

Leisure Satisfaction and Acculturative Stress: The Case of Chinese-Canadian Immigrants

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Abstract

The purpose of this study was to examine the causal relationship between leisure satisfaction and acculturative stress. Chinese immigrants to Canada were surveyed six months apart. Four kinds of acculturative stress (all at Time 2) were each hierarchically regressed on: age and gender, years in Canada, the corresponding stressor, and six types of leisure satisfaction (all at Time 1). Results indicated that: (a) social leisure satisfaction lessened loss/nostalgia-based stress; and (b) social, psychological, and aesthetic leisure satisfaction mitigated, while physiological leisure satisfaction exacerbated, perceived discrimination-based stress. These results suggest that, while facilitating certain types of leisure satisfaction (e.g., social) may be beneficial, fostering others (e.g., physiological) could have undesirable consequences.

KEYWORDS: Acculturation, acculturative stress, Chinese, immigration, leisure, satisfaction

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North America's sociodemographic composition is undergoing tremendous change. In the United States, 4% of the population was Asian or Pacific Islander in 2000, with this percentage expected to double by 2025 (Cheeseman Day, 2007). According to 2002 Census figures, Chinese was the largest Asian group (Barnes & Bennett, 2002) and greater China (i.e., Hong Kong, Taiwan, People's Republic of China) was the second largest region of birth of the United States foreign-born population (Malone, Baluja, Costanzo, & Davis, 2003). In Canada, the visible minority population was 16% in 2006 (Statistics Canada, 2010). Although this figure is triple the 5% reported in 1981 (Statistics Canada, 2005), it is only half that projected for 2031, when 31% of Canada's population will be visible minority group members (Statistics Canada, 2010). Chinese is now, and will remain, the second largest visible minority group (Statistics Canada, 2010). Currently 72% of Chinese in Canada are immigrants, largely (45%) from Mainland China (Lindsay, 2007).

In spite of the magnitude of this change, a review of 3,369 articles in five major leisure journals found only 12 articles that dealt specifically with immigrants' leisure (Floyd, Bocarro, & Thompson, 2008). This finding led to a call for more research on leisure and immigration in general and on "the role of leisure in adjustment to [North] American society" (p. 4) in particular. Floyd's et al. appeal echoes that of Shiner and colleagues (2006), who stated that as immigrant groups' influence grew, the effect of immigration on leisure experiences and the role of leisure in adjustment to (North) American society would become crucial research areas. Similarly, Stodolska and Walker (2007) argued that immigration status brings a distinct set of challenges (and, possibly, opportunities) that researchers who study minority groups' leisure need to acknowledge. Based in part on these leisure scholars' pleas, the purpose of this study is to examine how Chinese-Canadian immigrants' leisure satisfaction affects their acculturative stress.

Literature Review

Acculturative stress entails behaviors and experiences that are disruptive to a person after he or she immigrates (Berry, 1997). Based on the extensive literature conducted on this topic outside leisure studies, Berry developed a framework that outlines the acculturative stress process as well as the factors that compose it. The process component of his model involves the demands immigrants must face stemming "from the experience of having to deal with two cultures in contact, and having to participate to various extents in both of them" (Berry, Poortinga, Segall, & Dasen, 2002, p. 364). Among these potentially stressful demands are language difficulties, not feeling at home, loss/nostalgia, and perceived discrimination (Arjoian, Norris, Tran, & Schappler-Morris, 1998). Berry's model's factor component includes both personal (e.g., age, gender) and situational variables that arise during the acculturative stress process itself. Of the various situational variables that exist, this study focuses on two: number of years experiencing acculturation, and leisure as a coping strategy, specifically in terms of leisure satisfaction.

Research suggests that a person's age at the time of immigration influences how acculturation proceeds (Berry et al., 2002). This process is generally smoother, Berry et al. hold, if a person arrives when he or she is very young (i.e., pre-school)

rather than when an adolescent or older adult (e.g., retired and joining one's children). Although these researchers do not mention any differences during early- to mid-adulthood (i.e., age 18 to 64), a study (Mak, Chen, Wong, & Zane, 2005) of Chinese Americans using hierarchical multiple regression found that age did initially affect daily stress, but this effect became non-significant once two psychosocial variables (i.e., self-esteem and hardiness) were added. Mak et al. also included number of years in the United States in their regression, but this variable was never significant. This outcome, however, may have been a result of their participants having been in the United States for an average of 13 years, and so the acculturative process was already quite far along (cf. Ying, 2005). In contrast, gender was significant in both Mak's et al. initial and final regressions, and this finding is consistent with Berry and colleagues' proposal that females may be more at risk for problems during the acculturation process because "attempts to take on new roles available in the society of settlement may bring them into conflict with their heritage culture" (p. 366). On the other hand, a study (Ying) of Taiwanese students living in the United States found limited support for this proposition. As Ying noted, research on whether acculturative stress varies between Asian male and female immigrants is inconclusive.

