed two orthogonal dimensions of acculturation orientations: (a) the desire for preserving the heritage culture and (b) the desire for interacting with others in the dominant culture. On the basis of the two dimensions, Berry (1997, 2005) identified four acculturation strategies: (a) integration, (b) assimilation, (c) separation, and (d) marginalization. The integration strategy involves the interest in both maintaining the original culture and interacting with members in the mainstream society. The assimilation strategy is adopted when individuals replace their ethnic culture with active participations in the dominant society. The separation strategy includes the preservation of individuals' original culture and the avoidance of contact with members in the dominant culture. The marginalization strategy is applied when individuals fail to maintain their original culture and at the same time fail to establish relationships with host nationals.

Research linking acculturation strategies to adaptation outcomes has consistently established that the integration strategy is the most adaptive and the marginalization strategy is the least adaptive (Berry, 2005). Zheng, Sang, and Wang's (2003) study of Chinese sojourning students in Australia showed that those pursuing integration had better subjective well-being than those pursuing other acculturation strategies. Curran (2003) revealed that

Irish immigrants in London pursuing integration reported better adjustment than their counterparts pursuing other acculturation strategies, especially those adopting the marginalization strategy. Hui, Chen, Leung, and Berry (2015) found that the integration strategy was positively related to sociocultural adaptation and psychological adaptation among Mainland Chinese immigrants in Hong Kong. Kusic, Mannetti, and Sam (2006) found that the marginalization strategy was associated with lower sociocultural and psychological adaptation among Polish immigrants in Italy. The study by Sam and Berry (1995) with young immigrants in Norway indicated that acculturative stress was negatively predicted by integration and positively by marginalization.

On the other hand, the assimilation and separation strategies are associated with intermediate levels of adaptation outcomes (Berry, 2005; Ward, 1996). Studies have shown that these two strategies usually have weaker predictive power than other strategies (Sam & Berry, 1995; Tinghög, Al-Saffar, Carstensen, & Nordenfelt, 2009). For instance, Sam and Berry (1995) revealed that assimilation and separation did not significantly predict acculturative stress.

Social Support

It has been documented that social support provides valuable resources for coping with stressful events and for maintaining good physical and mental health (Chu, Saucier, & Hafner, 2010; Cohen & Wills, 1985). Social support can serve emotional, informational, instrumental, and appraisal functions (Langford, Bowsher, Maloney, & Lillis, 1997). Acculturation researchers have emphasized the role of social support in attenuating the stress of adjusting to an unfamiliar cultural environment and in promoting physical and psychological well-being during cross-cultural transitions (Adelman, 1988; Mallinckrodt & Leong, 1992; Ward & Rana-Deuba, 2000).

Sojourners may receive social support from family and friends (Adelman, 1988). In

the host society, sojourners may make friends with locals and non-locals, and the latter may include host compatriots from their own culture and multi-nationals from other cultures (Bochner, McLeod, & Lin, 1977; Hendrickson, Rosen, & Aune, 2011; Kashima & Loh, 2006). Moreover, social support may be derived from non-local friendships with home compatriots, which are playing an increasingly important role due to the spread of globalization and ease of long-distance communication and travel (Ng, Rochelle, Shardlow, & Ng, 2014).

Different supportive networks can serve different functions. First, friendships with locals serve as a source of information of the mainstream culture and are particularly important for developing cultural knowledge and competence necessary for adjusting to the host society (Adelman, Parks, & Albrecht, 1987; Kashima & Loh, 2006; Wilson et al., 2013). Second, social support from family, home compatriots, and host compatriots not only helps sojourners to maintain their heritage cultural identity and practices, and also reduces their homesickness and disorientation (Bochner et al., 1977; Kashima & Loh, 2006; Ng et al., 2014). Third, multi-national friends provide a sense of commonality that makes sojourners feel they are not alone in the new environment (Hendrickson et al., 2011).

