International migration and social pain responses ☆

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ABSTRACT

International migration, arguably one of the most challenging life events, is an increasingly common psychological experience in the globalizing world. One novel approach in theorizing about wide-ranging psychological implications associated with international migration is to consider its effect in thwarting basic psychological needs. The focus of the current research is on a thwarted sense of control that migrants experience in their adjustment to a host society and its association with heightening pain responses. Among foreign-born residents in Canada (Study 1) and the United States (Study 2), a negative association was found between the participants' identification with the host culture and their social pain responses. Study 2 supported the role of a diminished sense of control in mediating this association.

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1. Introduction

The worldwide number of international migrants reached 232 million in 2013, a 50% increase from 1990 (United Nations, 2013). Psychology research has a long tradition of examining issues implicated by international migration. One substantial body of literature in this regard is research on acculturation. This body of work suggests acculturation should be conceptualized as a bi-dimensional construct: individuals' adjustment to a new culture on the one hand and the maintenance of their heritage culture on the other (e.g., Berry, 1997; Nguyen & Benet-Martínez, 2013; Ryder, Alden, & Paulhus, 2000). Research has also identified the effects of acculturation on psychological and socio-cultural adaptation (e.g., Nguyen & Benet-Martínez, 2013; Ward, Okura, Kennedy, & Kojima, 1998). In addition to this literature, studies have examined the psychological issues implicated in shorter-term migration (e.g., expatriate workers) for example its effect in enhancing creativity (e.g., Leung, Maddux, Galinsky, & Chiu, 2008; Maddux & Galinsky, 2009). There is also a strong research tradition on psychological issues experienced among refugees and asylum seekers (e.g., Fazel, Wheeler, & Danesh, 2005; Porter & Haslam, 2005). Though these literatures differ in their focus, their findings converge in suggesting that international migration implicates a range of psychological processes. In this current research, two studies demonstrated that, among individuals who were undergoing international migration, weak identification with host culture was associated with heightened social pain response, and this association was mediated by the thwarted sense of control.

1.1. International migration and sense of control

To the extent that analyzing commonalities across a diverse range of psychological experiences in international migration is useful for considering its broad conceptual framework, one productive approach may be to focus on thwarted basic psychological needs. For instance, a thwarted sense of control is arguably one of the inevitable consequences of international migration. Consider interpersonal relations: migrants must cope with geographical barriers in maintaining close ties with their family and friends left behind; at the same time, they face the challenge of developing new interpersonal ties in a new cultural context. These interpersonal challenges thwart the belonging need as well as other basic needs such as the need for control, given the essentiality of interpersonal connections for psychological functioning (Williams, 2009). Aside from interpersonal relations, everyday life in a foreign culture can present migrants with many experiences of an undermined sense of control, stemming from encounters with unfamiliar norms, values, customs, and languages. In fact, research confirms the link between international migration and a deprived sense of control (Dalgard, Thapa, Hauff, McCubbin, & Syed, 2006; Moradi & Risco, 2006; Park & Harrison, 1995).

Importantly, the extent to which the new cultural environment thwarts sense of control likely varies greatly across individual circumstances and also across different phases of cultural adjustment. As migrants establish new social networks and adjust to the new norms, values, customs, and language, the new cultural environment should

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diminish its effect in thwarting migrants' sense of control. Put in another way, the effect of international migration in thwarting individuals' sense of control should vary as a function of the degree of challenges and obstacles that migrants face in the host society.

1.2. International migration and pain processes

One possible consequence of an undermined sense of control in international migration is heightened pain responses. In the literature on pain, a sense of control is a well-researched factor of pain responses (for a review, see Thompson, 1981). For example, studies have found that painful stimuli presented without any cues were rated as being more painful and tolerated less than the same stimuli presented with a cue (Rhudy & Meagher, 2000, 2001; Rhudy, Williams, McCabe, Rambo, & Russell, 2006). The effect of an undermined sense of control on heightened pain responses may extend to responses to socially painful events given the common neural and psychological pathways for physical and social pain (Eisenberger, 2012; MacDonald & Leary, 2005). In fact, a study found that participants with a deprived sense of control reacted more strongly to a social-exclusion manipulation (Warburton, Williams, & Cairns, 2006).

In sum, prior research findings suggest that (1) international migration thwarts individuals' sense of control, and that (2) a thwarted sense of control has the effect of heightening individuals' responses to physical and social pain. Some evidence is available linking international migration and physical pain responses. In one study, Chinese-American cancer patients less acculturated to mainstream American culture were found to report more intense pain and its greater interference with daily life (Edrington et al., 2010; Palmer et al., 2007). In another study, Asian-American university students born in countries in Asia exhibited a lower pain threshold and tolerance (measured via a cold pressor task) compared to Asian-American university students born in the United States (Chan, Hamamura, & Janschewitz, 2013). Despite these findings, several issues remain unclear. Particularly, no prior research has examined (1) whether the effect of international migration on pain processes extends to socially painful events, (2) whether the deprived sense of control accounts for the link between international migration and pain responses, and (3) whether the pattern of heightened pain responses is more salient among migrants who face greater challenges in establishing new social networks and in familiarizing with the new culture compared to those who face lesser challenges. The aim of the current research is to address these issues.