Coleman and Iso-Ahola (1993) were amongst the first researchers to theorize that leisure participation reduced life stress and, consequently, maintenance of physical and mental health. Leisure participation, they posited, did so in two ways: through the provision of social support and through the facilitation of self-determination (e.g., autonomy, competence; Deci & Ryan, 1985). Both of these factors have been supported in the limited literature on how immigrants use leisure to cope with acculturative stress. For example, Stack and Iwasaki (2009) stated that "building and re-building connections to and networks with friends, family, and the community (both within their own ethnic community and with the host 'Canadian' community)" during leisure was "critical for new [Afghan] immigrants to adapt to the life challenges encountered in the host community" (p. 251). Similarly, Stodolska and Alexandris (2004) found that sport was a means for immigrants in the United States to learn about the "ways of life" in their new country, through social interaction with people outside their ethnic group. In contrast, Yu and Berryman (1996) theorized about the relationships among leisure participation, competence, and self-esteem, as well as the empirical association between the first and last variable. They found that self-esteem and overall leisure participation were positively associated for adolescent Chinese immigrants in America.

In a study more in line with ours, Kim, Scott, and Oh (2005) examined the relationships among leisure satisfaction (which they referred to as leisure benefit), acculturation, acculturative stress, and self-esteem of Korean adults living in the United States. Amongst their hypotheses were that leisure satisfaction would have a positive effect on acculturation and self-esteem and a negative effect on acculturative stress. They found, however, that while leisure satisfaction did positively affect self-esteem it did not influence acculturation and, contrary to their expectations, leisure satisfaction actually had a positive effect on acculturative stress—albeit at $p < .1$. The last result, Kim and colleagues speculated, may have been a consequence of them using a composite made up of only two stressors (i.e., alienation

and loss of tradition). It could also, though, have been a consequence of them using a composite made up of only four of the six leisure satisfaction scales (i.e., psychological, educational, social, and relaxation, but not physiological and aesthetic; Beard & Ragheb, 1980), as well as examining only the relationship between these two composites rather than the relationships between each kind of leisure satisfaction and each type of acculturative stress.

Kim's et al. (2005) disconcerting discovery led them to call for further research on the relationship between leisure satisfaction and acculturative stress. They also recommended future research include the number of years in the host country. Finally, Kim and associates acknowledged that their study's cross-sectional design did not allow them to verify the direction of causality as, for example, a longitudinal study would.

In regard to the last, it is worth noting that there are at least three criteria for causal inference (Rindfleisch Malter, Ganesan, & Moorman, 2008): (a) temporal order (i.e., a predictor variable must precede an outcome variable); (b) covariation (i.e., predictor and outcome variables must be correlated); and (c) coherence (i.e., predictor and outcome variables must "conform to theoretical expectations and display a logical pattern of nomological relationships to other relevant variables"; p. 264). Causality's main criteria are commonly considered to be temporal order, which is why longitudinal designs are generally deemed to be superior to cross-sectional designs (Finkel, 2008; but see also Rindfleisch et al., 2008).

In summary, our current understanding of the relationship among leisure, immigration, acculturation, and acculturative stress is very limited (Floyd et al., 2008; Shinew et al., 2006; Stodolska & Walker, 2007). Moreover, the only study (Kim et al., 2005) that has examined how immigrants' leisure satisfaction influenced their acculturative stress found that, counter to expectations, a positive (albeit marginally significant) relationship existed. The veracity of this finding is open to question, however, because it did not satisfy the causal criteria of coherence and temporal order. Based on the above, therefore, we put forward: (1) the following general proposition regarding what we expect to find in this study. Some types of leisure satisfaction will positively, and some kinds of leisure satisfaction will negatively, affect some types of acculturative stress, above and beyond the effects of other variables such as age and gender, number of years in Canada, and the level of the same stressor when it was measured concurrently with the other predictor variables. And (2) that by using a two-wave prospective panel design, a better understanding of the causal relationships that exist among different types of leisure satisfaction and different kinds of acculturative stress is possible.