A body of studies have provided evidence for the beneficial effects of social support from family, local friends, and non-local friends on cross-cultural adaptation (e.g., Finch & Vega, 2003; Garcia, Ramirez, & Jariego, 2002; Hendrickson et al., 2011; Kashima & Loh, 2006; Mallinckrodt & Leong, 1992; Yashima & Tanaka, 2005). Apart from its direct impacts on adjustment, social support has also been shown to buffer the negative effects of acculturative stress on adaptation outcomes (e.g., Jibeen, 2011; Lee, Koeske, & Sales, 2004).

The Moderating Effect of Social Support on Acculturation Strategies

A gap in acculturation research is that empirical studies have predominately focused on the main effects of various predictors on cross-cultural adaptation and neglected potential

moderating processes (Zhang & Goodson, 2011). Although past research has examined the relationships between acculturation strategies and cross-cultural adaptation, the extent to which these relationships are moderated by other variables has not been well understood. This study seeks to illuminate these relationships by examining the moderating influence of social support. We focused on the integration and marginalization strategies for two reasons. First, the notions of integration (or biculturalism) and marginalization (or marginality) have been widely researched for decades (LaFromboise, Coleman, & Gerton, 1993; Nguyen & Benet-Martínez, 2013), but their interaction effects with social support remain largely unexplored. Second, previous studies have consistently shown the beneficial effects of the integration strategy and the detrimental effects of the marginalization strategy on adaptation outcomes (Curran, 2003, Hui et al., 2015, Kosic et al., 2006, Sam & Berry, 1995; Zheng et al., 2003), whereas research on the impacts of assimilation and separation on adaptation outcomes has produced inconsistent findings and weak predictive power (Sam & Berry, 1995; Tinghög et al., 2009). For example, Sam and Berry (1995) found that acculturative stress was associated with less use of integration and more use of marginalization, whereas the effects of assimilation and separation were not significant. Therefore, the present study attempts to investigate whether social support moderates the effects of integration and marginalization on sociocultural and psychological adaptation.

However, it is important to note that some scholars have questioned the validity and usefulness of the concept of marginalization (Rudim, 2003; Rudmin & Ahmadzadeh, 2001). In particular, Rudmin and Ahmadzadeh (2001) argued that as marginalization has sometimes been operationalized to include confusion, anxiety, feelings of alienation, loss of identity, and acculturative stress (Berry, Kim, Power, Young, & Bujaki, 1989), its relationship with poor well-being may be spurious and problematic. Even though in this study marginalization was operationalized as rejection of both host and home cultures, Rudmin and Ahmadzadeh (2001)

contended that people rarely prefer such an option. Hence, some studies have provided no support for the existence of the marginalization strategy (Jasinskaja-Lahti, Liebkind, Horenczyk, & Schmitz, 2003; Rudmin & Ahmadzadeh, 2001). For instance, the study by Jasinskaja-Lahti et al. (2003) with young ethnic repatriates from the former Soviet Union in Finland, Israel and Germany showed that very few participants preferred the marginalization option. On the contrary, marginalization often represents the failure to affiliate with the two cultures due to enforced cultural loss and exclusion (Berry, 1997, 2005; Rudmin & Ahmadzadeh, 2001). To provide a better understanding of marginalized people, this study not only took into account sojourning students' preference for bicultural rejection (the marginalization strategy), but also whether they received social support from members of the host and home cultures.

Acculturation researchers have argued that successful adaptation depends not only on sojourners' acculturation strategies, but also on the dominant group's orientation towards the non-dominant group (Berry, 2006; Bourhis, Moise, Perreault, & Senecal, 1997). While the latter has received much less attention, recent studies have suggested that taking the perspective of the dominant group into account provide a fuller understanding of the acculturation process (Hui et al., 2015; Rohmann, Piontkowski, & van Randenborgh, 2008; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). According to Berry (1997, 2006), the integration strategy tend to be more effective in societies with a multicultural ideology, which refers to a positive attitude towards cultural pluralism and diversity. One reason is that these societies and their members are more likely to offer social support to immigrants and sojourners (Berry, 2005; Murphy, 1965). In this light, social support from local friends, which provides resources for integrationists to acquire local cultural competence, may enhance the impact of the integration strategy on cross-cultural adaptation.