1.3. Current research

In two studies, we examined social pain responses, using different measures, among foreign-born individuals living in Canada (Study 1) and the United States (Study 2). To capture the individual difference among the participants with respects to the challenges they face in adapting to the host culture, the studies assessed the extent to which the participants identify with various aspects of the host culture (e.g., its values, norms, and customs, social activities and friendship with locals). Weaker identification with the host culture operationalized greater obstacles experienced in adjusting to the host culture. As such, we predict heightened responses to socially painful events among the participants with weak (vs. strong) host culture identification. Participants' identification with their heritage culture was also assessed to examine its role in potentially buffering the anticipated effects of weak host culture identification. That is, an analysis was conducted to see whether individuals who weakly identifying with the host culture but strongly identifying with their heritage culture show any signs of heightened pain responses. Study 2 also examined the hypothesized role of an undermined sense of control as underlying the association between international migration and social pain response.

2. Study 1

2.1. Method

The participants were 77 students (77% female, mean age = 20.23) at the University of British Columbia. They were all born outside of Canada. The sample was predominantly composed of those born in east-Asian countries (73% from China, Korea, Japan, etc.); 13% were born in south-Asian or middle-eastern countries, and 11% were from the United States and from European countries.

The Vancouver Index of Acculturation (VIA; Ryder et al., 2000) was used to assess the participants' identification with their host and heritage cultures. Sample items are "I believe in mainstream North American values", "I enjoy social activities with people from the same heritage culture as myself", and "I am comfortable working with typical North American people". Responses were indicated on a 7-point scale with 1 = strongly disagree to 7 = strongly agree. Both subscales were internally consistent (alphas ≥ 0.84).

Participants' responses to social pain were assessed by using the 'reliving task' (Chen, Williams, Fitness, & Newton, 2008). Participants were first asked to recall an incident in which someone said or did something that hurt their feelings, such as being rejected, criticized, betrayed, or ignored. Then, participants rated how painful the event was when it happened on a scale ranging from 0 (not painful at all) to 100 (extremely painful). In the discussion below, this rating is referred to as "initial pain". Next, participants were asked to describe the incident in detail in the space provided, and to rate how much pain they were currently feeling using the same scale. This rating is referred to as "relived pain". Using this method, Chen et al. (2008) found that while initial pain ratings for social and physical pain were indistinguishable, relived pain ratings for social pain were higher than for physical pain. This pattern of results led to the conclusion that social pain is re-experienced more intensely than is physical pain (Chen et al., 2008). Our analysis examined whether social pain is re-experienced more intensely among participants with weaker Canadian cultural identification. Research ethics for this study was approved by the institutional review board of the University of British Columbia.

2.2. Results and discussion

The level of pain the participants reported diminished from the initial pain rating ($M = 64.64$, $SD = 23.47$) to the relived pain rating ($M = 42.38$, $SD = 26.49$). This pattern replicates Chen et al. (2008). The pattern is also comparable to the one found among a sample of Canadian-born students from the same university responding to the same measure [n = 57, initial pain: $M = 58.37$, $SD = 22.93$; relieved pain: $M = 30.44$, $SD = 24.08$] (Hamamura, Chan, & Lu, 2015). When the two samples are compared, it indicates that while there was only a small difference on their initial pain ($d = 0.27$), the difference was relatively more pronounced for relived pain, with the foreign born students reported a higher level of pain ($d = 0.47$).

Next, a multiple regression analysis was performed with the foreign-born participants' relived pain predicted from their identification with the host culture, their heritage culture, and their interaction, along with initial pain entered as a control. The interaction term was entered to assess the effects associated with biculturalism (Ward & Rana-Deuba, 1999). Table 1 reports the findings. Participants' identification with Canadian culture was a negative predictor of relived pain ($b = -8.31$, $SE = 3.08$, $p = 0.01$, 95% CI [-14.46, -2.16]). Neither heritage culture identification ($b = 0.96$, $p = 0.78$) nor its interaction with host culture identification ($b = -0.86$, $p = 0.73$) was associated with relived pain.

In sum, these findings provide the initial evidence that a socially painful event was experienced more intensely among foreign-born participants, especially those with weak identification with the host culture. Study 2 extended these findings in a non-student population with a different measure of social pain. In Study 1, social pain was