Method

Study Instrument

A questionnaire was developed that included sections on country of origin, number of years living in Canada, leisure satisfaction, acculturation stress, and other sociodemographic information. In the first section, participants were asked: "What country or region were you born in: Mainland China, Hong Kong, Taiwan, Macau, Canada, or other?" Respondents who selected any option other than

Mainland China were excluded to ensure sample homogeneity (Stodolska & Walker, 2007). Respondents were also excluded if they had lived in Canada for more than ten years, as research (Ying, 2005) suggests that acculturative stress is greatest earlier in the acculturation process. In the third section, participants reported how frequently six needs—psychological, educational, social, relaxation, physiological, and aesthetic (Beard & Ragheb, 1980)—were satisfied by their leisure during the previous six months. Because of concerns regarding the questionnaire's length (and, consequently, a lower response rate), each leisure satisfaction scale was measured with two items (using four-point scales: 1 = never; 4 = very often). In the fourth section, participants reported how distressed they felt as a result of four acculturative demands—language difficulties, not feeling at home, loss/nostalgia, and perceived discrimination (Aroian et al., 1998)—during the previous six months. Two other Demands of Immigration sub-scales, occupation and novelty, were not examined; the former because of generalizability concerns (e.g., for students), the latter because a pre-test suggested it was culturally inappropriate. Each stressor was measured with three items (using 11-point scales: 0 = not at all distressed; 10 = very much distressed). In the final section, participants reported their age, gender, income level, education level, marital status, and contact information.

All of the measures were translated from English into simplified Chinese by one individual, and then a second individual—who had not seen the original English-language questionnaire—translated it from simplified Chinese back into English. The original English-language questionnaire and the translated English-language questionnaire were then compared and revisions were made (i.e., back-translation; Brislin, 1970).

The same study participants completed a nearly identical follow-up questionnaire approximately six months later. At both times, once a participant had completed a questionnaire, they received \$10 Canadian.

Study Sample

A quota of 220 participants was estimated so that the statistical analyses would have sufficient power when the study concluded (Soper, 2010). Potential participants were selected using the 100 most common surnames in China (Yan, 2002), and the various alternate spellings that exist (e.g., Zhang, the third most common surname in China, can also be spelled Chang, Cheong, Cheung, Chiang, Cheung, or Teoh depending upon the dialect; Chinese Roots, 2003). A list of 883 Chinese surnames was subsequently developed, and a random sample of 2,000 listed telephone numbers of people living in Calgary, Alberta having one of these names was obtained from a telecommunications company. Equal numbers of males and females were also selected.

Data were collected by the University of Alberta Population Research Lab from its centralized Computer-Assisted Telephone Interviewing (CATI) facilities. Along with English-speaking interviewers, Cantonese- and Putonghuà- (i.e., Mandarin-) speaking interviewers were scheduled for each shift. A pre-test ($N = 9$) was done to determine if there were any questionnaire wording, organization, or language issues.

To obtain 220 study participants, 2,000 telephone numbers were initially identified, with many of these numbers being excluded for various reasons, including: being ineligible (e.g., out of service, business/fax, immigrated more than ten years previously, $n = 790$), screened (e.g., refusal, incomplete, $n = 631$), unscreened (e.g., busy, no answer, answering machine, $n = 340$), or undetermined (e.g., call back, $n = 19$). The overall response rate (i.e., completed interviews divided by completed interviews and screened numbers) was 26%. Reasons given for refusing to participate included a lack of time, a lack of interest, and not wanting to give out personal information over the telephone.

Of the 220 participants who completed the initial questionnaire (i.e., Time 1), 174 (79%) completed a follow-up questionnaire six months later (i.e., Time 2). Of the non-participants, 54% had either moved or could not be re-contacted for other reasons while 46% refused.

Data Analyses

Data analyses consisted of three stages: (a) Descriptive statistics were computed on the participants' socio-demographic characteristics. (b) Means, standard deviations, and standardized Cronbach coefficient alphas were calculated for each of the six leisure satisfaction and four acculturative stress sub-scales at both Time 1 and 2. And (c) language difficulties, not feeling at home, loss/nostalgia, and perceived discrimination (all at Time 2) were each regressed separately, using a series of hierarchical multiple regressions. In all four instances age and gender (at Time 1) were entered first, number of years in Canada (at Time 1) was entered second, the same stressor (at Time 1) was entered third to ensure change had in fact occurred (White & Azri, 2005), and the six leisure satisfaction scales (all at Time 1) were entered last. This sequence follows Cohen, Cohen, West, and Aiken's (2003) recommendations for entering blocks of regressors beginning with more distal causes and gradually adding more proximal causes. It is also consistent with Berry's et al. (2002) "Factors affecting acculturative stress and adaptation" framework (p. 362). Probability levels for changes in the R^2 s after adding each block of variables were also calculated.