Apart from participating in the receiving society, integrationists also wish to preserve

their culture of origin. However, sojourners' native language and heritage cultural knowledge are not routinely used in the mainstream society (Ng et al., 2014). Social support from family and non-local networks of home compatriots and host compatriots are instrumental to the preservation of cultural practices (Bochner et al., 1977; Ng et al., 2014). Therefore, it is reasonable to expect that social support from family and non-local friends would strengthen the relationship between integration and cross-cultural adaptation.

In sharp contrast to integration, the marginalization strategy is characterized by the lack of involvement in both the home and host cultures. Berry (1997, 2005) noted that marginalists often encounter enforced cultural loss. Social support from family, home compatriots and host compatriots may help them to reaffirm their heritage cultural identity and revive their home cultural traditions (Bochner et al., 1977; Ng et al., 2014). Besides, marginalists usually perceive a high level of discrimination (Berry, 1997, 2005), which has been negatively associated with physical and mental health (Finch & Vega, 2003; Schwartz et al., 2010). Research has shown that social support from family, local friends, and non-local friends reduces the negative effect of perceived discrimination on well-being (e.g., Chou, 2012; Jasinskaja-Lahti, Liebkind, Jaakkola, & Reuter, 2006; Noh & Kaspar, 2003). Taken together, it is logical to predict that social support from family, local friends, and non-local friends would buffer the negative influence of marginalization on cross-cultural adaptation.

While research on subjective well-being has investigated individuals' global life satisfaction as well as satisfaction with specific domains (e.g., emotional satisfaction, social satisfaction, academic satisfaction; Cummins, 1996; Feldt, Graham, & Dew, 2011), acculturation researchers have also examined sojourners' global and specific domains of psychological adaptation (Arends-Tóth & van de Vijver, 2004; Chan, 2001). According to Chan (2001), sojourning students' psychological adaptation can be understood in terms of (a) mutual trust and acceptance, (b) life satisfaction and future expectations in the new society,

and (c) competency in academic achievement. It is possible that the interaction effects between social support and acculturation strategies may vary across different domains of psychological adaptation. In particular, among the three domains of psychological adaptation, mutual trust and acceptance is the most closely related to social support (Hendrickson et al., 2011). In this light, social support may be particularly important for integrationists and marginalists to develop mutual trust and acceptance. Therefore, it is of theoretical importance to examine the potentially domain-specific effects of acculturation strategies and social support on psychological adaptation.

The Current Study

This study aims to investigate how social support and the acculturation strategies of integration and marginalization interact to influence sociocultural and psychological adaptation using a sample of Mainland Chinese university students in Hong Kong. In particular, we hypothesized that social support from family, local friends, and non-local friends would moderate the relationships of the integration strategy with sociocultural and psychological adaptation. The positive effects of the integration strategy would be stronger when social support is higher. We also hypothesized that social support from family, local friends, and non-local friends would moderate the relationships of the marginalization strategy with sociocultural and psychological adaptation. The negative effects of the marginalization strategy would be weaker when social support is higher. Moreover, this study also endeavors to examine the potentially domain-specific effects of acculturation strategies and social support on psychological adaptation. Specifically, we hypothesized that the interaction effects between social support and acculturation strategies would be stronger for mutual trust and acceptance than for life satisfaction and future expectations in the new society and competency in academic achievement.

Method

Participants and Procedure

A total of 188 Mainland Chinese sojourning students from a local university in Hong Kong participated in this study. To be eligible for participation, participants were required to be Mainland Chinese residents enrolled in an undergraduate or postgraduate programme in Hong Kong. The sample consisted of 97 males (51.6%) and 91 females (48.4%). Among them, 108 were 24 years of age or below (57.4%), 70 were between 25 and 29 years (37.2%), and 10 were 30 years or above (5.3%). Regarding their education level, 19 were undergraduates (10.1%), 102 were master's students (54.3%), and 67 were doctoral students (35.7%). Participants were from various fields of study (e.g., science and engineering, business, humanities and social sciences, law, and creative media). Their residence length in Hong Kong ranged from 1 month to 6 years, with a mean length of 1.56 years ($SD = 1.20$). On average, their perceived level of Cantonese proficiency ($M = 2.49$, $SD = 1.43$) was below the scale mid-point of 3.

