Gender, Social Desirability, and Fear of Crime: Are Women Really More Afraid?

by

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Abstract

Fear of crime influences people's daily habits (Lavrakas, 1982), as well as entire communities' feelings of safety and cohesion (Gates, 1987). Gender has been identified as the strongest and most consistent predictor of fear of crime (for a review, see Hale, 1996). The literature consistently finds that women report greater fear of crime than do men. This finding is paradoxical when compared with the concurrent finding that men experience greater criminal victimization than do women. This phenomenon is referred to as the fear victimization paradox (Rennison, 2000). At first, it was accepted that women were more afraid of crime than were men and investigators offered many different theories to explain the paradox (e.g., Fisher & Sloan, 2003, Killias & Clerici, 2000, & Sacco, 1990). However, Sutton and Farrall (2005) investigated the possibility that masculinity was creating a social desirability bias in men's reporting of fear of crime and when they accounted for this social desirability bias, they found that men actually experienced greater fear of crime than did women. The current investigation replicated and extended this research with 1009 university students and 508 Winnipeg residents. It extended Sutton and Farrall's study by including measures of fear of crime and social desirability that have greater validity and by testing whether the findings apply differentially to fear of sexual versus non-sexual types of criminal victimization. The influence of age, location of residence within the city of Winnipeg, history of victimization, and masculinity on fear of crime was explored. This investigation was able to replicate Sutton and Farrall's finding, but only in the community sample. The findings from this investigation suggest that there is a shift as men leave university from actually being less afraid of crime than women to being more afraid of crime. However, despite their increased fear, men in the community seem to maintain the façade of fearlessness. It

was also found that women were consistently more afraid of sexual victimization than men, regardless of the influence of social desirability. Masculinity and social desirability had similar negative relationships to fear of crime and the implications of this are discussed.

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It was first widely recognized in the 1960's that fear of crime was a social problem (McCoy, Wooldredge, Cullen, Dubeck, & Browning, 1996). In 1967, a national poll indicated that one-third of American citizens were afraid to walk alone at night even on a neighbourhood street (Erskine, 1974). According to the Gallup Poll, in 2010 nearly 40% of the American respondents agreed that there are areas near their home where they are afraid to walk alone at night (Saad, 2010). Academic inquiry is often shaped by the social climate and fear of crime is no exception. As general awareness of this social issue grew, the scientific community began to investigate fear of crime and its effects on the population. Hale (1996) identified many different consequences of fear of crime including fractures in people's sense of community (which can, in turn, cause more crime), prosperous people adding protection to their property (which can move crime to impoverished areas), and increased vigilante justice. In response to this evidence, investigators have primarily directed their efforts towards identifying the variables that predict fear of crime in communities (Rader, 2004). This line of research has progressed greatly in the past four decades. Although many variables have interested investigators (e.g., age, past victimization, neighbourhood characteristics), gender has arguably been the variable of greatest interest and controversy in the literature (Hale, 1996). Investigators have consistently found that women report greater fear of crime than men, but a relatively recent investigation has questioned the traditional understanding of this finding (Sutton & Farrall, 2005). This review will conceptualize fear of crime, discuss the prevalence of crime and fear of crime, review the different factors that are related to fear of crime in the literature, and discuss the effects of fear of crime. The review will then focus on gender differences in crime victimization and fear of crime, as well as the theories that have been proposed to explain these differences.

Conceptualization

Fear of crime is a construct that, like many other constructs, at first appeared simple, but eventually proved to be multi-dimensional, complex, and difficult to describe adequately. Ferraro and LaGrange (1987) argued that "… even a casual review of the literature indicates that the phrase 'fear of crime' has acquired so many divergent meanings that its current utility is negligible" (p. 71). It is important to emphasize how complex this construct is because a long history of one-item 'global' measures of fear of crime gave a false sense that fear of crime was straightforward and uncomplicated (Ferraro & LaGrange, 1987). Two examples of one-item measures are "How safe do you feel being out alone in your neighbourhood after dark?" and "Is there any place around here where you would feel unsafe walking at night?" In spite of the impression these measures give that fear of crime is simple, fear of crime has been conceptualized in several different ways.

In order to understand the 'fear of crime' construct, it is important to first define and understand crime. The term 'crime' can be defined as the breach of laws, which are determined, in Canada, by the Government of Canada (Constitution Act, 1982). That being so, there is hardly any standard to determine what actions are crimes other than the fact that a government has made that determination. The Canadian Government has a large index of crimes (Criminal Code, 1985) that would be unwieldy if used in research. This has made it necessary for investigators to either refer to crime without further specification or to choose specific crimes as reference points in their conceptualizations. A brief review of the literature (Hale, 1996) made it clear that investigators, in earlier research, often only referred to crime in general, which left the definition very broad. When investigators began defining crime categories, they generally focused on violent

crimes (e.g., assault, rape, etc.) and property crimes (e.g., theft, vandalism, etc.) (e.g., Callanan & Teasdale, 2009; Hale, 1996; LaGrange, Ferraro, & Supancic, 1992). This focus left a wide variety of crimes that are generally termed 'white collar crimes' overlooked in the fear of crime literature. Thus, although fear of crime has been defined as "…the (negative) emotional reactions generated by crime or associated symbols" (Hale, 1996, p. 92), with associated symbols referring to symbols people associate with crime (e.g., graffiti, broken windows, dark streets etc.), fear of crime has been operationalized in the literature as the negative emotional reactions generated by certain types of crime (i.e., violent crime and/or theft) or associated symbols. With this understanding of how crime has been operationally defined by fear of crime investigators, it is now possible to consider how fear of crime as a theoretical concept has developed.

Harry Figgie, the Chief Executive Officer of a safety equipment company (A-T-O Inc.), produced the Figgie Report (1980), which was a research effort designed to study the effect of crime on American society and was one of the first attempts to elucidate the fear of crime construct. His report broke the fear of crime construct into two separate parts that were named 'formless fear' and 'concrete fear.' Formless fear referred to the "vague sense of being unsafe in one's everyday environment" (p. 49). The following is an example of one of the formless fear measures used in the Figgie Report, "How safe would you feel being out alone at night in your central business district or main shopping center?" This measure illustrates that formless fear is non-specific. In contrast, concrete fear of crime referred to the fear of specific types of crime such as murder, sexual assault, mugging, knifing, beating, and armed robbery. The distinction between formless and concrete fear was important in the literature because the concrete fear conceptualization

broke the one-item measure tradition. In addition, the distinction between formless fear and concrete fear led to a further distinction between general fear of crime and fear of specific types of crime, which continued to be recognized (Hale, 1996). It also proved to be influential empirically. For example, the relationship between fear of crime and age was found to be largely dependent upon the measure of fear of crime used (LaGrange & Ferraro, 1989). Specifically, the relationship between fear of crime and age was much smaller when fear of crime was assessed using measures that asked about specific crimes, as opposed to the strong relationship between fear of crime and age when assessed using a global measure of fear of crime. In addition, it is likely that distinguishing between types of crime is important because people perceive different types of crimes as likely to produce differing amounts of harm. For example, investigators have theorized that sexual victimization causes greater fear than other types of victimization because of it produces greater psychological harm (Ringel, 1997).

Fattah and Sacco (1989) presented another important conceptualization of fear of crime. They argued that most fear of crime questions focused on people's emotional responses and ignored cognitive and behavioural responses to crime. To address this, they offered three broad categories for fear of crime: cognitive, affective, and behavioural. Under this framework, the cognitive component encompassed people's beliefs about the likelihood of being personally victimized by crime and their assessment of the prevalence of criminal activity in their area. The affective component was conceptualized as worry about being a victim of specific crimes. This component contains the emotional aspect that is part of most fear of crime conceptualizations. Finally, the behavioural component referred to participants' behaviours that were intended to protect themselves. For

example, people might purchase security systems or avoid going out at night in order to protect themselves from being victimized by crime.

Fattah and Sacco's (1989) behavioural component of fear of crime created some controversy. The controversy was between their conceptualization of constrained behaviours as a component of fear of crime and the conceptualization of constrained behaviours as a response to fear of crime (Garofalo, 1981; Gates, 1987; Kail & Kleinman, 1985; Lavrakas, 1982; Maxfield, 1987). Using a national random sample of 6,500 participants from the United States, Liska, Sanchirico, and Reed (1988) found that fear of crime did constrain the behaviour of their participants, which they operationalized as going out in the evening for entertainment and other general activities (e.g., "In general, have you limited or changed your activities in the past year because of crime?"). They also found that constrained behaviour led to higher levels of fear. Liska et al. (1988) referred to this phenomenon as a positive escalating loop. As an example of this process, people might stop going outside because of their fear. Although not going outside might help protect these people from the possibility of experiencing crime, it would also preclude any positive experiences that could disprove their perception of risk and assure them that going outside is safe. In this manner, the lack of positive experiences might increase their fear and, in their perception, justify their constrained behaviour. Although the controversy continues over whether protective behaviours are a part of fear of crime or are a determinant of fear of crime, Liska et al.'s (1988) results suggest such behaviour may operate as both cause and effect.

Ferraro and LaGrange (1987) developed the work of DuBow, McCabe, and Kaplan (1979) and presented a conceptualization of fear of crime that included emotional fear of crime and divided Fattah and Sacco's (1989) cognitive component of fear of crime

into two parts, which they termed ‘perception of crime risk’ and ‘concern about crime.’ Perception of crime risk refers to people’s judgments of how likely it is that they will be the victim of a crime. Concern about crime refers to people’s general worry about crime. This concern could be thought of as a personal value because people who value a crime-free society will be very concerned and are likely to worry about escalating crime. Ferraro and LaGrange also distinguish between fear of crime for the self and for others. Taken together, they identified six separate components: (a) risk, concern, and emotional fear for self and (b) risk, concern, and emotional fear for others. They argued that past investigations had often used these six components of fear of crime interchangeably. DuBow et al. (1979) presented an overview of this conceptualization in the form of a table (Table 1). The vertical axis, labeled ‘Level of Reference,’ refers to fear of crime for others and fear of crime for the self. The horizontal axis, labeled ‘Type of Perception,’ displays the two cognitive components labeled ‘Judgments’ (perceptions of crime risk) and ‘Values’ (concern about crime) and the emotional component labeled ‘Emotion’. A second table (Table 2) created by Dubow et al. (1979) gives examples of questions used in the past that correspond to the different categories presented in Table 1.

Hale (1996) commented on the distinction Ferraro and LaGrange (1987) made between fear of crime and perceived risk of crime. Hale argued that it is understandable that researchers have confused fear of crime and the assessment of crime risk because, in the literature, fear of crime is presented as being caused by people’s judgments of risk. Hale suggested that investigators should carefully note the differences between fear of crime and assessment of risk. This awareness should then motivate investigators to use measures that investigate the participants’ emotional state when they are assessing fear of crime. For example, investigators should use phrases like ‘how afraid’ in their questions.

Table 1

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Table can be found in Dubow et al. (1979)

Table 2

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Table can be found in Dubow et al. (1979)

This practice has now become widely accepted (e.g., LaGrange et al., 1992; Mesch, 2000; Rountree, 1998; Smith & Torstensson, 1997; Williams, McShane, & Akers, 2000).

From the conceptualizations reviewed thus far, it appears that there are likely many different factors that contribute to people's emotional fear of crime. First, there is the cognitive assessment of the likely degree of harm, which investigators have examined by specifying the type(s) of crime about which people are questioned. The two other cognitive components are people's judgments of their risk of victimization and the value they place on safety or the absence of crime. In addition to the influence of these cognitive components, there are also the protective behaviours in which people engage. As already mentioned, it is possible that these protective behaviours increase fear of crime by inadvertently shielding people from positive experiences that could reduce their fear of crime. Putting all the conceptual components discussed in this review thus far together, if people anticipate a great deal of harm (type of crime), think crime is highly probable (judgment of risk), value safety greatly (concern), and are shielded from positive experiences that may negate this perception (protective behaviour), they will be very afraid. Once people experience fear of crime, they may engage in further behavioural restrictions in an attempt to reduce their perceptions of risk and, thereby, their fear.