Results

Of the 174 participants who completed both questionnaires 53% were females and 92% were either married or lived common-law. Twenty-one percent were 18 to 34 years of age, 76% were 35 to 49 years of age, and the remainder were 50 years of age or older. Although 84% of participants reported having completed a Bachelor's degree or higher, income levels varied widely, with: 15% being under \$25,000 (Canadian), 22% being between \$25,000 and \$49,999, 22% being between \$50,000 and 74,999, 20% being between \$75,000 and \$99,999, and 21% being over \$100,000. Near equal percentages had resided in Canada five or less years versus six to 10 years (53% and 47%, respectively), with most being either Canadian citizens (55%) or permanent residents (44%).

Table 1 reports the means, standard deviations, and standardized Cronbach coefficient alphas for the six leisure satisfaction scales, at both Times 1 and 2. On

average, participants were most satisfied with the relaxation dimension of their leisure, followed by the physiological dimension, with the psychological dimension being the least satisfied.

Table 1

Leisure Satisfaction Items and Scale Means, Standard Deviations, and Standardized Cronbach Coefficient Alphas, by Time

Scale and Items	Time 1			Time 2		
	M	SD	Alpha	M	SD	Alpha
<i>Psychological</i> I use many different skills and abilities in my leisure activities My leisure activities give me a sense of accomplishment	2.53	0.81	.71	2.48	0.72	.73
<i>Educational</i> My leisure activities help me learn about myself My leisure activities provide opportunities to try new things	2.59	0.74	.72	2.56	0.66	.56
<i>Social</i> My leisure activities have helped me develop close relationships with others I have social interactions with others through my leisure activities	2.66	0.68	.69	2.59	0.66	.73
<i>Relaxation</i> My leisure activities contribute to my emotional wellbeing My leisure activities help me relax	3.25	0.63	.72	3.14	0.63	.79
<i>Physiological</i> My leisure activities develop my physical fitness My leisure activities help me to stay physically healthy	3.05	.71	.68	3.00	0.68	.73
<i>Aesthetic</i> The areas or places where I engage in my leisure activities are beautiful The areas or places where I engage in my leisure activities are fresh and clean	2.99	0.65	.51	2.90	0.65	.67

Note. Leisure satisfaction items measured on a 4-point scale (i.e., 1 = never; 4 = very often).

Table 2 reports the means, standard deviations, and standardized Cronbach coefficient alphas for the four acculturative stress scales, at both Times 1 and 2. Of the four types of acculturative stress, loss/nostalgia was the most distressing, followed by perceived discrimination, not feeling at home, and finally language difficulties. Noteworthy, however, is that none of these stressors reached the midpoint on our scale (i.e., 0 = not at all distressed; 10 = very much distressed).

Table 2

Acculturative Stress Items and Scale Means, Standard Deviations, and Standardized Cronbach Coefficient Alphas, by Time

Scale and Items	Time 1			Time 2		
	M	SD	Alpha	M	SD	Alpha
<i>Language Difficulties</i>	3.95	2.31	.78	3.92	2.29	.84
Mainstream Canadians had a hard time understanding my accent						
I had difficulty doing ordinary things because of a language barrier						
Talking in English took a lot of effort for me						
<i>Not Feeling at Home</i>	3.99	2.78	.80	4.11	2.66	.78
Even though I live here, it does not feel like my country						
I did not feel that this was my true home						
<i>Loss/Nostalgia</i>	4.45	2.16	.61	4.22	1.92	.70
I missed the people I left behind in China						
When I thought about my past life, I felt emotional and sentimental						
My spare time activities give me a sense of accomplishment						
<i>Perceived Discrimination</i>	4.03	2.51	.84	4.17	2.44	.88
As a Chinese immigrant, I was treated as a second-class citizen						
Mainstream Canadians did not think I really belonged in Canada						
Mainstream Canadians treated me as an outsider						

Note. Acculturative stress items measured on an 11-point scale (i.e., 0 = not at all distressed; 10 = very much distressed).

Scale coefficient alphas were near or above accepted levels (i.e., .6; Nunnally, 1967; .5, Schmitt, 1996) for both sets of scales, especially once the number of items per construct and total number of constructs being measured are taken into account (Cronbach & Gleser, 1965).

When language difficulties and not feeling at home (at Time 2) were each hierarchically regressed (Tables 3 and 4, respectively), in both instances gender was

never significant while age became non-significant after the remaining variables were added. Entry of number of years living in Canada did significantly improve the R^2 s for both acculturative stressors, with this coefficient staying significant even after adding the remaining blocks. In neither final regression, however, did the addition of the block of six leisure satisfaction scales significantly increase either R^2 above that of the same stressor at Time 1.