The sample was obtained through convenience sampling. Data collection was conducted through two ways. First, web-based questionnaires were delivered to Mainland Chinese students who lived in the university hostel by electronic mail with the help of a Mainland Chinese students' union. Second, in order to increase the response rate, paper-and-pencil questionnaires were mailed to Mainland Chinese students who lived in the university hostel with the help of several Mainland Chinese students. Participation in the study was on a voluntary basis and no incentive was given. On average, it took about 25 minutes to finish the questionnaire. This study initially recruited 221 respondents. Missing data for each question ranged from 0% to 2.7%. Participants with missing data were deleted listwise.

Measures

The questionnaire was written in Chinese. The validated Chinese version of the measures of sociocultural adaptation, psychological adaptation, integration and

marginalization were adopted. Regarding the social support measures, the original English items were translated into Chinese with back-translation to ensure conceptual equivalence.

Sociocultural adaptation. The present study adopted the measure of sociocultural adaptation specific to Mainland Chinese in Hong Kong validated by Chan (2001). The instrument contained 30 items. Each item was assessed on a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). A sample item was “I fully understand the life style in Hong Kong”. Previous studies have demonstrated that this instrument has satisfactory internal consistency reliability and concurrent validity with other adaptation outcomes (Chan, 2001; Ng, Tsang, & Lian, 2013).

Psychological adaptation. The current study employed the measure of psychological adaptation specific to Mainland Chinese in Hong Kong validated by Chan (2001). This scale consisted of 46 items. Each item was rated on a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). An exemplary item was “I believe I will live in Hong Kong happily”. This scale contained three subscales, including (a) mutual trust and acceptance (25 items), (b) life satisfaction and future expectations in the new society (16 items), and (c) competency in academic achievement (5 items). A second-order confirmatory factor analysis was conducted using LISREL 8.80 to examine whether the three first-order factors could be accounted for by an underlying second-order factor of psychological adaptation. An acceptable model fit was indicated by $RMSEA \leq .08$, $SRMR \leq .10$ and $CFI \geq .90$ (Kline, 2005). Since tests of multivariate skewness and kurtosis showed that the data did not follow multivariate normal distribution ($ps < .001$), robust maximum likelihood (RML) estimation was applied and Satorra-Bentler scaled chi-square ($S-B\chi^2$) statistics were calculated. The second-order factor model demonstrated an adequate fit, $S-B\chi^2(985, N = 188) = 1981.16$, $p < .001$, $RMSEA = .074$, 90% CI [.069, .078], $SRMR = .096$, $CFI = .90$, after adding an error covariance between the two items of life satisfaction and future expectations in the new

society that measures future expectations. The second-order factor loadings were .64 (mutual trust and acceptance), .84 (competency in academic achievement) and .91 (life satisfaction and future expectations in the new society), suggesting that these three first-order factors could be combined to form a higher order general factor of psychological adaptation. In this study, both the three subscale scores and the overall scale score were used. The overall scale score was computed by taking the average of the 46 items. This scale has exhibited adequate internal consistency reliability and concurrent validity with other adaptation outcomes (Chan, 2001; Ng et al., 2013).

Acculturation strategies. Chan (2001) validated an instrument to measure the uses of the four acculturation strategies (integration, assimilation, separation, and marginalization) specifically for Mainland Chinese students in Hong Kong based on Berry's (1997, 2005) model. In this study, only the measures of integration and marginalization were adopted. Each acculturation strategy was assessed with 12 items. Each item delineated a hypothetical situation and required the respondent to indicate whether he or she would use a particular strategy (1 = *yes*, 0 = *no*). A sample item measuring integration was "I'm willing to become good friends with people from Mainland China as well as local people". A sample item measuring marginalization was "I am not interested in both Hong Kong and Mainland news". A higher score on a dimension indicated more use of the strategy. Prior studies have shown that these measures have good internal consistency reliability and concurrent validity with adaptation outcomes (Chan, 2001; Ng et al., 2013).

