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Lin Xiong

*RMIT University*, [lin.xiong@rmit.edu.au](mailto:lin.xiong@rmit.edu.au)

Kosmas X. Smyrnios

*RMIT University*, [kosmas.smyrnios@rmit.edu.au](mailto:kosmas.smyrnios@rmit.edu.au)

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### **ScholarWorks Citation**

Xiong, L., & Smyrnios, K. X. (2013). Social, cultural, and environmental drivers of international students' fear of crime: A cognitive behavioral perspective. In Y. Kashima, E. S. Kashima, & R. Beatson (Eds.), *Steering the cultural dynamics: Selected papers from the 2010 Congress of the International Association for Cross-Cultural Psychology*. <https://doi.org/10.4087/DQXL4182>

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# **Social, Cultural, and Environmental Drivers of International Students' Fear of Crime: A Cognitive Behavioral Perspective**

**Lin Xiong** (lin.xiong@rmit.edu.au)  
RMIT University, Australia

**Kosmas X. Smyrniotis** (kosmas.smyrniotis@rmit.edu.au)  
RMIT University, Australia

## **Abstract**

This investigation develops and tests an hypothesised Cognitive Behavioral Fear of Crime Model. Mass media reports of crimes against international students have raised public awareness, questions about racially-oriented victimization, and the need for appropriate preventative strategies. Drawing upon Culture Shock Theory, this study proposes that international students are a vulnerable group, showing elevated levels of fear of crime, perceived risk, and avoidance behaviors. Five-hundred and ninety-one international students across four universities participated in either an online or hardcopy questionnaire survey, the measures of which were adapted from related studies. Structural Equation Modelling demonstrates a nonrecursive relationship between perceived risk, fear of crime, and avoidance behavior, supporting cognitive behavioral theory as an appropriate theoretical conceptualization for investigating fear of crime. Results show that young and female international students express significantly higher levels of fear of crime than their older and male counterparts. International students, who report high levels of social disorder and feel as an outsider or that it is difficult to make friends, express elevated perceived risk and fear of crime. Direct victimization, perceived cultural distance, and host attitudes influence fear of crime and avoidance behavior indirectly via perceived risk. Intriguingly, international students' perceived prejudice by local residents is a nonsignificant predictor of perceived risk and fear of crime. Findings suggest the importance of social integration, social disorder, cultural differences, and attitudes of locals when it comes to international students' perceived risk and fear of crime.

## **Introduction**

An in-depth review of the pertinent literature suggests a dearth of studies investigating international students' fear of crime. Literature on international students focuses mainly on the positive or negative consequences of culture shock, such as academic performance, socio-cultural, and psychological adaptations (Khawaja & Dempsey, 2008). Although fear of crime research has been well developed in the criminology area, adult residents are the main participants, with limited studies addressing students' fear of crime (May & Dunaway, 2000; McConnell, 1997).

Recruitment of international students has brought substantial financial benefits to host countries (Andrade, 2006). Education services provided in Australia to overseas students was estimated at \$14.2 billion in export earnings in the financial year 2007–08 (ABS, 2008), making it the third largest export dollar earner after coal and iron ore (AEI, 2009). Full-fee paying overseas students play an important role in revenue sources for Australian universities, representing 15% of all revenue within the higher education sector (DEST, 2005). Also, international education exports make significant contributions to employment (Braley, Noonan, Nugent, & Scales, 2008), optimize the range and quality of educational programmes, and provide opportunity to expand locals' knowledge of different cultures (ABS, 2007).

In recent times mass media and other publications have reported an increase in the number of crimes against international students, culminating in murder (Robby, 2005), racial attack (Millar & Doherty, 2009), theft (Allen, 1999), and racial discrimination (Poyrazli & Lopez, 2007). This racially-oriented violence has raised public awareness and the need for appropriate preventative strategies. For example, sequential racial attacks on Indian students in Melbourne (Millar & Doherty, 2009) have led to heightened levels of fear of victimization among on-shore international students, resulting in a number of negative consequences, such as on-shore Indian students' terminating their study prematurely; a dramatic drop (50%) in student visa applications in 2009 and 2010; and threats to the future of Australia's international education sector and reputation (Mercer, 2010; Rao, 2010).