Table 3

Hierarchical Regression Analysis Predicting Language Difficulties, at Time 2

Predictor variable(s)	β^1	β^2	β^3	β^4	ΔR^2
<i>Step 1</i>					
Age	0.58*	0.88**	0.37	0.31	.03
Gender	0.48	0.54	0.31	0.30	
<i>Step 2</i>					
Years in Canada		-0.31****	-0.17***	-0.16**	.11****
<i>Step 3</i>					
Language Difficulties			0.68****	0.67****	.44****
<i>Step 4</i>					
LS - Psychological				-0.05	.01
LS - Educational				0.41	
LS - Social				-0.64**	
LS - Relaxation				-0.12	
LS - Physiological				0.18	
LS - Aesthetic				0.13	
Total R^2					.59****

Note. All predictor variables are at Time 1. Gender coded men = 1, women = 2. LS = leisure satisfaction.
 * $p < .05$. ** $p < .01$. *** $p < .001$. **** $p < .0001$.

When loss/nostalgia (at Time 2) was hierarchically regressed (Table 5), neither age nor gender were ever significant. Entry of number of years living in Canada did significantly improve the R^2 for this acculturative stressor, with this coefficient staying significant even after addition of the remaining block. In this case, however, adding the six leisure satisfaction scales did significantly increase the R^2 above that of this stressor at Time 1, with social leisure satisfaction having a significant negative coefficient (-0.45). The change in R^2 (.08) was indicative of a small to medium effect size (Cohen, 1992).

When perceived discrimination (at Time 2) was hierarchically regressed (Table 6), neither age nor gender were ever significant. Entry of number of years living in Canada did significantly improve the R^2 for this acculturative stressor, with this coefficient staying significant even after addition of the remaining block. Adding the six leisure satisfaction scales did significantly increase the R^2 above that of this stressor at Time 1, with psychological, social, and aesthetic leisure satisfaction

Table 4

Hierarchical Regression Analysis Predicting Not Feeling at Home, at Time 2

Predictor variable(s)	β^1	β^2	β^3	β^4	ΔR^2
<i>Step 1</i>					.01
Age	0.45	0.77*	0.56*	0.21	
Gender	-0.20	-0.17	0.14	0.05	
<i>Step 2</i>					.10****
Years in Canada		-0.34****	-0.23***	-0.36****	
<i>Step 3</i>					.30****
Not Feeling at Home			0.52****	0.49****	
<i>Step 4</i>					.01
LS - Psychological				-0.18	
LS - Educational				-0.16	
LS - Social				-1.08**	
LS - Relaxation				0.11	
LS - Physiological				0.78*	
LS - Aesthetic				-0.40	
Total R^2					.42****

Note. All predictor variables are at Time 1. Gender coded men = 1, women = 2. LS = leisure satisfaction. * $p < .05$. ** $p < .01$. *** $p < .001$. **** $p < .0001$.

having significant negative coefficients (-0.83, -0.91, and -1.21, respectively) while physiological leisure satisfaction had a significant positive coefficient (1.04). The change in R^2 (.18) is indicative of a medium to large effect size (Cohen, 1992).

Discussion

The purpose of this study was to examine how Chinese-Canadian immigrants' leisure satisfaction affected their acculturative stress. Given the very limited research on this topic we felt uncomfortable developing specific hypotheses, so instead proposed that some types of leisure satisfaction would positively, and some types of leisure satisfaction would negatively, influence some kinds of acculturative stress, above and beyond the effects of certain other variables.

Before we discuss our study findings, it is worthwhile to briefly consider the effects—or lack thereof—of these other explanatory variables. First, neither age nor gender significantly affected any of the acculturative stressors in the final regressions. As noted in the literature review, while there is support for both affecting acculturative stress (Berry et al., 2002), counter-findings with Chinese immigrants also exist (e.g., Mak et al., 2005; Ying, 2005). Thus, following the latter researchers' examples, it may be best to state that while the evidence is still somewhat inconclusive it appears that age and gender have little (if any) influence on acculturative stress after more proximal factors are taken into account. Second, in contrast with age and gender, number of years in Canada was significant in all of the regressions and across all four stressors. It appears, therefore, that the longer an immigrant

Table 5

Hierarchical Regression Analysis Predicting Loss/Nostalgia, at Time 2

Predictor variable(s)	β^1	β^2	β^3	β^4	ΔR^2
<i>Step 1</i>					.01
Age	0.24	0.41	0.18	0.19	
Gender	0.36	0.39	0.37	0.29	
<i>Step 2</i>					.05****
Years in Canada		-0.17**	-0.13**	-0.13*	
<i>Step 3</i>					.35****
Loss/Nostalgia			0.53****	0.53****	
<i>Step 4</i>					.08***
LS - Psychological				0.03	
LS - Educational				0.13	
LS - Social				-0.45*	
LS - Relaxation				-0.01	
LS - Physiological				0.09	
LS - Aesthetic				-0.32	
Total R^2					.48****

Note. All predictor variables are at Time 1. Gender coded men = 1, women = 2. LS = leisure satisfaction. * $p < .05$. ** $p < .01$. *** $p < .001$. **** $p < .0001$.