Rader (2004) reviewed the literature and presented an integrated conceptualization of fear of crime. Rader argued that the emotional, cognitive, and behavioural components should be considered components of the overarching construct 'threat to victimization.' This name was chosen because all of the construct's components (i.e., fear of crime, perceived risk, and constrained behaviour) involve responses to the threat of being victimized. Rader and May (2007) empirically tested this

conceptualization and found that it was generally supported. They found that risk, concern, and protective behaviours each had a reciprocal relationship with fear of crime. However, their results indicated that there was (a) a lack of relationship between gender and the measures of perceived risk and constrained behaviour, and (b) a lack of relationship between perceived risk and constrained behaviour. The lack of relationship between gender and perceived risk and constrained behaviour was a concern because women have been consistently higher in their reported fear of crime than men and if these constructs were to be part of a measure of this construct, they too should show a similar relationship with gender. The lack of relationship between perceived risk and constrained behaviour was problematic because these two measures were being combined into an overall construct, and for this reason should have some correlation with each other. These concerns were followed up with a second study that found that gender was related to all of the Threat to Victimization subscales, but the lack of relationship between risk of victimization and constrained behaviours continued to be problematic (May, Rader, & Goodrum, 2010).

Prevalence of Crime

A survey of the prevalence of crime is important for understanding the context of the fear of crime literature. However, prior to discussing the various statistics collected on the prevalence of crime, it is important to recognize that a large proportion of crime goes unreported (Skogan, 1977). For example, Skelton and Burkhart (1980) found that women's willingness to report an incidence of rape was not constant, but instead was influenced by factors such as their relationship to the rapist and the circumstances of the rape. Although a great deal of crime goes unreported, the reported statistics can provide

an estimation of crime, information concerning how crime has fluctuated over time, and information regarding how crime rates vary across geographical regions.

Fitzgerald, Wisener, and Savoie (2004) reported that crime in Winnipeg is made up mostly of property crime (83%), followed by violent crime (15%) and, finally, other types of crime including prostitution, drugs, weapon offences, and gambling. Winnipeg has a crime rate (calculated on the basis of 100,000 population) significantly higher than the rest of Canada for both property crime (Figure 1) and violent crime (Figure 2). Figure 1 represents the property crime rate for Winnipeg and Canada, which was calculated by totaling the respective area's rate of break and enters and motor vehicle thefts (Dauvergne, 2007; Dauvergne & Turner, 2010; Gannon, 2006; Logan, 2001; Sauvé, 2005; Savoie, 2002; Silver, 2007; Wallace, 2003; 2004). There is a significant drop in Winnipeg's rate of property crime from 2007 (rate of 2736) to 2009 (rate of 1439), which was due to a significant drop in the rate of motor vehicle thefts during this period. Dauvergne and Turner (2010) attribute this drop to an increase in the use of anti-theft devices, the use of "bait car" programs, youth prevention programs, and specialized task forces. They indicated that these programs have been particularly targeted in Winnipeg, which had one of the highest rates of motor vehicle theft in Canada. Figure 2 represents the violent crime rate for Winnipeg, Manitoba, and Canada, which was calculated by totaling the respective area's rate of assault (level 1, 2, and 3) and sexual assault (level 1, 2, and 3) (Logan, 2001; Savoie, 2002; Wallace, 2003, 2004). Unfortunately, data for these violent crimes in Winnipeg was only readily available from Statistics Canada up to and including 2003. For this reason, Manitoba's rates for these crimes were included in the above calculation as an approximation of Winnipeg's crime rate trend. Winnipeg represented approximately 60% of Manitoba's population during this period

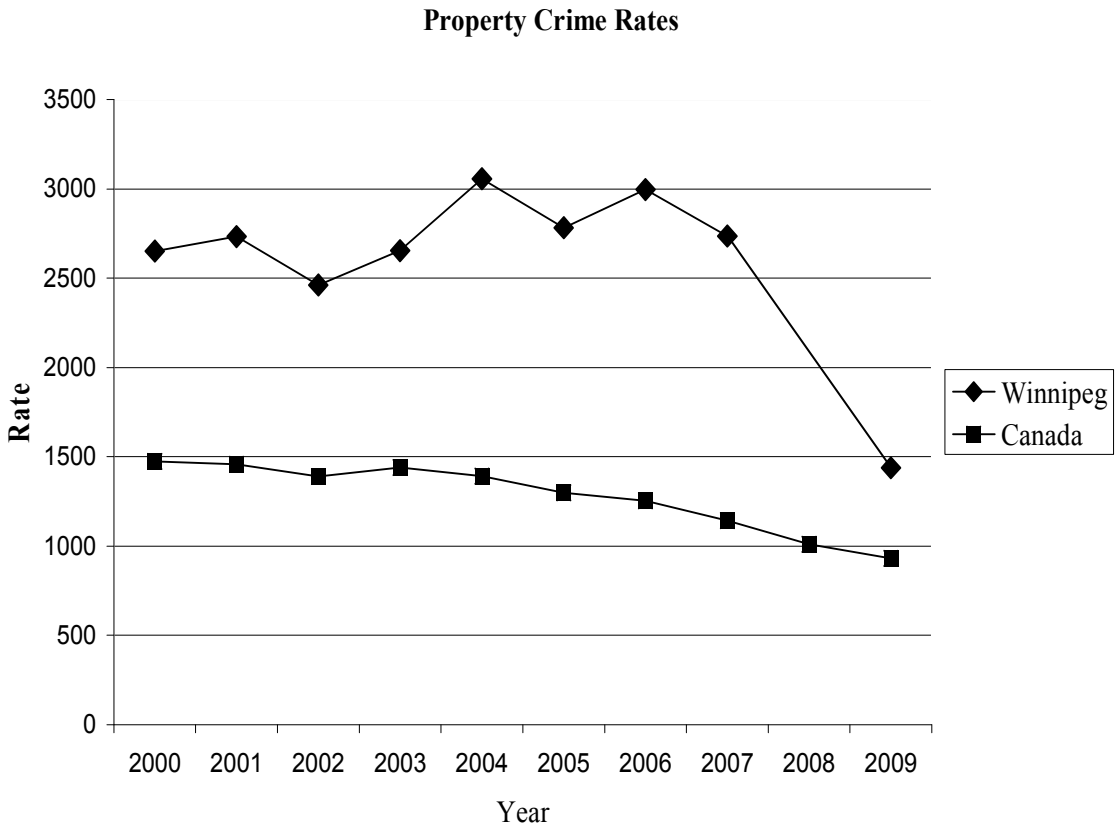

Figure 1. Property crime rate in Winnipeg, as compared with Canada.

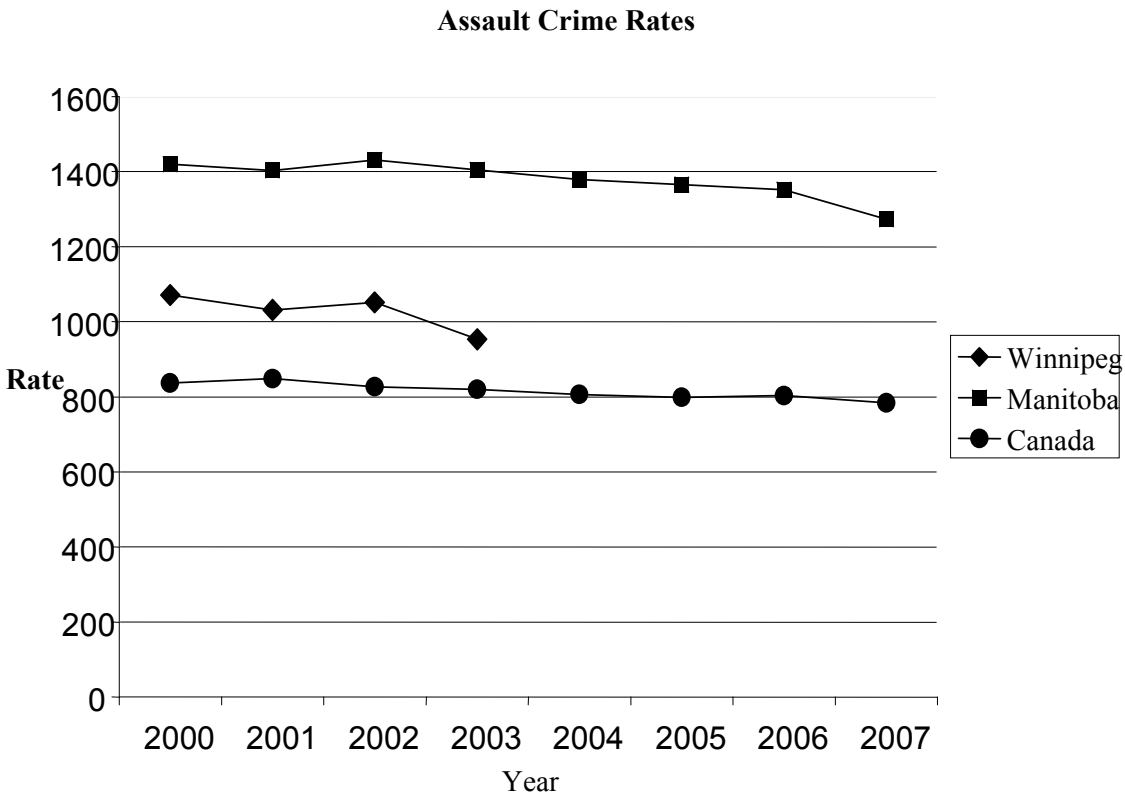

Figure 2. Assault crime rate in Winnipeg and Manitoba, as compared with Canada.

(Silver, 2007; Statistics Canada, 2006a).

In 2009, Statistics Canada released a new measure entitled the 'Crime Severity Index', which was created to counteract high crime rates being produced by minor offences. Instead of solely counting the number of offences, the severity of the sentences provided by the courts were given values and included in the calculations. All offences, including traffic offences, are included in this index. According to this measure, in 2009 Winnipeg had the third highest crime severity rate for crime overall among metropolitan areas in Canada and was rated the highest for violent crime among metropolitan areas in Canada (Dauvergne & Turner, 2010).

Fitzgerald et al. (2004) reported that the distribution of these crimes within Winnipeg is uneven, with most of the crime occurring in the center of the city. Figure 3 displays the concentration of crime incidents (all crime occurrences) in Winnipeg. For example, the darkest colour on the figure depicts the area that has over 1,100 incidents of crime per square kilometer. Although this figure clearly depicts where criminal incidents are occurring, it is important to consider the number of people at risk in a given area when attempting to depict which areas of a city are more dangerous. For example, a given area may have a very high number of criminal incidents, but this may be simply an artifact of a very highly concentrated population in that area.