Social support. The Multi-Dimensional Support Scale developed by Winefield, Winefield, and Tiggemann (1992) is an instrument that can be adopted to assess perceived social support from any sources. In this study, this instrument was applied to measure social support from (a) family, (b) local friends who were Hong Kong residents, and (c) non-local friends who were not Hong Kong residents. Each source of social support was assessed with

6 items. All items were evaluated on a 4-point Likert scale ranging from 1 (*never*) to 4 (*always*). An exemplary item was “How often did you feel that they were really trying to understand your problems?” Past studies have revealed that this instrument has good internal consistency reliability and concurrent validity with measures of psychological well-being (Neuling & Winefield, 1988; Winefield et al, 1992).

Demographic variables. Participants were instructed to indicate their gender, age, and residence length in Hong Kong (in years and months). In addition, they were asked to rate their Cantonese proficiency on a 5-point Likert scale ranging from 1 (*very poor*) to 5 (*very good*).

Results

Descriptive Statistics

The means, standard deviations, reliabilities, and correlations among the major variables employed in this study are presented in Table 1. All variables showed acceptable internal consistency reliability. Sociocultural adaptation and psychological adaptation were significantly intercorrelated ($r = .61, p < .001$). Higher sociocultural adaptation was significantly associated with more use of the integration strategy ($r = .41, p < .001$), less use of the marginalization strategy ($r = -.33, p < .001$), higher social support from family ($r = .34, p < .001$), higher social support from local friends ($r = .21, p = .002$), and higher social support from non-local friends ($r = .22, p < .001$). Besides, higher psychological adaptation was significantly associated with more use of the integration strategy ($r = .44, p < .001$), less use of the marginalization strategy ($r = -.41, p < .001$), higher social support from family ($r = .25, p < .001$), and higher social support from local friends ($r = .25, p < .001$). These results suggested that appropriate use of strategies and greater social support were generally linked with better adaptation outcomes.

Insert Table 1 about here

Hierarchical Moderated Regression Analyses

It was expected that social support from family, local friends, and non-local friends would moderate the effects of integration and marginalization on sociocultural and psychological adaptation. We conducted two separate sets of hierarchical moderated regression analyses (Aiken & West, 1991; Cohen, Cohen, West & Aiken, 2003) to test for the hypothesized moderating effects. The dependent variables for the two analyses were sociocultural adaptation and psychological adaptation. The independent variables (integration and marginalization) and moderators (social support from family, local friends, and non-local friends) were mean-centered. Interaction terms were formed by multiplying the centered predictors and moderators. With respect to demographic variables, gender (1 = *male*, -1.07 = *female*) and age (1 = *24 or below*, -1.35 = *25 years or above*) were weighted-effects coded, whereas Cantonese proficiency and residence length in Hong Kong (transformed into years) were mean-centered. In each regression equation, the demographic variables were entered in step one, the centered predictors and moderators in step two and the interaction terms in step three.

Table 2 presents the results of the hierarchical moderated regression analysis predicting sociocultural adaptation. It was found that more use of the integration strategy ($B = .39, p < .001$) and higher social support from family ($B = .12, p < .001$) significantly predicted higher sociocultural adaptation. Entering the six interaction terms did not account for a significant increment of explained variance in sociocultural adaptation, $\Delta R^2 = .03, \Delta F(6, 172) = 1.43, p = .205$, indicating that the omnibus interaction effect between the three sources of social support and the two acculturation strategies was not significant. However, two significant specific interaction effects were found. As predicted, the integration \times social

support from local friends interaction effect ($B = .50, p = .006$) and the marginalization \times social support from local friends interaction effect ($B = 1.05, p = .011$) were significant. Following the suggestion by Aiken and West (1991) and Cohen et al. (2003), simple main effects of integration and marginalization on sociocultural adaptation were examined at high (one standard deviation above the mean), medium (mean), and low (one standard deviation below the mean) values of social support from local friends. The simple slopes of integration and marginalization are illustrated in Figure 1 and 2, respectively. Integration was not significantly associated with sociocultural adaptation when social support from local friends was low ($B = .06, p = .354$). The positive effect of integration emerged when social support from local friends was medium ($B = .40, p < .001$) or high ($B = .74, p < .001$). By contrast, marginalization had a significant negative effect on sociocultural adaptation when social support from local friends was low ($B = -.93, p = .009$). Marginalization was not significantly related to sociocultural adaptation when social support from local friends was medium ($B = -.21, p = .215$) or high ($B = .50, p = .126$). These results indicated that social support from local friends enhanced the beneficial impact of integration and buffered the detrimental impact of marginalization on sociocultural adaptation.