Table 6

Hierarchical Regression Analysis Predicting Perceived Discrimination, at Time 2

Predictor variable(s)	β^1	β^2	β^3	β^4	ΔR^2
<i>Step 1</i>					.01
Age	0.44	0.66	0.37	0.12	
Gender	0.19	0.26	0.09	0.08	
<i>Step 2</i>					.04***
Years in Canada		-0.19*	-0.21**	-0.22**	
<i>Step 3</i>					.26****
Perceived Discrimination			0.48****	0.49****	
<i>Step 4</i>					.18****
LS - Psychological				-0.83**	
LS - Educational				0.35	
LS - Social				-0.91**	
LS - Relaxation				0.19	
LS - Physiological				1.04**	
LS - Aesthetic				-1.21****	
Total R^2					.49****

Note. All predictor variables are at Time 1. Gender coded men = 1, women = 2. LS = leisure satisfaction. * $p < .05$. ** $p < .01$. *** $p < .001$. **** $p < .0001$.

resides in a country the lower his or her acculturative stress but that this factor does continue to be relevant even after more proximal variables are incorporated. Third, as demonstrated across the full set of regressions, acculturative stressors persist over time, and these effects are significant and substantial.

As for the effects of leisure satisfaction on acculturative stress, study findings are mixed. In the case of language difficulties and not feeling at home, for instance, the block of six leisure satisfaction dimensions did not have a significant effect on either of these stressors. In the former case, it may be that even though language difficulties can reduce leisure participation (Stodolska & Yi-Kook, 2005), and decreased leisure participation likely leads to decreased leisure satisfaction (Mannell & Kleiber, 1997; Ragheb & Tate, 1993), leisure itself may be perceived by Chinese immigrants as being separate from, and non-compensatory for, other domains (e.g., education, employment) where English-language skills are essential. Moreover, because their leisure likely occurs largely with other Cantonese- and Pütōnghuà- (i.e., Mandarin-) speaking Chinese immigrants (cf. Yu & Berryman, 1996), satisfaction with these activities is unlikely to lessen the stress resulting from having little or limited English-language skills. In the latter case, while leisure may be an avenue through which immigrants eventually develop a sense of belonging, Statistics Canada (2003) found that overcoming feeling uncomfortable or out of place can take many, many years. More specifically, while 29% of visible minority group members who had been in Canada less than 10 years reported this feeling, 23% of visible minority group members who had been in Canada more than 10 years did so—a relatively small decrease over time. In summary, this finding suggests that feeling at home in a new country, and the stress that goes along with not doing so, may not only be long-lasting but also (largely) unaffected by leisure.

The proviso in the last sentence is present because, while the six leisure satisfaction dimensions together did not affect not feeling at home, there is some indication that satisfaction with the social aspect of one's leisure did have a minor mitigating effect on this stressor. On the other hand, social leisure satisfaction clearly and noticeably reduced the stress associated with feelings of loss/nostalgia. Although how exactly this process occurred with our Chinese-Canadian participants is indeterminable, a study (McConatha, Stoller, & Oboudiat, 2001) of older Iranian women who immigrated to the United States provides some insight. According to McConatha et al., their participants employed one of three adaptive strategies: "insular," "withdrawn," and "assimilative." Those who used an insular strategy, for example, not only actively participated in social events such as attending Iranian concerts, visiting Iranian restaurants, and seeking out Iranian book and grocery stores, but they also enjoyed reminiscing about the past and found it to be a source of great solace. In contrast, a second group of Iranian women used a withdrawn strategy. These immigrants engaged in very few social events outside the immediate family—and when they did they found the experience to be stressful—whereas the recollection of past memories "elicited feelings of longing and sadness" (p. 374). The third group of Iranian women used an assimilative strategy in which they either "busied" themselves with, or became avidly engaged in, mainstream American activities. Thus, it appears that while socializing with

others helps lessen the stress resulting from missed loved ones and places, reminiscing with others can “lead to the integration of the past with the present; it can also result in more positive self-assessment of life experiences” (p. 379).

The importance of the social dimension of leisure satisfaction is also evident in terms of the stress that results from perceived discrimination. A recent meta-analysis of non-leisure studies concluded, for example, that:

social support was more likely to buffer the relationship between perceived discrimination and negative mental health, supporting the notion that individuals with strong support networks may be able to offset the pernicious effects of discrimination through close connections with others. (Pascoe & Richman, 2009, p. 545)

Similarly, in leisure studies, Livengood and Stodolska (2004) found that American Muslims turned to members of their inner circle (e.g., family, friends, community) to cope with and overcome the effect post-9/11 discrimination had on their leisure. In conclusion, this study’s results are congruent with these findings and thus it further supports Coleman and Iso-Ahola’s (1993) contention that social support during leisure buffers stress.