The first step in estimating the number of people at risk in a community is counting the number of people residing in the area (i.e., calculating the rate of crime per number of residents). However, in some urban areas, the people who are at risk may reside in other areas of the city; people who commute to the area for employment for example. Fitzgerald et al. created a more accurate representation of criminal activity in Winnipeg for violent crime (Figure 4) and property crime (Figure 5), by also including an

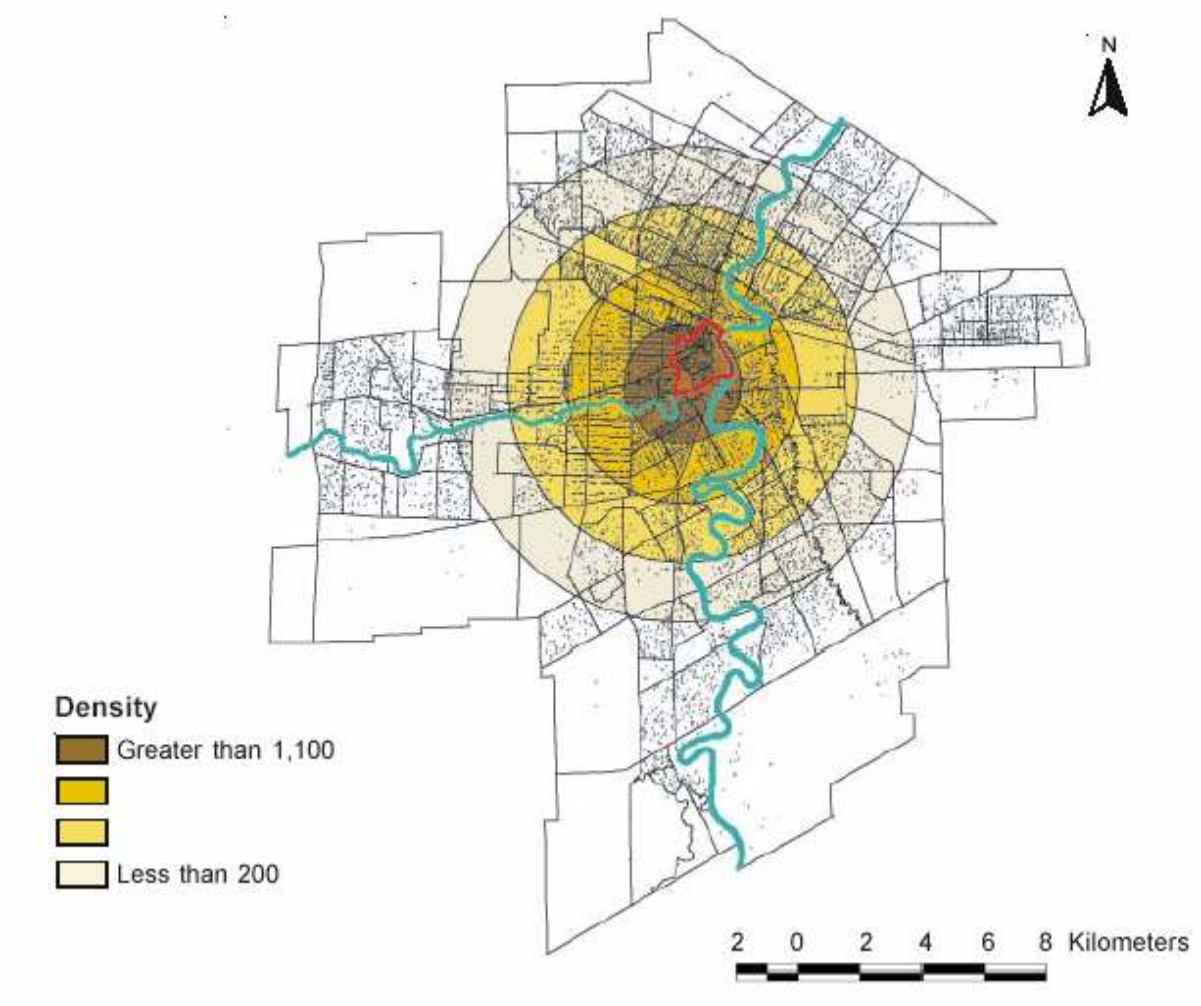

Figure 3. Number of crime incidents in Winnipeg, Manitoba, in 2001 (reproduced from Fitzgerald et al., 2004) (This reproduction is a copy of an official work that is published by the Government of Canada and has not been produced in affiliation with, or with the endorsement of, the Government of Canada).

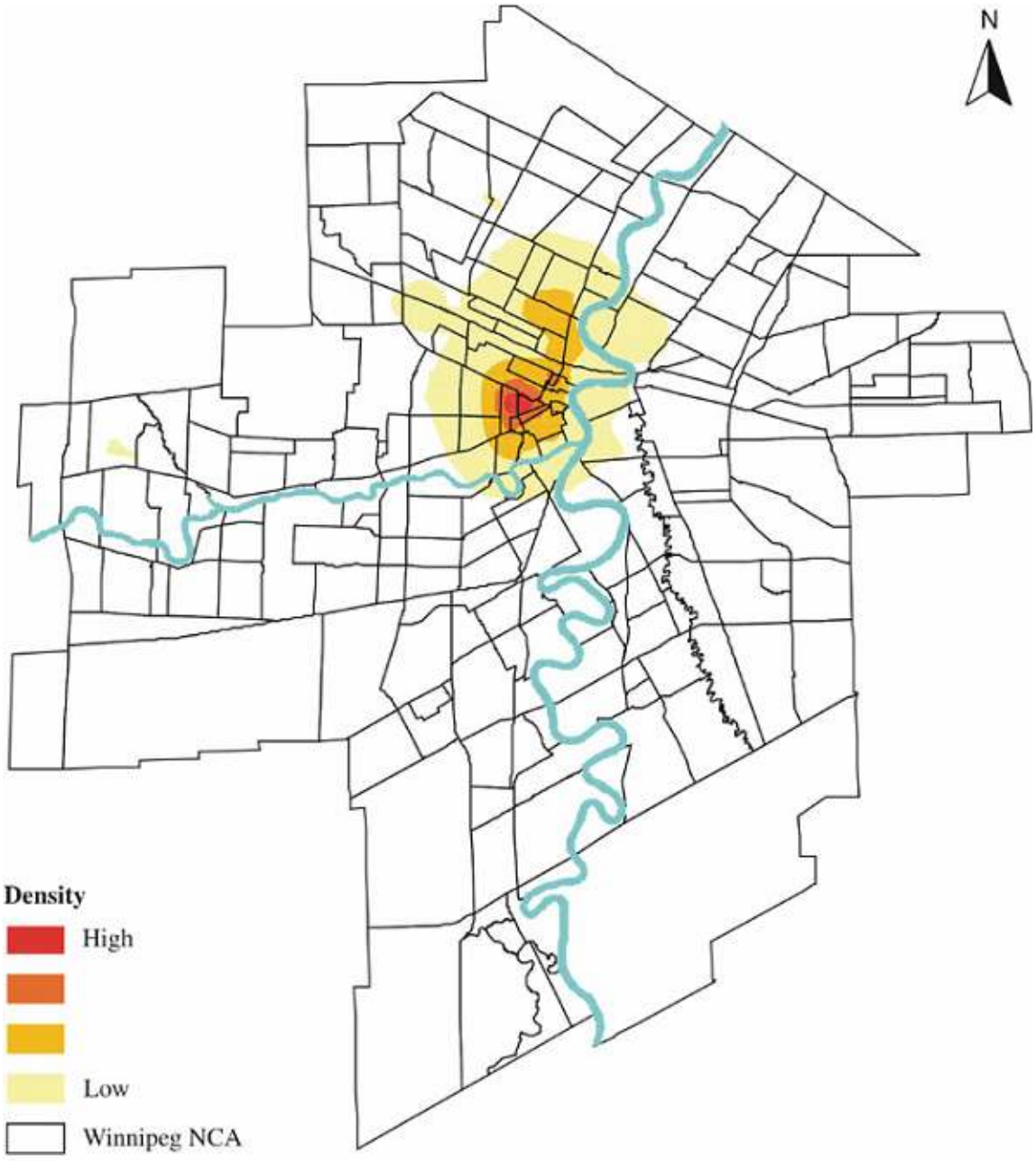

Figure 4. Rates of violent crime in Winnipeg, Manitoba, in 2001 (reproduced from Fitzgerald et al., 2004) (This reproduction is a copy of an official work that is published by the Government of Canada and has not been produced in affiliation with, or with the endorsement of, the Government of Canada).

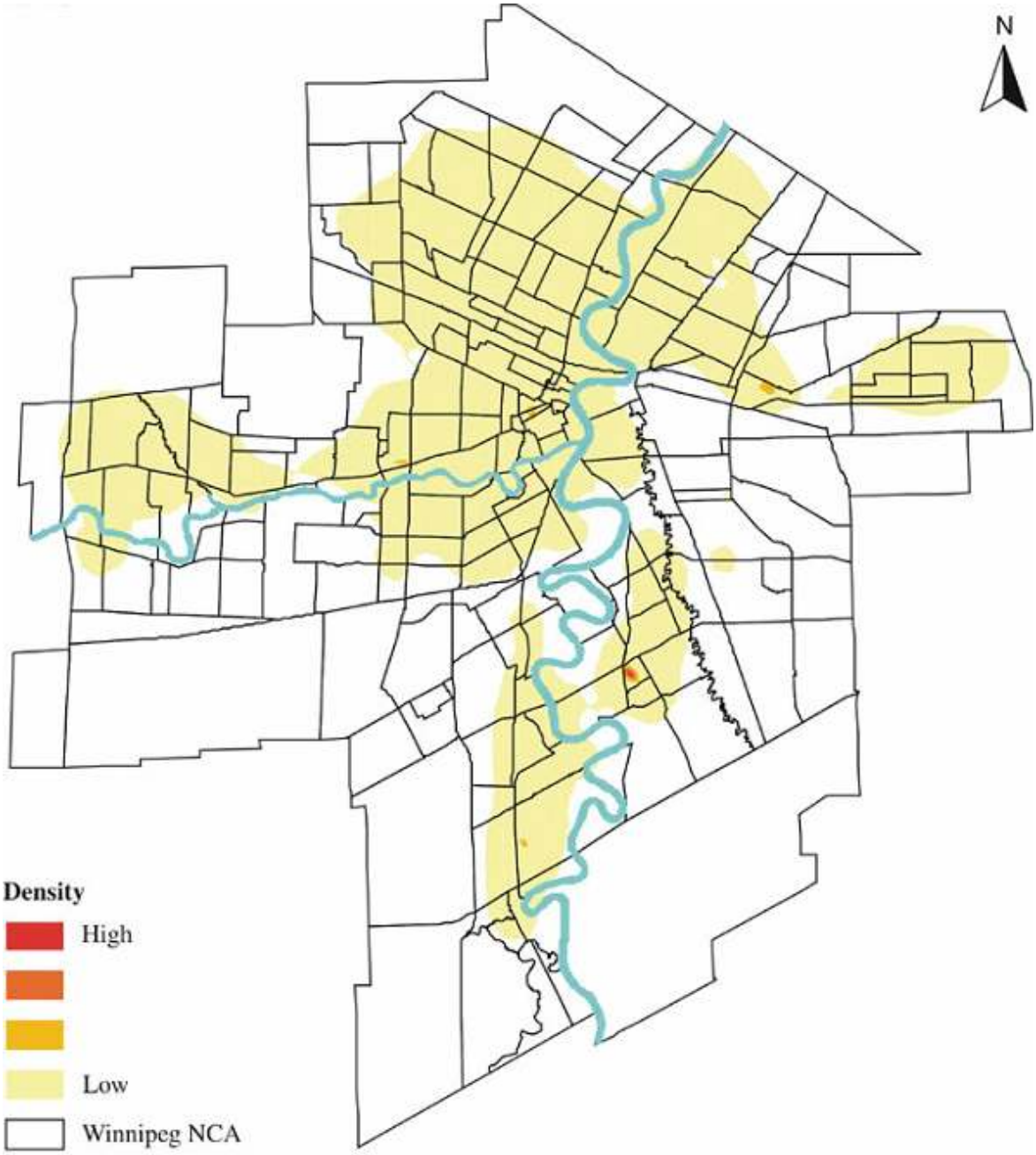

Figure 5. Rates of property crime in Winnipeg, Manitoba, in 2001 (reproduced from Fitzgerald et al., 2004) (This reproduction is a copy of an official work that is published by the Government of Canada and has not been produced in affiliation with, or with the endorsement of, the Government of Canada).

estimation of the number of people who were at risk in the area for reasons other than residence (Statistics Canada used specific areas called "neighbourhood characteristic areas" or NCAs, which are outlined on Fitzgerald's figures). They estimated the number of people at risk in an area by using information sources like transit and employment rates. They were then able to calculate the number of criminal incidents in the area per number of people at risk in the area. After the authors accounted for the population distribution, some neighbourhoods continued to have greater rates of violent and property crime. For example, the average rate of violent crime in Winnipeg in 2004 was 11 per 1000 people; however, one community had a rate of 88 per 1000 people. Similarly, the average rate of property crime in Winnipeg in 2004 was 60 per 1000 people; however, one community had a rate of 229 per 1000 people. Figure 4 shows that rates of violent crime are highly concentrated within the central area of Winnipeg. In contrast, Figure 5 shows that rates of property crime are similar across much of the city. These crime statistics provide a backdrop for understanding the potential fear of crime experienced by Winnipeg residents.