Insert Table 2, Figure 1 and 2 about here

The results of the hierarchical moderated regression analysis predicting psychological adaptation were summarized in Table 3. It was revealed that more use of the integration strategy ($B = .37, p = .002$), less use of the marginalization strategy ($B = -.60, p = .023$), higher social support from family ($B = .10, p = .006$) and higher social support from local friends ($B = .09, p = .011$) significantly predicted higher psychological adaptation. Adding the six interaction terms did not account for a significant increment of explained variance in psychological adaptation, $\Delta R^2 = .04, \Delta F(6, 172) = 1.98, p = .071$, suggesting that the omnibus

interaction effect between the three sources of social support and the two acculturation strategies was not significant. However, three significant specific interaction effects were found. Consistent with our predictions, the integration \times social support from local friends interaction effect ($B = .37, p = .049$) and the marginalization \times social support from local friends interaction effect ($B = .86, p = .047$) were significant. Figure 3 and 4 delineates the simple slopes of integration and marginalization at different levels of social support from local friends, respectively. The positive effect of integration on psychological adaptation was non-significant at low social support from local friends ($B = .20, p = .153$), but became significant at medium ($B = .45, p < .001$) or high social support from local friends ($B = .70, p < .001$). Moreover, the negative effect of marginalization on psychological adaptation was significant at low ($B = -1.14, p = .004$) or medium social support from local friends ($B = -.56, p = .033$). The relationship between marginalization and psychological adaptation was not significant at high social support from local friends ($B = .03, p = .480$). These results demonstrated that social support from local friends strengthened the favorable influence of integration and alleviated the adverse influence of marginalization on psychological adaptation.

Insert Table 3, Figure 3 and 4 about here

Contrary to our expectation, social support from non-local friends was found to significantly attenuate the positive association between integration and psychological adaptation ($B = -.48, p = .023$). As shown in Figure 5, the positive effect of integration on psychological adaptation was significant when social support from non-local friends was low ($B = .76, p < .001$) or medium ($B = .45, p < .001$), but diminished to non-significant when social support from non-local friends was high ($B = .13, p = .248$).

Insert Figure 5 about here

To further examine the interaction effects between social support and acculturation strategies on the three specific domains of psychological adaptation (mutual trust and acceptance, life satisfaction and future expectations in the new society, and competency in academic achievement), three additional hierarchical moderated regression analyses were performed. As predicted, the three interaction effects observed above were replicated when mutual trust and acceptance was used as the dependent variable. In particular, the integration \times social support from local friends interaction effect ($B = .70, p = .001$), the marginalization \times social support from local friends interaction effect ($B = 1.46, p = .003$), and the unanticipated integration \times social support from non-local friends interaction effect ($B = -.64, p = .006$) were found to be significant. Simple main effect analyses revealed that the positive effect of integration on mutual trust and acceptance was not significant when social support from local friends was low ($B = .08, p = .351$), but became significant when social support from local friends was medium ($B = .55, p < .001$) or high ($B = 1.02, p < .001$). Besides, marginalization had a significant negative effect on mutual trust and acceptance when social support from local friends was low ($B = -1.44, p < .001$) but no significant effect when social support from local friends was medium ($B = -.45, p = .076$) or high ($B = .54, p = .143$). Unexpectedly, the positive effect of integration on mutual trust and acceptance was significant at low ($B = .96, p < .001$) or medium social support from non-local friends ($B = .55, p < .001$), but was reduced to non-significant at high social support from non-local friends ($B = .13, p = .251$). However, these interaction effects were not replicated when either life satisfaction and future expectations in the new society or competency in academic achievement was used as the dependent variable.