Do international students encounter high levels of victimization? What are key factors contributing to international students' fear of crime? Driven by these questions, this study aims to investigate international students' fear of crime from cultural, social, environmental, and personal perspectives. Drawing upon the culture shock thesis (Oberg, 1954), this investigation holds that being in an unfamiliar culture, international students are likely to express heightened levels of fear of crime and perceived risk. Cognitive-behavioral theory underpins the current research on the ground that fear of crime has been conceptually viewed as a multidimensional psychological phenomenon, comprising cognitive (i.e., perceived risk), emotional (i.e., fear of crime), and behavioral (i.e., avoidance or protective) facets (Gabriel & Greve, 2003).

For these reasons, the current investigation views various facets of fear of crime from a better cognitive, emotional, and behavioral perspective, and integrates pertinent elements of two important research streams involving international students and fear of crime, the topics of which have been largely investigated independently of one another. This confluence of multi-discipline (i.e., psychology, criminology, sociology, and education) and multi-perspectives (i.e., social, environmental, cultural, psychological, and personal) provides an in-depth understanding of the nature, causes, and consequences of international students' fear of crime.

### **Culture Shock Thesis**

Culture shock was first introduced by anthropologist Oberg (1954) as an occupational disease of people who have been suddenly transplanted abroad, precipitated by anxiety resulting from losing all familiar signs and symbols of social intercourse. International students, tourists, international businessmen and businesswomen, refugees, and immigrants are prone to experience culture shock (Ward, Bochner, & Furnham, 2001).

There is a wide range of symptoms of culture shock: sense of loss, confusion, isolation, fearfulness, distrust, depression, helplessness, vulnerability, self-doubt, anxiety, and suspiciousness. Those symptoms can result in a number of behaviors, including excessive hand washing; feelings of helplessness and a desire for dependence on long-term residents of one's own nationality; fits of anger over delays and other minor frustrations; delay and outright refusal to learn the language of the host country; excessive fear of being cheated, robbed, or injured; and longing to be back home (Oberg, 1954).

Both positive and negative outcomes relating to international students' culture shock have been well developed and redefined as cross-cultural adjustment, culture learning, or cultural adjustment stress (Chapdelaine & Alexitch, 2004). Students who perceive high levels of cultural differences and have limited social interaction with host students show intensive levels of culture shock and poor adjustment (Poyrazli & Lopez, 2007). Unfavourable experiences and negative host attitudes also affect international students' psychological well-being and cultural adjustment (Spencer-Rodgers, 2001).

Forbes-Mewett and Nyland (2008) reported that being in an unfamiliar culture affects students' levels of safety and security. Allen (1999) noted that educational tourists are more likely to be victimized when compared with those who visit for vacation and business purposes. On the grounds of the culture shock thesis, it is reasonable to hypothesize that international students are prone to express high levels of fear of crime and perceived risk owing to living in a new culture with different values and rules, encouraging them to avoid certain places and behaviours at particular times, thus reducing their likelihood of being victimized. The following section discusses prior research on fear of crime.

### **Fear of Crime**

Fear of crime can be defined as "an emotional response of dread or anxiety to crime or symbols that a person associates with crime" (Ferraro, 1995). Fear of crime can lead to many negative consequences, such as increased levels of anxiety, depression, or other psychological sequelae, heightened interpersonal distrust, deteriorative social cohesion and control, behavioral restriction, and withdrawal from the community (Schafer, Huebner, & Bynum, 2006; Wyant, 2008).

It has been widely accepted that fear of crime is a product of individual-level information processing, highly related to personal vulnerability to crime, and perceptions of ecological setting conditions and dynamics (Wyant, 2008). Physical and social vulnerability observed through personal characteristics are found to be significantly related to fear of crime (Ferraro, 1995). In general, the elderly (Evans & Fletcher, 2000), female

(Ferraro, 1995), prior victims (Wyant, 2008), minorities (Perkins & Taylor, 1996), and people with lower education (LaGrange, Ferraro, & Supancic, 1992) and poor health (Lee & Ulmer, 2000) express heightened levels of fear of crime and perceived risk.

Also, ecological factors involving perceptions of disorder and social integration influence fear of crime. Social integration serves to diminish residents' perceptions of danger in the neighbourhood (Rountree & Land, 1996), as social integration is the initial step in the process of people getting to know each other (Gibson, Zhao, Lovrich, & Gaffney, 2002). Perceptions of high levels of physical and social disorder, such as proliferation of unsupervised teenagers, prostitutes, and drug users are more likely to lead to high levels of fear of crime, as these signals communicate that no one cares (Bennett & Flavin, 1994). Anxiety, helplessness, withdrawal, and propagation of disorderly conditions generate increasing levels of fear of crime (Schafer, et al., 2006). Disorder can also be viewed as powerful as crime itself in generating and elevating feelings of fear (Maxfield, 1984).