Prevalence of Fear of Crime

The prevalence of fear of crime has remained relatively high and stable in the United States. Warr (1995) investigated the history of fear of crime in the United States and found that it had remained relatively constant from1965 to1993, with approximately 30-50% of respondents being "afraid to walk alone at night." Although this statistic does not confirm claims of rapidly increasing fear of crime, it does suggest that fear of crime is a stable reality in the lives of Americans. Other investigators have garnered fear of crime statistics using different measures. For example, Garofalo (1979, as cited in Garofalo,

1981) found that in a National Crime Survey conducted in 13 cities in the United States, 27-56% of respondents had "limited or changed" their behaviour because of crime.

The 2004 General Social Survey (GSS) produced by Statistics Canada suggested a much more encouraging view of fear of crime prevalence in Manitoba (Gannon, 2004). The most startling finding was that 93% of Manitobans were either somewhat satisfied or very satisfied with their personal safety. However, when respondents were asked about their fear of being home alone at night and taking public transportation, 20% and 53% respectively indicated they would feel either very or somewhat unsafe. Another Canadian study surveyed a representative sample of 299 French-speaking residents from Montreal, Quebec (Ouimet & Coyle, 1991). The authors asked respondents to rate their fear of being the victim of a burglary, a mugging, or an assault and they found that 30% of the sample reported either "some" or a "great deal" of fear of a burglary, 24% reported similar fear of a mugging, and 34% reported similar fear of an assault.

When comparing Canada and the United States, the findings are somewhat inconsistent. For example, only 10% of Canadians indicated that they would either feel very or somewhat unsafe when asked if they would be "afraid to walk alone after dark" (Gannon, 2004), which was substantially lower than the rates Warr (1995) found in the United States (30-50%). However, a recent investigation measured fear of crime in four universities of which three were American (n = 1,069) and one was the University of Winnipeg (n = 397) (Kohm, Waid-Lindberg, Weinrath, Shelly, & Dobbs, 2012). When the samples were compared, the Canadian students reported greater fear of crime than the American students.

Farrall and Gadd (2004) critiqued fear of crime measures and argued that they over represent the prevalence of fear of crime. As an alternative, the authors provided a

set of fear of crime questions that focused on counting fearful episodes and measuring the intensity of those episodes. To do this, they broke down fear of crime questions into three sections. The first asks if the respondent has "…ever felt fearful in the past year about the possibility of becoming a victim of crime?" If the response is yes then a second question is asked about frequency "How frequently have you felt like this in the last year?" The third question then asks about the intensity of that fear "On the last occasion, how fearful did you feel?" The last question has a four point response scale (not very fearful, a little bit fearful, quite fearful, and very fearful). These questions were given to 977 respondents in the United Kingdom in 2002. Farrall and Gadd found that 49% of the respondents felt fearful between one and four times in the previous year and that 15% of respondents were either "quite" or "very" afraid on the last occasion. They also found that 8% of respondents had experienced more than five fearful episodes in the past year and felt "quite" or "very" fearful on the last occasion. Farrall and Gadd argued that these statistics provide a more accurate and less inflated representation of fear of crime.

Determinants of Fear of Crime

Three of the primary factors that relate to fear of crime in general are neighbourhood characteristics (incivilities), age, and the media. The 'incivilities theory' (Wilson & Kelling, 1982) suggests that physical and social 'incivilities' contribute to fear of crime. They define physical and social incivilities as "symbols of physical and social disorder." Perkins, Meeks, and Taylor (1992) list examples of physical incivilities (litter, vandalism, vacant or dilapidated houses, abandoned cars, and unkempt lots) and social incivilities (loitering youth, prostitutes, homeless people, rowdy behaviour, drug dealing, and public drunkenness).

Perkins et al. (1992) investigated the influence of physical incivilities on United States residents by conducting an environmental assessment of 50 city blocks, each in a different neighbourhood, and conducting interviews with 412 residents of these blocks. They used three teams to measure each block's physical incivilities so they could determine the inter-rater reliability of the raters, which they found to be high (mean alpha = 0.85). They found a positive correlation between the measurement of the blocks' physical incivilities and the community residents' perceptions of different social problems (e.g., vandalism, harassment, and selling drugs). They also found that the measurement of the blocks' physical incivilities was positively correlated with the respondents' behavioural restrictions. Thus, the above results appear to confirm that physical incivilities are positively correlated with perceptions of crime. In addition, the positive correlation between physical incivilities and increased behavioural restrictions suggests that physical incivilities cause greater fear of crime. Other researchers have confirmed that fear of crime is related to situational context and came to the conclusion that people have greater fear of downtown areas than other areas of the city (e.g., Rohe & Burby, 1988).

To extend the above research on physical incivilities, Ross and Jang (2000) studied both physical and social incivilities. They asked 2,482 United States residents to rate their fear of crime, perceptions of community disorder, and social ties in the community. The authors found that physical and social incivilities were negatively correlated with informal social integration (e.g., visiting neighbours) and positively correlated with fear of crime. In addition, they found that lack of informal social ties made physical and social incivilities more likely to increase fear of crime. These results suggest that informal social ties buffer individuals from the effects of physical and social

incivilities in their communities. A recent investigation by De Donder, De Witte, Buffel, Dury, and Verté (2012) obtained data from Belgium Aging Studies which had sampled 24,962 Belgium residents who were 60 years of age or older. This study confirmed that the quantity of ties with friends and acquaintances, but not family, was negatively related to fear of crime. In addition, participation in informal networks, formal organization, and political organizations were all negatively related to fear of crime.

Kohm (2009) investigated the role physical and social incivilities have in the fear of crime of residents who lived in a high crime area of Winnipeg, Canada. Working in partnership with the community, the investigation's questionnaire was completed by 394 residents. The residents were asked to rate their perception of the neighbourhood's crime rate relative to other neighbourhoods, perceived safety walking alone at night, worry about crime, and frequency of victimization. They were also asked to map the areas of their community that they felt were "particularly unsafe" and then they were asked what made those areas feel unsafe. Kohm (2009) expected that the high rates of crime and victimization in the area would cause respondents to indicate that crime was the primary reason for feeling that specific regions were unsafe. However, the results indicated that residents identified social disorder as the reason for finding particular areas to be unsafe. Specifically, the most common reasons given were intoxication, panhandling, and people sleeping on the street; the second most common reasons were drug dealers and prostitutes; and the third most common reason was gang related activities. These results suggest that even when crime is commonplace, people rely on social cues from their environment to determine places that are to be feared.

Fisher and May (2009) examined a construct similar to incivilities. They examined whether "fear provoking cues" functioned differently for men and women. Fear

provoking cues are different from incivilities, in that incivilities are indications that a neighbourhood is dangerous and fear-provoking cues are indications that a situation is dangerous. For example, respondents could be in a neighbourhood that generally does not have any incivilities and for this reason feels safe, but still encounter a fear-provoking cue such a group of young men on an empty street, which causes them to be afraid of being victimized. The authors examined this construct among 904 college students from a "large public institution in the south" of the United States. The students were asked to rate their fear of four different crimes (assault with weapon, theft, assault, and sexual assault) and their fear of being victimized on campus in specific areas (different poorly lit areas, around overgrown shrubbery, around groups of students, and related to the visibility of public safety officials). The investigation found that women reported finding these cues fearful at much higher rates. For example, 65% of females reported that poor lighting in parking lots caused fear, whereas only 34% of males indicated this was the case. When the fear provoking situations were ranked by the authors, there were no gender differences in which situations were more fearful than others.

In addition to neighbourhood characteristics, investigators have also considered old age to be a factor that causes people to feel vulnerable and, because of this, afraid of crime. Investigators have often found that age was positively associated with fear of crime (LaGrange & Ferraro, 1987), which was consistent with theories that the elderly would feel more fearful because they are less able to defend themselves. However, more recent research has also found a negative relationship between age and fear of crime (e.g., Chadee & Ditton, 2003). These investigators have explained their results with statistics that the elderly are the least likely to be victimized by crime. Moore and Shepherd (2007) completed one of the most detailed studies on age and fear of crime. They accessed

17,611 respondents from the 2001 British Crime Survey; a survey given annually to households in England and Wales. They examined two types of fear: fear of personal harm (violent crime) and fear of personal loss (property crime). They found that the relationship between these variables and fear of crime was curvilinear. For fear of personal loss, fear increased between the ages18 and 48 and decreased after that. Moore and Shepherd suggested that this increase was because of the relative importance of material wealth in different stages of life. For fear of personal harm, fear increased slightly between age 16 and 26 and then decreased dramatically in the older members of the sample. In addition to the overall lowered risk of personal victimization with age, theorists have suggested that, for women, the negative relationship between age and fear could possibly be explained by the lowered risk of sexual victimization (Franklin & Franklin, 2009).

Aside from gender, which will be examined in more detail in a later section, and age, it is important to note than there are many other types of social vulnerability that also influence fear of crime. In order to study the relative influence of different factors on fear of crime, Rader, Cossman, and Porter (2012) obtained access to two sets of survey results, one from the Center of Race, Religion, and Urban Life and the second from the United States Census Bureau, which were combined to create a representative sample of 2,610 respondents from across the United States. The results from this large study concluded that both social (i.e., health (negative), education (positive), marital status (married individuals were less afraid)) and neighbourhood characteristics (i.e., percent non-white (positive), poverty (positive), percent married (negative), proportion with graduate degrees (negative)) had significant impacts on the rates of fear of crime. Although these variables have not received as much attention in the literature as age or

gender, it is important to note that they each have a contribution in determining fear of crime.

The media also plays a large role in influencing the fear of crime of individuals. There seems to be a consensus in the literature that the media over-reports and sensationalizes crime (Welch, Price, & Yankey, 2002). This is not surprising when taking into consideration the ability of crime stories to capture and maintain the interest of the public, as well as the media's interest in maintaining profitability. In fact, crime stories are so proficient at capturing and maintaining public interest that Bardwell, Klite, and Salzman (1997, as cited in Eschholz, Chiricos, & Gertz, 2003) found in their national one-day assessment that one-third of all news stories dealt with crime. For further evidence of how the media over-reports and sensationalizes crime stories, Welch et al. (2002) describe how media can play a major role in the creation of a moral panic. They cite how in New York a group of young men sexually assaulted a woman. This incident "captured the public's imagination" (p. 3) and the media covered the story extensively. This fascination by the public and media only became stronger once the incident was termed a 'wilding.' The media reported the incident repeatedly; in fact, there were 110 articles on the incident. Welch et al. (2002) argue that, given the thousands of other types of crimes in New York, the media's projected danger of being the victim of a wilding was disproportionate to the actual risk. Cohen (1972) suggested that the media often goes beyond the basic facts of the crime to create an image that will capture the public's attention. For example, in one instance the media used terms like 'pack' and 'gang' to describe the perpetrators, despite the fact the perpetrators were not part of a gang. This type of response from the media, and the subsequent attention by the public, show the power the media has to influence perceptions of crime.