Discussion

Theoretical and Practical Implications

The purpose of the current study is to examine the moderating roles of social support from family, local friends, and non-local friends in the effects of the integration and marginalization strategies on sociocultural and psychological adaptation among a group of Mainland Chinese sojourning university students in Hong Kong. The results provide partial support for our hypotheses. As predicted, higher social support from local friends amplified the beneficial effects of the integration strategy and buffered the adverse impacts of the marginalization strategy on sociocultural and psychological adaptation. However, to our surprise, higher social support from non-local friends was found to reduce the positive impact of the integration strategy on psychological adaptation. These findings contribute to a more comprehensive understanding of the relationships between acculturation strategies and cross-cultural adaptation by demonstrating the moderating effects of multiple sources of social support (local friends and non-local friends) in different directions. Implications and limitations of this study are discussed.

Consistent with previous research, this study revealed that more use of integration, less use of marginalization, and higher social support from family and local friends were crucial for better cross-cultural adaptation. Past studies have documented that integration is the most effective acculturation strategy and marginalization the least effective (Berry, 2005; Curran, 2003; Hui et al., 2015; Kosic et al., 2006; Sam & Berry, 1995; Zheng et al., 2003). Moreover, family support has been found to be important for the adjustment of international students, especially in the initial phase of the acculturation process (Bochner et al., 1977; Wang, Heppner, Fu, Zhao, Li, & Chuang, 2012). Furthermore, prior studies have suggested that social support from locals is beneficial to cross-cultural adaptation as it provides resources necessary for adapting to the new environment and interacting with the host society members (Bochner et al., 1977; Hendrickson et al., 2011). The present findings show that the

favorable effects of these factors are applicable to Mainland Chinese sojourning students in Hong Kong.

More important, social support from local friends was shown to enhance the positive effect of integration and mitigate the negative effect of marginalization. Prior work has demonstrated that social support may serve as a buffer against stress (e.g., Cohen & Wills, 1985), including the acculturative stress of international students (e.g., Bertram, Poulakis, Elsasser, & Kumar, 2014; Lee et al., 2004; Smith & Khawaja, 2011; Zhang & Goodson, 2011). These findings enrich the current knowledge by showing that social support may also moderate the impacts of acculturation strategies. However, the predicted moderating effects were detected only when the social support was provided by local friends, but not family or non-local friends. This may be because, compared with strong ties with family and friends from the home culture, weak ties with locals play a more critical role in the adaptation process as they provide resources for sojourners to acquire local language and cultural knowledge (Adelman et al., 1987; Kashima & Loh; 2006; Wells, 2011). It was found that social support from family had significant positive main effects on cross-cultural adaptation, suggesting that this source of social support may contribute to cross-cultural adaptation independently instead of increasing the favorable impacts of integration and decreasing the unfavorable impacts of marginalization. Since very few studies have explored the differential roles of different sources of social support in the acculturation process, additional research effort should be made to clarify our findings.

The present study also seeks to investigate the potentially domain-specific effects of acculturation strategies and social support on psychological adaptation. Consistent with our prediction, this study showed that social support from local friends and acculturation strategies of integration and marginalization interacted to influence mutual trust and acceptance, but not life satisfaction and future expectations in the new society and

competency in academic achievement. These results are sensible because social support from local friends is more strongly associated with mutual trust and acceptance than with the other two domains of psychological adaptation (Hendrickson et al., 2011). Even though the results of the second-order confirmatory factor analysis indicated that the three domains converged to form a higher order factor of psychological adaptation, the roles of acculturation strategies and social support depend on the operationalization of psychological adaptation. These findings suggest that using domain-specific rather than global measures of psychological adaptation contributes to a fuller understanding of the impacts of acculturation strategies and social support. Future research is recommended to verify the effects of social support and acculturation strategies on different domains of psychological adaptation.