A growing body of evidence (Carmen, Polk, Segal, & Bing, 2000) shows that students are fearful of being a victim of crimes on campus, especially at night, and in open and outside campus areas. Female students express higher levels of fear than their male counterparts. The following section provides a review of cognitive-behavioral theory underpinning this research.

### **Cognitive-Behavioral Theory**

There is no single definition of cognitive-behavioral theory (Kalodner, 2007). It is best conceptualized as a set of related theories that emphasize that "cognitive activity" and "behavior" are fundamentally different (Hupp, Reitman, & Jewell, 2008), and that cognition plays an important role in behavior change (Kalodner, 2007). Rational-emotive therapy (RET) (Ellis, 1962), cognitive therapy (CT) (Beck, 1976), cognitive-behavior modification (Meichenbaum, 1977), and problem-solving training (D'Zurilla & Goldfried, 1971) are the leading models.

Beck's CT, also labelled as cognitive behavior therapy (CBT) was initially developed for understanding and treating depression and anxiety disorders. The central tenets of CBT are: cognitions have a controlling influence on emotions and behaviors; cognitive activity can be monitored and altered; and how we act or behave can strongly affect thoughts and emotions (Kalodner, 2007). Cognitive processing plays a central role because individuals continually appraise the significance of events (e.g., stressful events, memories) around and within them (Wright, Basco, & Thase, 2006).

Based on CBT, it is taken that if international students experience difficult or traumatic life events (i.e., being victimized) during their residence, then they would be more likely to develop negative core beliefs and assumptions (i.e., unsafe or disrupted environment) than nonvictims. These negative beliefs can develop into everyday negative automatic thoughts (i.e., risk of victimization) and feelings (i.e., fear of crime), and in turn change their behaviors (i.e., constraining their day-to-day activities). In turn, behavioral changes would increase their cognitive assessment of potential risk and crime in the future, and thus accentuate emotional reactions to crime (Liska, Sanchirico, & Reed, 1988). The following section discusses the present methodology.

## **Method**

### **Participants and procedures**

Via both an online survey and hand-out of hardcopy questionnaires, 591 on-campus international students across four Melbourne universities participated in this study from March to May, 2009. The majority of participants were female (60.8%), aged 18-25 (81%), and studying at an undergraduate level (69.7%). 90% of students rated their health as *Good to Excellent*. Almost 53% of international students shared their accommodation with other individuals, with 16.1% living in single-person households. 30.6% of international students had been in Melbourne for 1-2 years, followed by those who had lived here for 3-4 years (26.0%), or less than 6 months (25.3%). 8.6% of international students rated their English speaking ability as *Not at all Fluent*. 84% of international students disagree that *the culture differences between Australia and their home country are very small*. A significant number of international students report relatively high levels of *having been cheated out of money* (20.3%); and *having been attacked, threatened, or verbally abused owing to their ethnic origin* (18.4%).

## Measures

Measures of the present Fear of Crime questionnaire (FCQ) were adapted from related literature (Evans & Fletcher, 2000; Gibson, et al., 2002). Along with the description of measures, results of Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) are reported. Harman's one-factor test (Podsakoff, MacKenzie, Jeong-Yeon, & Podsakoff, 2003) and testing for social desirability (Marlowe & Crowne, 1961) suggest that common method effects are unlikely contaminants of the present results.

*Fear of Crime.* According to Ferraro (1995), fear of crime constitutes eight specific crime items: *being cheated out of money; having your room broken into while you are away/there; being raped, sexually assaulted or harassed; being physically attacked (e.g., assaulted or kidnapped); being robbed or mugged; having your car stolen or things stolen from your car; and being attacked/harassed, threatened, or verbally abused owing to your ethnic origin.* Five-point Likert scales, ranging from 1=*Not at all Afraid* to 5=*Extremely Afraid*, were used. An EFA of these eight offenses provides a one factor solution explaining 65.59% of variance. A CFA resulted in a reasonable fitting measure, with factor loadings ranging from .61 to .88. CR (.81), Cronbach's alpha ( $\alpha$  = .87), and VE (.51) indicating sound reliability levels.