The first theory developed to explain how the media influences the population was the 'cultivation hypothesis,' which stated that television portrays the world as more violent than it is in reality. In turn, the more people are exposed to the media, the more affected they become by this message (Gerbner, 1970; Romer, Jamieson, & Aday, 2003). However, there does not appear to be a statistically significant relationship between general television viewing and fear of crime when demographic variables are held constant (e.g., Eschholz et al., 2003). Once the cultivation theory fell out of favour, investigators began to look at the factors influencing media's relationship with fear of crime in more detail. They found that specific types of media have different effects (Eschholz et al., 2003; Kort-Butler & Hartshorn, 2011; Weitzer & Kubrin, 2004) and that audiences come with different experiences and perspectives that also influence the relationship between media and fear of crime (Chiricos, Eschholz, & Gertz, 1997; Doob & Macdonald, 1979; Eschholz et al., 2003; Weaver & Wakshlag, 1986).

Although some of the older research in this area has some of the best methodology (e.g., O'Keefe & Reid-Nash, 1987), it is important to consider primarily recent research because the types of media and audience interactions with that media change over time at a very rapid pace. One of the best examples of recent research that has considered numerous media and audience variables simultaneously was conducted by Eschholz et al., (2003). Using a random telephone survey of 1,490 respondents in Leon County Florida. They had respondents rate their fear of specific personal and property crimes on a ten-point scale, with ten being extremely fearful. They also measured respondents' consumption of local news, national news, news "magazine" shows (e.g., Dateline, 60 Minutes, 20/20), "tabloid" shows (e.g., Hard Copy, Inside Edition), reality crime shows (e.g., COPS, America's Most Wanted), and crime drama (e.g., Law and

Order, Jag, Walker: Texas Ranger). The authors' found that all of the television programs, when combined into a single index, were not related to fear of crime. This finding has been consistent in the literature (e.g., Ditton et al. 2004; Heath & Gilbert, 1996) and caused the cultivation theory to fall out of favour. However, viewing local news was related to fear of crime, a finding that has been confirmed by other investigators (e.g., Bazargan, 1994; Chiricos, Padgett, & Gertz, 2000; Weitzer & Kubrin, 2004). In addition, while local news was the most powerful predictor of fear of crime, and that reality TV and crime drama also had significant contributions. From these results, Eschholz et al. (2003) theorized that portrayed violence was the most important factor in the media (found in local news, reality TV, and drama), that realism was the second most important (found in local news and reality TV), and that proximity (how close the reported violence happened in relation to the viewer) was the third most important (highest for local news). In addition, the authors also thought that local news was the most powerful predictor because it was frequent (broadcast daily) and because crime news was featured prominently during the broadcast.

More recently, Kort-Butler and Hartshorn (2011) telephone-surveyed 784 randomly sampled Nebraska community residents and measured fear of different types of crime (e.g., breaking and entering, being murdered, sexually assaulted), as well as respondents' consumption of different forms of media. The media types they measured, consisted of the frequency with which respondents' watched local news, national news, and crime drama (e.g., Law and Order, CSI). They also measured the number of days respondents watched a relatively new type of program they termed "crime non-fiction". Reality crime shows like "COPS" and "America's Most Wanted" had aired for some time, but a new style had proliferated, and even had a Discovery channel devoted to

them. These non-fiction crime shows like “Primetime,” “The First 48 Hours,” and “The New Detectives” used real interviews, narrative, and drama to follow detectives or investigators as they tell real crime stories. These types of shows are a mixture between real crime reporting and shows like CSI. Kort-Butler and Hartshorn (2011) found that these crime non-fiction shows were related to increased fear. They also found that crime dramas were not related to fear of crime, but were related to increased support for the death penalty. The authors theorized that the crime non-fiction programs contributed to the idea that the crime in general was “out of control,” leading to increased fear, whereas crime drama serves an ideological function because the shows’ scripted endings reinforced the dominant ideological position that the criminal justice system is successful in ensuring criminals receive their “just desserts”.

In addition to the divergent contributions of different media forms, audience characteristics also play a significant role in the effect of media on fear of crime. Eschholz et al. (2003) not only identified the differential impact of different forms of television programming, but also found that respondents only showed an increase in fear of crime when they perceived themselves to be living in a neighbourhood with a high percentage of black residents. The authors argued that this was evidence of “social threat,” which is the feeling of being threatened by your community. This idea dates back to 1967 (Blalock, 1967) and has consistently been identified in other studies (e.g., Eitle & Taylor, 2008; King & Wheelock, 2007). Although other researchers have found social threat to be directly related to fear of crime (e.g., Chiricos, McEntire, & Gertz, 2001; Moeller, 1989; Skogan, 1995), Eschholz et al. (2003) found that it mediated the relationship between the media and fear of crime. That is, only those respondents who lived under perceived social threat were affected by the media. Other research has also

found that residents who feel threatened generally are more affected by media messages. Specifically, media has a stronger influence on respondents living in high crime communities (Chiricos et al., 2000; Weitzer & Kubrin, 2004).

Effects of Fear of Crime

Given the consistent prevalence of fear of crime in society, it is important to gain some idea of the degree to which society is suffering negative consequences resulting from this fear. Morgan (1978) asserted that feelings of safety are so important that community can be defined as a feeling of safety: "Community to most citizens is a rational self-interested desire for safety and orderly conduct in one's immediate public environment" (p. 13). Under this definition, it is not surprising that fear of crime can undermine sense of community. When a community does not offer safety, members of that community often seek to create safety for themselves through various behavioural patterns. Lavrakas and Lewis (1980) conducted a factor analysis on the results of four surveys (1972 Kansas City survey, n = 1200; 1974 Portland survey, n = 3916; 1975 Hartford survey, n = 556; and 1977 Philadelphia-Chicago-San Francisco survey, n=1369) to find cohesive subsets of protective behaviours. The strongest reactions to fear of crime were what they termed "avoidance" behaviours, which included not going out alone, driving as opposed to walking, not visiting specific areas, avoiding certain strangers, and not carrying cash. They found that the majority of people engaged in some of these activities in order to reduce the likelihood of being victimized. The second category of crime prevention behaviours they identified was what they termed "access control," which refers to behaviours designed to prevent the breaching of private spaces. Most people engaged in some of these behaviours (e.g., locking doors, installing bars, installing alarms), while other behaviours were not enacted as often (e.g., stopping

deliveries, asking neighbors to watch their home). There was also evidence for "territoriality," which refers to behaviours designed to declare private space and protections, such as "private property" signs or "neighbourhood watch" signs. Finally, there were other self-protection behaviours such as buying guns, insurance, or dogs that did not fit any overall dimension, but remained important crime preventing behaviours in which people engaged.

As previously mentioned, avoidance behaviour is the most common behavioural reaction to fear of crime. Gates (1987) investigated behavioural avoidance by conducting 523 interviews in six neighbourhoods in Atlanta, Georgia. In addition to gathering secondary data on the community's crime rates and physical conditions, she asked respondents about their local social ties, perceived social control, social behaviour in the neighbourhood, reactions to crime, perceived neighbourhood conditions, and demographics. Gates found that behavioural avoidance increased with greater fear of crime, crime rates, and perceived neighbourhood problems. Gates was surprised to find that avoidance was engaged in by both low and high socioeconomic status (SES) respondents. They had expected that the lower SES black respondents would be more likely to engage in avoidance behaviour; however, they found that higher SES respondents were more likely to engage in avoidance behaviour and had more avoidance behaviours available to them because of their resources (e.g., private cars as opposed to public transportation).

Rader, Cossman, and Allison (2009) studied various categories of behavioural restriction among 1,340 university students in a 'southern university' in the United States. They studied four types of behavioural restriction: (a) lifestyle modification (avoidance of specific areas day or night, wearing specific dress, and being aware of alcohol and

drug consumption because of fear of crime), (b) reliance on others (asking someone to walk with you day or night, attending crime prevention programs, using university security escort programs), (c) defensive precautions (carrying pepper spray, carrying a fire-arm, taking a self-defense course), and (d) convenience precautions (keeping lights on at home, locking doors at home or on vehicle, carrying a cell phone). The investigators also measured fear of crime by asking the respondents to rate their worry about ten different types of crime on a five point scale. They found that higher fear of crime was predictive of more reliance on others and lifestyle modification for both men and women. Higher fear of crime was also predictive of defensive precautions for women and convenience precautions for men. There may also be many other forms of behavioural restriction that have not been given much consideration. For example, a recent study completed in China (Zhong, 2010) found that community residents' fear of crime was negatively related to willingness to intervene (stop the thief, yell for help, call police) when they witnessed a purse snatching.

Fear of crime can also affect the political orientation of communities (Cullen, Clark, & Wozniak, 1985; Hough, 1985; Langworthy & Whitehead, 1986; Rossi, Simpson, & Miller, 1985). That is, most communities with increasing fear of crime become more punitive (e.g., lobbying for longer prison sentences) and less welcoming of lenient justice policies (e.g., pardoning, community rehabilitation programs etc.). However, in general, these political sentiments do not appear to translate into differences in personal punishment decisions. That is, contrary to expectations, even though communities with greater fear of crime may become more punitive, on an individual level people who are more afraid of crime do not choose harsher verdicts when different vignettes are presented (Ouimet & Coyle, 1991).

Not all effects of fear of crime are negative Gates (1987), in the same investigation discussed earlier, found that fear of crime could be the impetus for positive collective responses from communities. They observed that some communities engaged in different positive responses, such as neighbourhood crime watch programs, in response to increased fear of crime and perceived neighbourhood problems. These collective responses occurred when the community's perceived social control and neighbouring were high. Perceived social control refers to the perceived ability to influence one's neighbourhood conditions and events, and was found to be higher among women, long-term homeowners, residents of neighbourhoods with more single-family dwellings, and residents who perceived themselves to be similar to the community, interact more with neighbours, and see the neighbourhood as improving. Neighbouring was defined as local social interactions and was highest when respondents perceived themselves as similar to those in their neighbourhood, were relatively new to the neighbourhood, and were more highly educated. These results indicate that neighbourhoods under stress (higher fear and perceived neighbourhood problems) were more likely to react positively if they felt they were able to influence their neighbourhood and lived in a community where individuals interacted.

Fear Victimization Paradox

The fear victimization paradox refers to the finding that, whereas women experience lower rates of violent criminal victimization than men (Lauritsen & Heimer, 2008; Perreault & Brennan, 2010; Smith & Huff, 1982), they report higher fear of crime (Rader 2009; Weinrath, 1996). Women's rate of criminal victimization in comparison with men's varies depending on the type of crime. The General Social Survey (GSS) produced by Statistics Canada measured rates of crime self-reported to the police in

Canada and found that women were the victim of 70% of the sexual assaults in 2009, whereas men were the victim of 62% of the physical assaults (Perreault & Brennan, 2010). The incidence of both of these crimes, however, was drastically different from each other. Police statistics indicated that, in 2009, physical assaults outnumbered sexual assaults 11 to 1 (Dauvergne & Turner, 2010). Sexual assault 1, 2, and 3, physical assault 1, 2, and 3, and robbery are the three most serious violent crimes recorded and, when combined, make up 66% of the police-reported violent crime incidents in Canada (Dauvergne & Turner, 2010). Taken together, women's rate of victimization was 8% less than men's (Perreault & Brennan, 2010).