Coleman and Iso-Ahola (1993) also contended that the facilitation of self-determination (Deci & Ryan, 1985) during leisure would buffer stress, and our findings provide some support for this. Fulfilment through the use of one’s skills and abilities as well as feelings of accomplishment (i.e., psychological leisure satisfaction) assuaged the stress resulting from perceived discrimination, likely because the need for competence was satisfied. (But see also Walker, 2010, and Walker & Wang, 2009, regarding the nominal and even negative role competence plays in Chinese people’s leisure.) Also possible, though speculative, is that the resulting increase in self-esteem (which some researchers consider an aspect of competence; Sheldon, Elliot, Kim, & Kassser, 2001) did so, as Harrell (2000) held that this psychological factor “may buffer the impact of racism-related stress on well-being” (p. 51). A study (Wei, Ku, Russell, Mallinckrodt, & Liao, 2008) of Asian international students’ self-esteem, perceived discrimination, coping strategies, and depressive symptoms did find that self-esteem decreased depression, although this effect varied by strategy when interactions were examined.

Not surprisingly, fresh, clean, and beautiful areas (i.e., aesthetic leisure satisfaction) also cushioned the stress associated with perceived discrimination, likely because such settings were relaxing (Walker, Deng, & Dieser, 2001) and, possibly, less threatening.

What was surprising—or, more accurately, troubling—was the discovery that as physiological leisure satisfaction increased so too did the stress resulting from perceived discrimination. Although research (Brown, 1991) has long proposed that staying fit mitigates life stress, and a recent review of the literature (Gerber & Puhse, 2009) has largely supported this proposition, the latter also noted that cross-cultural differences might exist and, therefore, further investigation of this topic was necessary. It is also possible, however, that while physical activity itself decreases the stress that ensues from perceived discrimination, the physical and

social settings in which these activities occur could exacerbate this stressor. For example, Lee (1972) interviewed a Chinese American who stated that he did not go to a natural area because it was a "White man's park," and racism has been found to be an important constraint to park visitation for both African and Hispanic Americans (e.g., Blahna & Black, 1993; Chavez, 1991).

But non-natural settings may be equally if not more problematic. In terms of gyms and fitness centers, for instance, Stolp's (2010) study of stereotypes established that non-exercisers were not inclined to work out with certain other types of users (i.e., "athletes," "jocks," and "weightlifters") because they felt "intimidated" by these individuals. Although this intimidation was not ethnically or racially based, Fusco (2005) found that "discourses of whiteness" were clearly evident in the locker rooms at a Canadian university athletic and recreation center.

Tirone (2000) and colleague (Paraschak & Tirone, 2008) also found that South Asians often reported being discriminated against when playing sports in Canada. A study (Doherty & Taylor, 2007) of immigrant English-as-a-second-language high school students in Canada concurred, finding that sport participation was marred by social exclusion resulting from "language difficulties, unfamiliarity with mainstream sports, and prejudice on the part of their peers" (p. 27). Noteworthy, however, is that these same students also reported that sport participation contributed to their physical health and well-being.

Outside Canada, a Dutch study (Krouwel, Boonstra, Duyvendak, & Veldboer, 2006) of recreational soccer found that inter-ethnic interaction was often neither trouble-free nor a conduit to greater understanding. Rather, these researchers concluded:

In some ways, recreational soccer even seems to magnify inter-ethnic differences and tensions: unequal grasps of language, verbal abuse and discrimination easily lead to violent behaviour in a context of direct (sporting) confrontation. ...The contact-hypothesis, seemingly so adequate for sport, is in fact naïve with regard to leisure time activities. ...For sport encounters between different groups, the hypothesis of competition, suggesting that group boundaries are reinforced, seems more appropriate. (p. 176)

Discrimination, and the stress that ensues, can also occur when a visible minority group sportsperson becomes even more "visible," either because he or she is a "pioneer" in the sport, or because he or she is exceptionally talented, or both. For example, Jeremy Lin, the son of Taiwanese immigrants to the United States, was recently profiled in a *Time* magazine article entitled: Harvard's hoops star is Asian. Why's that a problem? The article's author (Gregory, 2009, December 31) wrote:

Some people still can't look past his ethnicity. Everywhere he plays, Lin is the target of cruel taunts. "It's everything you can imagine," he says. "Racial slurs, racial jokes, all having to do with being Asian." Even at the Ivy League gyms? "I've heard it at most of the Ivies if not all of them," he says. Lin is reluctant to mention the specific nature of such insults, but ac-