*Perceived Risk.* The same eight Fear of Crime items were utilized to tap participants' cognitive assessment of the likelihood of being a victim over the ensuing 12 months. Five-point Likert-type scales were used, ranging from 1=*Extremely Unlikely* to 5=*Extremely Likely*. Sections of fear of crime and perceived risk were not contiguous in FCQ so that participants were unlikely to recall their ratings for fear of a crime when estimating perceived risk for the same crime (Ferraro, 1995). Similarly, an EFA resulted in a one factor solution explaining 62.54% of variance. A CFA of this one factor solution culminated in a sound fitting measure, with factor loadings ranging from .62 to .88. Although VE (.44) was relatively low, CR (.79) and Cronbach's alpha ( $\alpha$  = .84) were acceptable.

*Avoidance Adaptation.* Respondents were asked to rate on a 5-point Likert-type scale, ranging from 1=*Never* to 5=*Often*, 7 items investigating participants' avoidance reactions to crime: *how often does fear of crime prevent you from walking in the neighbourhood after dark; walking in the city after dark; leaving home when it is dark; opening the door to strangers in the evening or at night; attending outside activities or events (e.g., sports, religious events or movie); visiting night spots/clubs/bars; and visiting certain areas.* An EFA resulted in a one factor solution explaining 55.48% of variance. A CFA indicated a good-fit, with factor loadings ranging from .51 to .89. CR (.80), VE (.51), and Cronbach's alpha ( $\alpha$  = .85) indicated sound levels of reliability.

*Victimization.* As suggested by Evans and Fletcher (2000), measures of both direct and indirect victimization were used to evaluate their impact on fear of crime. The same eight Fear of Crime types were utilized to determine whether respondents had been exposed to any offenses over the previous 12 months (or since their arrival in Melbourne). Responses were coded 1 (*Yes*) and 0 (*No*). Two composite scales were developed to decrease nonnormality of data.

*Environmental Disorder.* This construct was assessed through perceptions of disorder. Eight items were selected from Katz et al. (2003) and Evans and Fletcher (2000): *litter and trash lying around; poor street lighting; Groups of teenagers fighting, vandalizing, or harassing; people drunk in public; prostitution; harassment, threatening behavior, or verbal abuse in the street; drug dealing and drug offers; and racial harassment or attack.* Five-point Likert-type scales ranging from 1=*Not at all Serious* to 5=*Very Serious* were utilized. An EFA suggested a one factor solution. A CFA of this one factor solution resulted in a reasonable fitting measure, with factor loadings ranging from .66 to .84. Cronbach's alpha ( $\alpha$  = .86), CR (.79), and VE score (.50) indicate sound levels of reliability.

*Social Integration.* Two items (i.e., *It is difficult to meet and make new friends in Melbourne; I always feel that I am an outsider*) were used to assess international students' perceptions of social integration. Participants were asked to rate statements on a five-point Likert scale, ranging from 1=*Strongly Disagree* to 5=*Strong Agree*.

*Cultural factors.* Cultural influences were assessed from three perspectives: cultural distance between Australia and their home country, feelings of prejudice, and perceived host attitudes. In terms of host attitudes, participants were asked to rate two statements on a five-point scale, ranging from 1=*Strongly Disagree* to 5=*Strong*



*Agree*, in response to: *Overall, people in Melbourne are accepting of people from other culture/religions.*

**Demographics.** Nine socio-demographic factors were employed, involving age, gender, education, length of residency, living arrangements, English speaking ability, romantic relationship status, home arrangement, and health.

### Data Analyses

EFA, CFA, and Structural Equation Modelling (SEM) were used to analyse data. The present sample was split randomly in half for EFA and CFA, in order to confirm both the reliability and “goodness-of-fit” of theory-based measures (Fabrigar, Wegener, MacCallum, & Strahan, 1999). All constructs demonstrated sound fit, providing further support for testing the proposed model.

According to Hu and Bentler (1998), multiple criteria are used to assess the goodness-of-fit of a hypothesized model, including Normed Chi-square (i.e., the ratio of  $\chi^2$  to df -  $\chi^2/df$ ), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root-Mean-Square Residual (SRMR). The ML-based RMSEA is less sensitive to distribution and sample size than Chi-square (Hu & Bentler, 1998); a value of about .05 or less reflects a model of close fit, whereas values between .05 and .08 indicate reasonable fit (Browne & Cudeck, 1993). The cut-off points for CFI and TLI are .90, and .05 for SRMR.