In the United States, Lauritsen and Heimer (2008) accessed the results of the National Crime Survey and National Crime Victimizations Survey from the Bureau of Justice Statistics from 1976-2004 for respondents ages 12 and older. They found a number of gender differences in the rates of victimization for different crimes. Figures 6, 7, and 8 display the rates of homicide, robbery, and aggravated assault, respectively. In these figures, the solid lines represent the crime rates for each gender and the scale for these rates is on the left side of the graph. The dotted line represents proportion of male victimization experienced by females, and the scale for this proportion is on the right side of the graph. For example, on the proportion scale, 0.25 is equal to 25%, which would indicate that women's rate of victimization is 25% of men's. For homicide, they found that the rates had remained consistent, with women's rate of homicide victimization remaining approximately 30% of men's rate (Figure 6). The gender ratio for robbery was higher than homicide's and had also remained consistent over the past three decades, with women's rate of victimization being approximately 40-50% that of men's rate (Figure 7). For aggravated assault, the gender disparity had decreased by 30% over the three decades

Figure 6. Homicide victimization by gender: 1976–2004.

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Figure can be found in Lauritsen and Heimer (2008).

Figure 7. Robbery victimization by gender: 1973–2004.

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Figure can be found in Lauritsen and Heimer (2008).

Figure 8. Aggravated assault victimization by gender: 1973–2004.

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Figure can be found in Lauritsen and Heimer (2008).

depicted, with women's rate of victimization being approximately 50% that of men's in 2004 (Figure 8). For all three crimes, the three rates followed a similar pattern over the decades, decreasing steadily except for a slight increase in the 1990's. From this review, it appears that men do experience higher rates of serious violent crime both in Canada and the United States.

The other piece of the fear victimization paradox is that women report higher fear of crime. This is one of the strongest and most consistent findings in the literature (Cops & Pleysier, 2011). Statistics Canada's GSS 2005 fear of crime results indicated that approximately twice as many Canadian women reported being fearful of crime (Gannon, 2006). For fear of walking alone at night, 16% of women and 6% of men indicated they felt somewhat or very unsafe. For fear of waiting for or using public transportation, 58% of women and 29% of men indicated they were somewhat or very worried. For fear of being at home during the evening or night, 27% of women and 12% of men indicated they were somewhat or very worried. Warr (1985) found that, except for buying a weapon, women took more precautions than did men. For example, 9% of men avoided going out at night, whereas 40% of women avoided going out at night. Similarly, 8% of men avoided going out alone, whereas 42% of women avoided going out alone.

Many types of research have focused on women's higher reported fear of crime, including investigations of the way fear of crime is measured (Callanan & Teasdale, 2009), other cultures (Wilcox, Ozer, Gunbeyi, & Gundogdu, 2009; Zhang, Messner, Liu, & Zhuo, 2009), minority groups such as Canadian First Nations (Weinrath, 1999), different types of crime such as terrorism (Nellis, 2009), and varying demographics (Cops & Pleysier, 2011). In all cases, women reported higher overall fear of crime and fear of violent crime.

The primary question investigators have to answer is why women's overall rate of victimization does not appear consistent with their reported fear. One of the first questions to consider is whether crime victimization is actually related to fear of crime. Although it seems intuitive that victimization would cause increased fear, investigators have struggled to answer this question definitively (Hale, 1996). Some investigators have even suggested victimization may reduce fear of crime (e.g., Agnew, 1985; Fox et al., 2009). Agnew (1985), for example, argued that victimization prompts phrases that neutralize their fear, such as "I wasn't hurt badly" or "I probably won't be victimized again," which may be so effective that they lower fear below the respondent's pre-victimization fear.

Bilsky and Wetzels (1997) wrote a criticism of the research in this area, suggesting that the inconclusive findings were a result of numerous methodological problems. For example, they suggested that the measures of crime victimization should ask about the same types of crime as the fear of crime measures, that respondents categorized as "non-victims of crime" should meet a more narrow definition (never experiencing violent or property crimes), and that researcher's statistics should account for the rarity of criminal victimization because comparing unequally sized groups causes a restriction in the range of correlations. For demonstration purposes, Bilsky and Wetzels showed that by using some of their controls, they could increase the positive correlation between victimization history and fear of crime by 129%, from 0.14 to 0.32.

One of the best studies investigating the connection between victimization and fear remains the study conducted by Skogan in 1987. This investigation randomly sampled 1738 residents of specific neighbourhoods that had a mixture of rental apartments and single-family dwellings. Each respondent was given a second interview

one-year after the first. This first interview was treated as a baseline so that recent victimizations (within the last year) could be identified by examining whether the respondent had an increase in their reported victimization since the first interview. Skogan asked respondents about their fear of specific violent (e.g., robbery, assault etc.) and property crimes (e.g., auto theft, burglary), their concern about crime in the neighbourhood (e.g., "how big of a problem is robbery…" etc.), and whether they engaged in household protective behaviours (e.g., increased lighting, locks, timers etc.). Victimization was measured through 17 yes/no questions about whether they had "recently" experienced a list of specific crimes. Skogan found that respondents who experienced recent victimization, which was operationalized as an increase in reported victimization on the second interview, had higher fear of crime. This effect was found for both violent and property victimization. With each additional crime the respondents experienced in the previous year, there was a corresponding increase in fear. In addition, many types of crime victimization caused a similar increase in reported fear.

Studies in Canada have also found that prior victimization, even when it happened in the more distant past, was positively related to fear of crime (Weinrath & Gartrell, 1996). Crime victimization was related to fear of crime directly and indirectly because victimization increased people's assessment of their risk of future victimization (Tseloni & Zarafonitou, 2008) and victimization affects both fear of crime that occurs during the day and at night (Fox, Nobles, & Piquero, 2009).

An issue closely related to whether prior victimization influences fear of crime is whether community crime rates influence individuals' fear of crime. That is, if experiencing victimization causes an increased fear of crime, it would be reasonable to suggest that communities with higher crime rates would have higher rates of fear of

crime. Some investigators have suggested that crime rates are not related to fear of crime (e.g., Taylor & Hale, 1986). Weinrath, Clarke, and Forde (2007) analyzed data from the Winnipeg Area Study from 1984, 1994, and 2004, with each data set being comprised of a sample drawn from approximately 750 households, and found that increases and decreases in crime rates were not related to coinciding increases and decreases in the respondents' fear of crime

Rountree (1998) conducted one of the best studies on this question and found that the two variables had a complex relationship. Rountree accessed a 1990 victimization survey that had sampled 4,638 respondents from 100 Seattle neighbourhoods. Fear of crime was measured by asking respondents two dichotomous (yes/no) questions about fear of violent victimization ("whether they worry at least once a week about being physically attacked") and fear of property victimization ("whether they worry at least once a week about their home being burgled"). The results indicated that neighbourhood burglary rates had a positive relationship with fear of property victimization, but not fear of violent victimization. Violent crime rates had a positive relationship with fear of violent victimization, but, surprisingly, had a negative relationship with fear of property crime. The author speculated that the decrease in fear of property crime was because the fear of violent victimization was so consuming. That is, the respondents who were afraid of violent victimization had "more serious concerns than worry about their home being burglarized" (p. 365). However, other investigators (e.g., Franklin, Franklin, & Fearn, 2008) have examined the influence of crime rates and not found similar results. This inconsistency in the research may be because the relationship between fear of crime and crime rates is complex and requires more detailed measures. For example, a recent study used a very detailed measure of crime (one that could track crime block by block) with

737 residents from Houston, Texas and found that there was a positive relationship between burglaries recently committed near (between 0.1 and 0.5 mile radius) residents and their fear of burglaries (Lai, Zhao, & Longmire, 2012). Perhaps future work with this type of detailed measure will show a more consistent relationship between community crime rates and fear of crime.

This review suggests that the fear victimization paradox can be substantiated from the various findings in the literature. The three elements of this paradox are that men experience more criminal victimization, women report higher fear of crime, and there is a positive relationship between crime victimization and fear of crime. Taken together, these three findings create a paradox that many investigators have attempted to explain.

Determinants of the Fear Victimization Paradox

One of the major theories used to explain the fear victimization paradox is vulnerability theory (Hale, 1996). Vulnerability has been shown to be associated with fear of crime in general (e.g., Snedker, 2012; Stiles, Halim, & Kaplan, 2003). This theory asserts that women experience greater fear of crime because of their feeling of vulnerability due to physical factors (smaller stature). Killias and Clerici (2000) sampled 726 respondents from the general Swiss population (ages ranged from 18 to 85) to investigate the effects of vulnerability on fear of crime. Interviewers, who were blind to the research hypothesis, interviewed respondents in the community (mostly in their homes) and then rated the respondents' characteristics shortly after. The investigators measured many different forms of vulnerability. They measured (a) personal vulnerability (e.g., gender, age, and physical inability to cope with physical attack), (b) social vulnerability, which referred to social characteristics of neighbourhoods (e.g., crime rates, racial composition, and neighbourhood policing), and (c) environmental

vulnerability, which referred to the physical characteristics of neighbourhoods (e.g., graffiti, litter, and street lighting). Gender was the most powerful predictor of fear of crime, with women reporting greater fear, followed by physical vulnerability and age, which were both positively related to fear of crime. In addition, some physical characteristics of the neighbourhood (e.g., graffiti, people loitering, and litter) were also positively correlated with fear. Gender was still a significant predictor of fear of crime after controlling for feelings of physical vulnerability (i.e., inability to cope with physical attack). Therefore, although more research needs to be done on the vulnerability theory (for a review, see Hale, 1996), this investigation suggests that gender's relationship with fear of crime is not completely explained by women's feelings of physical vulnerability.

Closely related to vulnerability theory is socialization theory, which has suggested there is a "social vulnerability" that causes fear of crime (Hale, 1996). Socialization theory asserts that men and women have different influences and expectations (i.e., different "social control") placed on them as they mature, which changes their attitudes and feelings towards crime. Socialization theory maintains that the female gender role has traditionally emphasized submissiveness, whereas the male gender role has emphasized assertiveness. Weis and Borges (1973; as cited in Garofalo, 1979) suggested that women are socialized to be submissive through teaching them to fear crime, particularly rape. Women are then taught to be dependent on men for protection. Men are socialized to be the protector and to be fearless. However, theorists disagree about how socialization operates to create differential fear of crime in men and women. Some authors believe that the difference between men and women can be accounted for by society's expectation that women fulfill roles that entail greater feelings of passivity and dependency (Garofalo, 1979). Others believe that women's greater fear of crime has

more to do with women's feelings of powerlessness and lack of control (Normoyle & Lavrakas, 1984; Sacco & Glackman, 1987). Finally, feminist authors (e.g., Stanko & Hobdell, 1993) argue that socialization theory should not focus on women's socialized feelings of powerlessness but instead on men's socialized inclination for risk-taking. That is, they argue that the focus should not be on why women are more afraid of crime but on why men are irrationally fearless.

Some researchers argue that the fear victimization paradox is not a theoretical issue, but a result of victimization surveys that do not capture the experience of women. Sacco (1990) listed four areas in which victimization surveys fail purportedly in this regard. The first is that women report less victimization than men because they are disproportionately victimized by crimes that are more under-reported than other crimes, such as sexual assault (Ringel, 1997; Skelton & Burkhart, 1980). The second failure of these surveys is that they do not give appropriate weight to the harmful impact of different forms of victimization. More specifically, they show that men experience more violent crime than women, but do not give adequate weight to the significant harm of sexual victimization, which is a type of victimization experienced more by women. For example, women's rate of sexual assault represented 70% to 80% of incidents in Canada in 2009 (Mahony, 2011; Perreault & Brennan, 2009). These sexual assaults could be considered more disturbing or personally violating than other violent crimes, making women's greater fear more understandable. The third reason surveys are misleading is because women's lower victimization rates lead researchers to conclude that they are less at risk for being criminally victimized than men. Some authors argues that women are more targeted by criminals than men, but have lower victimization rates because they engage in more cautious behaviour. Thus, women's greater fear and caution is

understandable because they are actually more at risk for victimization than men (Stafford & Galle, 1984; Warr, 1985). The last reason Sacco (1990) presents is similar to the first; women experience crimes and threatening situations that surveys often do not take into account. For example, surveys do not often ask about sexual harassment at work, inappropriate sexual advances on the street by strangers, or obscene phone calls. These threatening experiences could possibly contribute to fear of more serious victimization.