Contrary to our expectation, social support from non-local friends was found to reduce the positive effect of the integration strategy on psychological adaptation. One possible explanation is that although compatriot networks provide emotional support and reinforce sojourners' heritage cultural identity (Bochner et al., 1977; Ng et al., 2014), they may also have some negative side effects on sojourners. Acculturation researchers have argued that co-national friendships may offer short-term support but hinder long-term adjustment (Kim, 2001). Previous studies have suggested that overreliance on co-national friendships may make sojourners less willing to acquire the local language and adapt to the local customs (Hendrickson et al., 2011; Kim, 2001). In this light, it is plausible that strong social support from non-local friends may prevent integrationists from achieving long-term adaptation to the dominant culture. Maintaining a medium level of social support from non-local friends may be conducive to one's adaptation process (Wang et al., 2012). Future studies are needed to clarify our findings and identify the optimal level of this source of social support for sojourning students.

Our findings indicate that social support from local friends not only promotes cross-

cultural adaptation, but also enhances the beneficial effects of integration and buffers the harmful effects of marginalization. Universities are recommended to provide services to promote cultural exchanges between sojourning students and local students so as to enhance the friendships between the two parties. A recent study showed that social networking sites provided a platform for Chinese international students in United States to make friends with peers from the host country and to enrich their social network diversity, which in turn improved their adaptation (Forbush & Foucault-Welles, 2016). Social networking sites could be built to serve this purpose. Moreover, international friendship programs could be designed to initiate intercultural links so as to enhance sojourning students' social support networks (Sakurai, McCall-Wolf, & Kashima, 2010).

Limitations and Future Research Directions

Despite the novel findings from the present investigation, several limitations have to be acknowledged. First, because the current study was correlational and cross-sectional in nature, the causal directions of the relationships among variables were debatable. As acculturation is a dynamic process (e.g., Cuadrado, Tabernero, & Briones, 2014; Wang et al., 2012), social support and cross-cultural adaptation could have mutual effects on each other over time. It is possible that better cross-cultural adaptation may encourage sojourning students to develop social support networks with members from the mainstream culture, which may further facilitate their cross-cultural adjustment. Future longitudinal studies will help to clarify the directionality between social support and adaptation outcomes.

Second, the current findings may not generalize to other samples of sojourning students. Because the cultural disparity between Mainland China and Hong Kong has been diminishing since the handover of sovereignty in 1997 (Ng, 2007), Mainland Chinese sojourning students in Hong Kong may encounter less acculturative challenges than do other groups of sojourning students. Pan et al. (2007) found that Mainland Chinese university

students in Hong Kong experienced lower acculturative stress compared with their counterparts in Australia. Further studies are needed to assess the generalizability of our findings to other samples of sojourning students.

Third, this study only used an overall measure of social support from non-local friends but did not evaluate the levels of social support from different types of non-local friends separately. As aforementioned, sojourners may receive social support from non-local friendships with home compatriots, host compatriots, and multi-nationals, and these three types of non-local friends may serve different functions in the acculturation process (Bochner et al., 1977; Hendrick et al., 2011; Kashima & Loh, 2006; Ng et al., 2014). Future work is suggested to investigate how social support from these different types of non-local friends may moderate the associations between acculturation strategies and adaptation outcomes.

Fourth, the marginalization measure had acceptable but low internal consistency reliability. One possible reason is that in this study marginalization was operationally defined as rejection of both host and heritage cultures. However, as individuals rarely choose this strategy (Berry, 1997; Rudmin & Ahmadzadeh, 2001), its existence has not received consistent empirical support (Jasinskaja-Lahti et al., 2003; Rudmin & Ahmadzadeh, 2001). In this study, participants reported a low score of marginalization. Such restriction in range might attenuate the internal consistency reliability. Future research is recommended to use orthogonal measures of attitudes towards the two cultures, which do not have the problems posed by the fourfold acculturation scales (Rudmin & Ahmadzadeh, 2001).

Conclusion

As a concluding remark, the present investigation examined the moderating influences of social support on the relationships between acculturation strategies and cross-cultural adaptation among Mainland Chinese sojourning students in Hong Kong. The results indicate that social support from local friends increases the positive effects of integration and

decreases the negative effects of marginalization on sociocultural and psychological adaptation. Universities should dedicate to provide services to help sojourning students to develop friendships with local students in order to improve their adjustment during their stay in the host society.

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