### Results

This section focuses on findings of the structural equation model. The Type I error rate was set at  $\alpha=.05$ . Figure 1 shows the final path model, containing seven latent constructs and five observed indicators. Nonsignificant paths and factors (i.e., indirect victimization, English speaking ability, romantic relationship status, home arrangement, and perceived prejudice) were excluded. Goodness-of-fit indices exceeded acceptable levels ( $\chi^2(305)=704.959$ ,  $\chi^2/df=2.311$ , TLI=.911, CFI=.928, RMSEA=.049, and SRMR=.046), indicating a reliable and robust fit between the present conceptual model and sample covariances.

Findings show nonrecursive and positive relationships between perceived risk, fear of crime, and avoidance adaptation, with a stability index=.033. In terms of explanatory power, the model accounts for 23.6% of variance in perceived risk, 22.7% of variance in fear of crime, and 12.1% of variance in avoidance behavior, all of which are sufficiently high to make examination of path coefficients practically meaningful.

Results indicate that disorder (.30,  $t=5.91$ ) and gender (.13,  $t=3.08$ ) are related positively and significantly to fear of crime. However, social integration (-.17,  $t=-2.71$ ), Living Arrangement (-.10,  $t=-2.26$ ), age (-.14,  $t=-3.13$ ), and health (-.11  $t=-2.61$ ) have a negative impact on fear of crime, respectively. With regard to cognitive assessment of risk, disorder (.20,  $t=4.19$ ), culture distance (.16,  $t=3.55$ ), and direct victimization (.21,  $t=4.415$ ), each influence perceived risk positively and significantly. Social integration (-.17,  $t=-2.65$ ), gender (-.09,  $t=-2.16$ ), and host attitudes (-.14,  $t=-2.59$ ) are related to this construct negatively and significantly. Direct victimization influences fear of crime indirectly via perceived risk. All independent factors have an indirect impact on avoidance behavior via perceived risk and fear of crime.

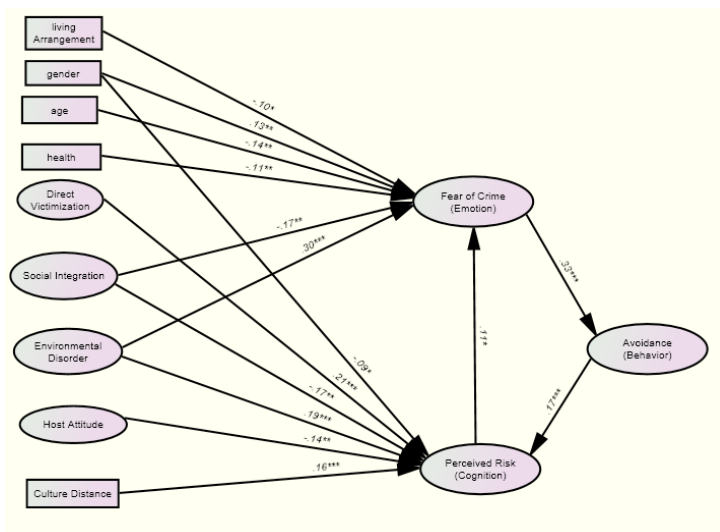


Figure 1: Cognitive-behavioral fear of crime model.

Note. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Nonsignificant relationships are not indicated.

$R^2$  for Fear of Crime = 22.7%.  $R^2$  for Avoidance = 12.1%.

## Discussion

This study investigated international students' fear of crime, perceived risk, and avoidance behavior from cultural, social, environmental, and personal perspectives. The multidimensional nature of fear of crime was explored from a cognitive-behavioral theory perspective. Nonrecursive relationships between perceived risk, fear of crime, and avoidance behaviour suggest that cognitive-behavioral theory is appropriate in understanding fear of crime. International students who report high levels of perceived risk show heightened levels of fear of crime, and avoid walking in the neighbourhood or city after dark, leaving their accommodation after dark, or opening the door to strangers in the evening.

Consistent with the culture shock thesis, international students who perceive a large culture gap between Australia and their home country, and report negative host attitudes, express high levels of perceived risk, which in turn indirectly influence their fear of crime and avoidance behavior. As expected, fear of crime results from geographical distance, fluent English communication skills, lack of social support, being away from families, and holding different values, beliefs, and associated behaviors.