Investigators have also suggested that fear of crime for women might be more influenced by fear of sexual victimization than other types of victimization (e.g., Sacco, 1990). Ferraro (1996) conducted a phone interview study with a random sample of 1,101 residents (a 61% response rate) from across the United States and asked about the respondents' fear of specific crime (e.g., rape, murder, burglary, robbery, car theft etc.). Ferraro found that fear of rape was positively related to fear of murder and that this correlation was larger in the female sample. The author tested how well fear of rape predicted fear of murder and found that the explained variance in the model increased from 23% to 40%. Also, when the effect of fear of rape was removed from the model, men and women's fear or murder scores reversed, such that men exhibited higher fear of murder than women. This phenomenon was also found with robbery and burglary. These results suggest that fear of rape may be the factor causing women to be more afraid of crime than men. The author theorized that fear of rape was present in crimes that had the potential for face-to-face contact because there is a higher risk of rape occurring as a secondary crime. The authors formulated the 'shadow of sexual assault hypothesis,' which suggests that fear of rape increases fear of other types of crime. For example, if a woman is afraid of burglary, the shadow of sexual assault hypothesis suggests that this

fear is increased by the possibility that the burglary could lead to a sexual assault. The shadow of sexual assault hypothesis accounts for the fear victimization paradox by asserting that women experience more fear of crime because they have greater fear of rape, which influences their fear of many other types of crime. Fisher and Sloan (2003) replicated Ferraro's findings with 3,472 undergraduates (freshman to graduate students ages 18-24) from 12 randomly selected United States colleges and universities. They measured daytime and nighttime fear of various crimes (e.g., rape, larceny/theft, robbery, simple assault, and aggravated assault), as well as the respondents' victimization history for these crimes. Fisher and Sloan's results followed the same pattern as Ferraro's for robbery, simple assault, and aggravated assault. That is, when the effect of fear of sexual assault was removed from the model, men were found to have greater fear than women. These results were confirmed for both daytime and nighttime fear. The finding that larceny/theft did not show the same pattern was also consistent because it only involves the possibility of face-to-face contact, which makes it less likely to progress into sexual assault.

More recently, two theories have been proposed to explain the fear victimization paradox. The first is evolutionary theory, which maintains that evolution is responsible for the difference in fear of crime between men and women. Fetchenhauer and Buunk (2005) contend that men were more successful in mating when they engaged in more risky behaviour, including combat with other men. Thus, the men who were genetically more prone towards risky behaviour and fearlessness were able to mate with more women, thereby passing on their genetically programmed fearlessness to the next generation. The authors also argued that women would be more successful in mating and raising children if they engaged in cautious, avoidant behaviour. Thus, the genetic traits

that made women fearful (causing cautious, avoidant behaviour) were passed on to future generations of women, causing them to be more fearful. To support evolutionary theory, the authors sampled 610 Dutch high school students and 560 parents. They asked both groups to rate how afraid they were of assault, robbery, burglary, and rape. They also asked them to rate their fear of two non-criminal accidents, namely car accidents and suffering from a physical injury by other kinds of accidents. They found that women were not only more afraid of crimes, but more afraid of accidents as well. The authors maintained that this was evidence against vulnerability theory because vulnerabilities like physical stature have no role in car accidents. Thus, women's greater fear must have its roots in evolution. However in drawing this conclusion, the authors did not appear to take into account the effect physical stature may have on people's perceptions of vulnerability, in addition to their actual vulnerability.

Fetchenhauer and Buunk (2005) continued their criticism by attempting to refute inaccurate assessment theory. As previously discussed, the inaccurate assessment theory asserts that victimization surveys do not accurately represent women's victimization because women experience more of the types of crime that are generally under-reported (e.g., sexual assault). Thus, the inaccurate assessment theory suggests that women's greater fear of crime is explained because they actually experience greater criminal victimization. However, Fetchenhauer and Buunk argued that even if men and women experienced similar rates of crime, women would still have greater fear of crime. To support this assertion, they cite the finding that women experience greater fear of car accidents, even though men and women experience similar collision rates. The authors refuted the shadow of sexual assault theory because they found that fear of rape was not only associated with crimes in which rape may occur but also with fear of events having

no association with rape. For example, fear of rape was a good predictor of fear of car accidents, despite the fact that most women do not associate car accidents with the potential for being raped. The authors concluded that fear of rape is simply a good empirical predictor of women's fear of crime generally. To add further evidence, they also examined this relationship with their male sample and found that men's fear of rape, while substantially lower than women's, was a good predictor of their fear of crime and fear of car accidents. Another investigation that similarly questioned the shadow of sexual assault hypothesis was put for by Nellis (2009) who studied the fear of terrorism and found that women were more afraid of terrorism than men, despite there being no increased probability of sexual assault. Wilcox et al. (2009) conducted a similar study on fear of terrorism in Turkey and found had the same result. Finally, the authors refuted the socialization hypothesis. They administered a one-item measure of adherence to male/female stereotypes (i.e., boys must be less fearful than girls) and found that it was unrelated to either gender's fear of crime. However, in their discussion, the authors admit that the use of a single item measure may be inadequate and that culture probably plays some role in gender differences.

The most recent explanation for the fear victimization paradox is the mobility theory proposed by Whitely and Prince (2005). Their theory contends that women have greater fear of crime because of 'time-space inequalities.' This term refers to the authors' suggestion that women have less access to time and different spaces within their environment. For example, women generally have less money and, as a result, may be forced to walk or take public transportation rather than their own car or a taxi. Whitely and Prince developed this theory through a qualitative study of people in an inner-community in London, England. The authors found that women who were wealthier did

not appear as concerned about crime in their neighbourhood because they could avoid the danger by taking a car or taxi rather than walking. In addition, these wealthier women spent less time in their local environment because of work and holidays. This finding, that women who have more money are less afraid, is consistent with the general finding that both men and women with higher socio-economic status (SES) are less afraid (Doob & Macdonald, 1979). In short, Whitely and Prince (2005) found that certain socio-demographic factors such as being female, having children, and having a pre-existing mental health problem all contributed most acutely to increased fear of crime. Despite the authors' contention that this is an innovative theory, it appears to be very similar to, or perhaps an extension of, the vulnerability theory described earlier.

Despite the assortment of theories suggested by investigators, the fear victimization paradox has remained unresolved and the contribution of different theories remains unclear. One explanation for the fear victimization paradox that has yet to garner a solid position in the literature is social desirability theory.

Social desirability. Although previous investigators have given many explanations for women's greater reported fear of crime they have, for the most part, discounted male bravado as a possible explanation. Male bravado can be defined as male adherence to, and actions consistent with, society's male gender stereotype. This stereotype consists of men being assertive, appearing invulnerable, and appearing fearless (Goodey, 1995). The extreme of this stereotype, termed hyper-masculinity, has been characterized as being aggressive, rebellious, controlling, unsympathetic, uncurious, sensation seeking, sexually entitled, and emotionally constricted (Burk, Burkhart, & Sikorski, 2004; Mosher & Sirkin, 1984). Men's attempts to appear less afraid than they really are may be more influential in men's reported fear of crime than previously

believed (Gilchrist, Bannister, Ditton, & Farrall, 1998; Goodey, 1995). Men's attempts to appear less afraid can be thought of as a response bias caused by the respondent attempting to appear in a socially desirable way.

It could be argued that the social desirability hypothesis can be differentiated from the socialization hypothesis. This depends on the view taken regarding the socialization process, which is the way in which people learn society norms and values from their environment. If the socialization process is completely internalized (i.e., integrated into the individual's identity), it would mean that the teachings of society have so influenced men's psyche that they are actually less afraid of crime than women. If this was the case, there would be no social desirability bias; the finding that men are less afraid would be an accurate assessment of their emotions and actions. This perspective is different from the social desirability hypothesis, which holds that socialization does not completely change men's identity and emotional reactions. Instead, the social desirability hypothesis argues that men, either consciously or unconsciously, change their responses to make them more socially appropriate (i.e., less afraid).

The potential social desirability bias in researchers' findings is often discounted as being small or inconsequential; however, in many topic areas this bias can have a profound effect on the findings and conclusions. The amount of response bias to which any topic is subject largely depends on people's perceptions of how consistent is their response to social norms or ideals (Tourangeau, Rips, & Rasinski, 2000). On some topics, respondents tend to under-report and, on other topics, they tend to over-report to represent themselves in a more favourable fashion (for a review, see Tourangeau et al., 2000). For example, respondents tend to under-report illicit drug use (e.g., Fendrich & Vaughn, 1994), smoking (e.g., Patrick et al., 1994), and some kinds of sexual behaviour

(e.g., Herold & Way, 1988). In contrast, respondents tend to over-report church attendance (e.g., Presser & Stinnson, 1998), voting behaviour (e.g., Presser, 1990), and other kinds of sexual behaviour (e.g., Tourangeau & Smith, 1996). In addition, social desirability bias can apply to different groups differently. For example, males tend to over-report their number of sexual partners (e.g., Tourangeau & Smith, 1996), whereas females tend to under-report their number of sexual partners (e.g., Herold & Way, 1988).

Measuring reporting bias is difficult, but investigators have developed ways of assessing the extent to which a topic is sensitive and liable to have response bias. One common way to detect sensitivity is to compare different methods of measurement. Researchers often find that different methods of measurement produce different results (e.g., Burkhart, Green, & Harrison, 1979), but it can be difficult to determine whether the difference between measurement types is due to something related to the measurement itself or whether the difference is due to the fact that the different measures are actually measuring different constructs. However, sometimes different measurement methods can quite clearly display response bias. For example, women report more sexual partners when answering a paper and pencil survey than when being interviewed (Tourangeau & Smith, 1996). It is also possible to decrease bias by misleading participants into believing that biased responding can be detected in some way. Another method to detect a social desirability bias is to compare the respondents' self-report with objective information. For example, it is possible to compare self-reported smoking with saliva tests that detect recent smoking. It is also possible to compare two self-reports that are related in some way to detect inconsistencies. For example, a husband and wife could be questioned regarding who takes out the garbage and their responses compared for inconsistencies. Finally, it is possible to use a lie scale that measures the degree to which a person is

generally attempting to appear socially desirable (e.g., Bem, 1974; Sutton & Farrall, 2005). Such scales use statements that are socially desirable, but true of almost no one, to detect whether or not people are attempting to appear overly positive. Despite the use of the term 'bias,' it should be noted that social desirability bias is not necessarily a form of testing error, but instead can sometimes be considered a part of culture and, as such, a legitimate topic for inquiry (Crowne & Marlowe, 1964, as cited in Ortega & Myles, 1987). Given the importance of gender identity as a general topic of study, the potential social desirability bias found in the fear of crime literature should not be considered merely testing error but, instead, a legitimate topic worthy of investigation.

The lack of attention male bravado has received in the fear of crime literature is apparent in many ways. Although exceptions have become more frequent since Sutton and Farrall (2005) published their research on the topic (e.g., Elchardus, De Groof, & Smits, 2008), one of the most obvious demonstrations is the lack of consideration male bravado has received in fear of crime literature reviews (e.g., Baumer, 1978, 1985; Franklin et al., 2008; Giles-Sims, 1984; Gomme, 1988; Gordon, Riger, LeBailly & Heath, 1980; LaGrange & Ferraro, 1989; Miethe & Lee, 1984; Schafer et al., 2006; Smith & Hill, 1991a, b; Toseland, 1982; Warr, 1984, 1985). Generally speaking, investigators have discounted the male bravado explanation based on the assumption that the relationship between fear of crime and gender is too strong and robust for male bravado to be a plausible theory (e.g., Clemente & Kleiman, 1977-1978).