According to Harvard teammate Oliver McNally, another Ivy League player called him a C word than rhymes with ink during a game last season. ... In the face of such foolishness, Lin doesn't seem to lose it on the court. "Honestly, now, I don't react to it," he says. "I expect it, I'm used to it, it is what it is." Postgame, Lin will release some frustration. "He gets pissed about it afterwards," says McNally. (para. 7 & 8)

In summary, as a Chinese immigrant's physiological leisure satisfaction increases so too, it appears, does his or her acculturative stress, likely because of the discrimination perceived in the parks where he or she runs, in the gyms and fitness centers where he or she works out, and on the courts and fields where he or she plays sports. This finding has important implications for two theories, the first focused on where discrimination occurs and the second on how leisure affects coping.

In terms of the first framework, Stodolska (2005) put forth 11 propositions regarding discrimination in work and leisure settings and how these might vary across certain conditions. Her second proposition holds that the workplace is "often associated with competition-related phenomena that are largely absent in leisure settings" (p. 63), but based on our belief that sport participation is antecedent to physiological leisure satisfaction, which in turn is antecedent to stress resultant from perceived discrimination, playing sports may be an important exception. This may be particularly true when a sportsperson's ethnic or racial identity is highly salient (e.g., during inter-ethnic competitions; Krouwel et al., 2006; when he or she is constantly reminded of it by non-teammates, especially if this is done in a derogatory way; Gregory, 2009, December 31); or when his or her self-identity is strongly associated with the sport (e.g., as in serious leisure; Stebbins, 1992); or both. Additionally, although Stodolska notes that workplace competition for scarce rewards could result in hostility if the opposing party was a member of a visible minority group, it is equally possible that, if a non-visible minority group member is "serious" about his or her physical activity, competition for scarce resources (e.g., time on a treadmill, access to a specific type of weightlifting equipment) could also result in hostility if the opposing party was a member of a visible minority group.

In terms of the second framework, according to Iwasaki, Mannell, Smale, and Butcher (2005):

theorists and researchers have tended to over-emphasize the importance of physically active leisure for providing stress-coping and health benefits (e.g., Iso-Ahola, 1997). ...This exclusive reliance on physically active leisure has the danger of ignoring the potential of non-physical forms of leisure (such as relaxing leisure, social leisure and cultural leisure). (p. 82)

Based on this study, however, it is not that the importance of physically active leisure is over-emphasized but rather, through the intervening variable of physiological leisure satisfaction, this type of activity actually exacerbates rather than mitigates the stress resulting from perceived discrimination. In contrast, so-

cial leisure, through the intervening variable of social leisure satisfaction, lessened both this stressor and loss/nostalgia, and cultural leisure activities might also do so when they involve the larger ethnic and/or mainstream communities (e.g., McConatha et al., 2001; Stack & Iwasaki, 2009). Importantly, as the above makes clear, our conceptualization differs from Coleman and Iso-Ahola (1993) in one key way: that is, because leisure participation is antecedent to leisure satisfaction (e.g., Mannell & Kleiber, 1997; Ragheb & Tate, 1993; Walker, Halpenny, Spiers, & Deng, 2010), it is leisure satisfaction rather than leisure participation that has the greatest effect on stress.

Conclusion

Future research is necessary based on the discussion outlined above, as is research which addresses some of the limitations inherent in this study. For example, our sample was highly educated and thus our results may not apply to Chinese immigrants who have lower education levels. We would also recommend replicating our study with other ethnic groups (e.g., Koreans, Mexicans) and in other countries (e.g., Australia, the United States) to determine how generalizable our results are. Additionally, examination of other potential causal and intervening variables (e.g., health, social support, societal attitudes; Berry et al., 2002) as well as the utilization of longitudinal studies over a longer time period so that leisure researchers can better understand how the acculturation process “works” over five, ten, or even twenty years, is recommended. Finally, field-based intervention studies are required so that leisure practitioners can ensure the recreation programs, services, and facilities they provide do in fact mitigate the acculturative stressors immigrants face.

We began this article by describing the sociodemographic change occurring in North America. In recent articles (e.g., Spiers & Walker, 2009) we have often referred to this as a “sea” change, but the true scale of this transformation only became clear to us while we were writing the first draft of this paper. In 2010 Statistics Canada reported that, while 16% of Canada’s population is currently composed of visible minority group members, this percentage will double in just over two decades. Simply put, in the ten years between publication of our first paper on this topic (Walker et al., 2001) and the current article, the need for more research on ethnicity, immigration, acculturation, acculturative stress, and leisure has only grown.

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