Environmental disorder is a significant and potent factor influencing fear of crime and perceived risk (Ferguson & Mindel, 2007). International students who perceive high levels of disorder in the community such as groups of teenagers fighting, threatening behavior or verbal abuse in the street, drug dealing, and racial harassment or attack, report elevated levels of perceived risk and fear of crime, and constraints on their behavior. This result suggests that when international students believe that disorder is prevalent in the community, such beliefs culminate in actual consequences (i.e., constrained behavior) (Schafer, et al., 2006).

Another salient finding is the negative effect of social integration on fear of crime. International students who feel as outsiders or report difficulties making friends report heightened levels of fear of crime and perceived risk. This finding is consistent with fear of crime literature (Adams & Serpe, 2000; Rountree & Land, 1996) demonstrating that social integration involving socialization, interaction, and attachment to the local community can help to alleviate feelings of fear (Delone, 2008). Chapdelaine and Alexitch (2004) stated that social interaction with hosts plays an important role in international students' adjustment and ability to overcome loneliness. In other words, international students who have appropriate friends from a host culture are more likely to learn skills, rules, and values of the host culture than those whose friends are compatriots (Furnham & Bochner, 1986). In the light of these findings, international students who tend to interact with co-na-

tionals hinder their social integration levels (Chapdelaine & Alexitch, 2004).

In terms of demographics, international students who are young and have been in Melbourne a short time express high levels of fear of crime. Possible explanations relate to being away from families, lack of social support, and their lifestyle. Ho, Li, Cooper, and Holmes (2007) reported that Chinese students studying in New Zealand spend substantial periods of time gambling, boy-racing, or even being involved in prostitution, drug addiction, and gang activities, increasing their likelihood of being victimized. Poor health also increases international students' feelings of physical vulnerability and levels of fear of crime (Moore & Shepherd, 2007). Interestingly, the influence of gender differed for fear of crime and perceived risk. Female students reported accentuated fear of crime which is consistent with prior literature (Ferguson & Mindel, 2007; Schafer, et al., 2006). However, male students expressed significantly higher levels of perceived risk. One possible explanation is that males and females are affected differently by social pressure to downplay fears about crime. Men who are most concerned with distorting their responses for self-presentational reasons may report the lowest levels of fear (Sutton & Farrall, 2005).

### Implications and Limitations

This study has several implications. Theoretically, it bridges a gap by demonstrating that cognitive-behavioral theory is an appropriate approach to understanding fear of crime, an area that has been criticised for a lack of theoretical grounding. On a practical level, this study highlights the importance of social integration as an important process for reducing fear of crime, providing direction for international education advisors and universities to monitor safety issues and to design support programs. When students feel more physically and emotionally safe, learning/academic performance improves, and stress, depression, and other related mental health problems subside. On a governmental level, international education strengthens relations between countries and world trade, promoting global understanding. Not only is it important to attract students, it is also necessary to care for them upon and following arrival (Li & Kaye, 1998). The unspoken assumption is that word of mouth accounts for market penetration, both positive and negative. Students who feel that their study abroad has been worthwhile will provide favourable publicity for the country and the institution where they obtain their education (Ward, et al., 2001).

This study involves a number of limitations. First, cultural factors were measured by culture distance, host attitudes, and perceived prejudice, however, it is also possible that this construct might be more appropriately operationalized in terms of other dimensions, such as power-distance, or individualism and collectivism relating to conflict (Shupe, 2007). Second, understanding fear of crime is challenging because it is possible that significant differences in causes of fear might exist (Meško, Fallshore, Muratbegović, & Fields, 2008). Third, the context of this study is Melbourne, but different neighbourhood environments might influence perceptions and fears differently.

Future research could adopt mixed-methodologies such as open-ended interviews that allow individuals to voice what they are thinking and feeling, helping to reveal hidden factors. Quantitative research enables researchers to statistically test and compare the magnitudes of relationships between different constructs, but can fail to generate rich insights (Tsang, 2001). Interviews could yield information on participants' particular circumstances. Observation of students in school at different places at different times can also provide insights into processes and causes of heightened levels of fear of crime and their avoidance behavior (Wayne & Rubel, 1982). Moreover, future studies would benefit by including several universities across different states. Such comparisons could make a significant contribution to Australia's international education and associated policies.

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