Goodey (1995) and Gilchrist et al. (1998) were some of the first authors to explore masculinity as a potentially important factor for explaining gender differences in fear of crime. Goodey asserted that men have as much fear as women but need to display a 'fearless façade.' Goodey argued that boys begin to adopt this fearless façade in

adolescence when they attempt to achieve their rightful masculine identity and to maintain a masculine position of power and control. When examining the extreme masculinity, termed hyper-masculinity (Burk et al., 2004; Mosher & Sirkin, 1984), Norris (1996, as cited in Burk et al., 2004) hypothesized that identification with the masculine role causes men to limit their emotional responding. He/she found that men who adopted this role avoided most emotional responses in favor of expressing either anger or fear.

To examine socially desirable responding and how it relates to fear of crime, Sutton, Robinson, and Farrall (2011) conducted an experiment with 50 men and 50 women who were interviewed in a coffee shop in Straffordshire, England. Each participant was asked to rate his/her fear of, and how much he/she thought about five different types of crime (burglary, vandalism, assault, sexual assault, and being mugged). The researchers manipulated the instructions to the questions so that the respondents were first asked to respond honestly and then were asked again with the instruction to respond as in a way that "portrays themselves in the best possible light" (p. 426). The researchers found that the instruction to respond in a socially desirable fashion caused opposite responses in men and women; men responded with lower reported fear of crime and women with higher reported fear of crime. Sutton et al. argued that this experiment shows the each gender, if they were to show a bias, would be biased in the direction of their gender stereotype, with men desiring to appear less afraid and women desiring to appear more afraid. They argued that each gender is motivated to respond in a biased fashion in order to avoid negative effects that occur to those who break stereotypes (Rudman & Fairchild, 2004).

Sutton and Farrall (2005) also studied the question of whether or not a significant social desirability bias is present in reports of fear of crime. They used data from a

sample of 1,629 people in the Strathclyde area of Scotland in 1996. All of the participants were asked how afraid they were and the amount they thought about three different crimes, namely break and enter, assault, and vandalism. In addition, 288 participants (176 women and 112 men) were given a lie scale to measure social desirability. The hypothesis that women report more fear of crime than men was tested first across the entire sample. As expected, women reported more fear of crime than did men. To assess for a potential social desirability bias, the authors calculated two regression equations, one for women and one for men to predict what the respondents' fear of crime would be with no social desirability bias. These equations were calculated only with the 288 participants who completed the lie scale. Sutton and Farrall found a significant negative relationship between fear of crime and social desirability for men, but not for women. This finding indicated that the men's responses were influenced by a social desirability bias. Men's regression equation from this first analyses were then used to predict what their scores would have been if the men had responded with no social desirability bias. Although the authors only used the men from the 288 participants to calculate the regression equation, the equation was used to change all of the men's fear of crime scores in the complete sample of 1,629 participants. The authors changed the responses of the larger sample to increase the statistical power of the subsequent tests they completed. After they had used the regression equation to transform the men's actual fear of crime scores into the predicted (theoretically unbiased) fear of crime scores, the authors re-ran the initial Independent Samples t-test with all 1,629 participants. They discovered that changing the fear of crime scores reversed the original findings. The results now indicated that men scored significantly higher on fear of crime than did women. As previously mentioned, earlier research attempted to discover why women were more

afraid of crime than men. If Sutton and Farrall's (2005) finding is accurate, it would be a significant step towards resolving the victimization paradox by explaining why women report more fear of crime despite lower victimization rates.

Sutton and Farrall's (2005) study was very provocative, but it contained some weaknesses. Its first weakness was their generalization of the regression equations from the 288 participants to all 1,629 participants. This generalization gave their later analysis greater statistical power to find significant differences between men and women after accounting for social desirability bias. However, this increased power may not have been deserved. The regression equations formulated with the lower number of participants would have greater error variance because the smaller sample was less representative than the larger sample of 1,629 participants. Thus, the authors utilized the increased power of the larger sample for their analysis even though these scores had inflated error variance. Second, Sutton and Farrall used a fairly simple measure of fear of crime. As already discussed, more sophisticated measures of fear of crime have been developed that assess more types of crime and separate dimensions of fear (e.g., assessment of risk, concern, and protective behaviour). Third, Sutton and Farrall assessed three different types of crime (burglary, assault, and vandalism). However, they did not separate fear of sexual crime from fear of non-sexual crime. This distinction had proven to be important in past investigations (Ferraro, 1996) when it comes to accounting for gender differences in fear of crime responding. By not using separate measures of fear of crime and fear of sexual crime, Sutton and Farrall were unable to dispute Ferraro's claim that gender differences in fear of crime responding can be accounted for by women's disproportionate fear of sexual victimization. Sutton and Farrall's (2005) findings have not yet been replicated.

Present Research

From the literature on fear of crime, it is clear Sutton and Farrall (2005) made an important discovery that could turn the direction of research on fear of crime. For this reason, the present study attempted to replicate Sutton and Farrall's finding, with some important methodological improvements. First, the present investigation increased the sample size from the 288 community respondents to 1,009 university students and 508 community residents. The second improvement involved including measures of both sexual and non-sexual fear of crime. Fear of sexual crime was of particular interest because, taken alone, it is not a part of the fear victimization paradox. That is, women experience greater rates of sexual victimization than men (Dauvergne & Turner, 2010) and also report greater fear of sexual victimization than men (e.g., Ferraro, 1996). The third improvement was improved measures of both fear of crime and social desirability.

Hypothesis 1 predicted that women would report greater fear of crime than men. This hypothesis has been very well supported in the literature and alone does not advance it. Instead, it is a foundational hypothesis that, if supported, would allow the remaining hypotheses to be tested.

Hypothesis 2 predicted that men and women's fear of crime scores would reverse when the effect of social desirability was taken into account. It was expected that women's scores would be higher than men's initially (Hypothesis 1). Hypothesis 2 predicted that a negative relationship between social desirability and men's fear of crime and would be of sufficient strength that the removal of its effect would raise men's scores above women's. This hypothesis was created to attempt to replicate Sutton and Farrall (2005) and was the central hypothesis of the investigation.

The third and fourth hypothesis of this study focused on investigating the relationship between social desirability and fear of sexual crime. In order to obtain a clear picture of how social desirability related to fear of sexual victimization, a measure was created that represented fear of non-sexual victimization. Hypothesis 3 predicted that social desirability would relate to fear of non-sexual victimization in the same way it had with fear of crime in general. That is, men and women's fear of non-sexual crime scores would reverse when the effect of social desirability was taken into account.

Hypothesis 4 predicted that women would report greater fear than men of sexual crime, when social desirability was taken into account. It was expected that social desirability would relate to fear of sexual crime differently than it had with fear of crime in general and fear of non-sexual crime. Specifically, social desirability was not hypothesized to affect respondent's fear of sexual crime. This was expected for two reasons. The first was that fear of sexual crime is not part of the fear victimization paradox. For this particular type of crime, women's higher rates of victimization gave them ample reason to be more afraid than men. Second, there was no literature suggesting otherwise. All of the literature reviewed suggested that women were more afraid of sexual crime. Moreover, Sutton and Farrall (2005) did not provide contrary evidence on this relationship because their study did not ask respondents about fear of sexual crime.

In addition to these central hypotheses, post-hoc analyses were conducted. The post-hoc analysis in this study concerned the relationship between hyper-masculinity and fear of crime. Sutton and Farrall (2005), as well as a few other theorists (Goodey, 1995; Gilchrist et al., 1998), have theorized that men's reluctance to admit their fear is because of their masculinity. As already mentioned, the extreme expression of masculinity has been termed hyper-masculinity (Burk et al., 2004; Mosher & Sirkin, 1984). This study

conducted a preliminary analysis of the relationship between social desirability and hyper-masculinity and the moderating effect of hyper-masculinity on the relationship between gender and fear of crime.

This study also sought to comment on the distribution of fear in Winnipeg, the relationship between fear of crime and respondents' history of victimization, and the relationship between fear of crime and other socio-demographic variables.

Method

Participants

This research drew a sample of 1,009 participants from the University of Manitoba's Introduction to Psychology research participant pool which contains a representative sample of first-year university students. This population was expected to be a good sample for the purposes of the present study as previous research indicates post-secondary students display the typical pattern of women reporting greater fear of crime than men (Fox et al., 2009; McConnell, 1997). Investigators have also found that university students have sufficient experience to display a social desirability bias in their responding (Stöber, 2001).

In addition to the university sample, a sample of 508 participants from the City of Winnipeg was also collected. This sample was collected to ascertain whether the findings of the study generalized to the Winnipeg population as a whole.

Both university students and community residents had to meet a number of recruitment criteria. Each participant was required to: (a) be at least 18 years of age, (b) have completed grade eight, (c) have lived in Winnipeg for the last five years or longer, and (d) indicate their gender on the questionnaire. Participants were required to be 18 or older because adults were the focus of the research. They were required to have completed grade eight to ensure that they were able to understand the questionnaire. Participants were required to have lived in Winnipeg for the last five years or longer because fear of crime in Winnipeg was the focus of the investigation. Participants were required to specify their gender because this variable was central to the research hypotheses. For the community sample, respondents were required to be the person in the household who had celebrated his or her birthday most recently. This requirement was

included to ensure that the community sample was sufficiently random. It prevented an over-selection of people who had attributes (e.g., personality, education, etc.) that made them more likely to answer the telephone. For example, there may be a certain person in a household who, perhaps being more of an extrovert, is more likely to answer the telephone. By having the most recent birthday as a selection criterion, no personal attribute was permitted to bias the sample.

Procedures

University participants. A brief summary of the research was posted on a website the university utilizes to allow students to view available research projects. The summary informed students that the research was on the topic of fear of crime and specified criteria for participation. Students registered online to participate in the research at pre-determined times (time-slots). At the beginning of the time-slot, participants were emailed a link to the online research and given one week to complete the research online. The online survey program Surveymonkey.com was used to collect the students' responses. Students who did not complete the research within the first week were sent a reminder email that informed them that they had been given a one-week extension to complete the questionnaire. One student who did not complete the questionnaire later claimed that she had not received the email containing the link to the research. Efforts were made to ensure that this student had ample opportunity to complete the research.

Before participants began the questionnaire, they were presented with instructions on how to participate (Appendix A). The instructions outlined that the student must first read the informed consent form and agree to participate before complete the questionnaire. After reading the instructions, the participants were presented with the consent form (Appendix B). The participants were able to print a copy of the consent

form for their own records. Participants were then linked to a website containing the questionnaire to complete. The university participants received partial credit for their Introduction to Psychology class in exchange for participating in the study for one hour. Participants were provided with a summary of the research findings as soon as they were known available.

Community participants. The community sample was obtained by randomly phoning households in Winnipeg and inviting one adult resident from each household to complete the questionnaire online. Random phone numbers were obtained by first randomly selecting one of the 4040 Winnipeg streets. Once the street was chosen, one of the postal codes on that street was randomly selected (there was an average of 5.2 postal codes for each street). Once the postal code was chosen, all of the phone numbers for that postal code area and street were identified by using a procedure available on the White Pages website (there was an average of 16.8 phone numbers for each street and postal code). Every phone number from the selected street and postal code was then called and invited to participate in the research. During the collection of this data, 19,795 calls were made to 12,100 phone numbers.

During the telephone recruitment, potential participants were provided with basic information regarding the purpose, procedure, criteria, and compensation for the research (Appendix A). They were informed that they were being invited to participate in a research project of a doctoral student from the University of Manitoba and that they would be able to participate on the internet at their convenience. Participants who agreed to participate were provided with two different options for participating. The first, and the most common, was to provide the researcher with their e-mail address. The participant was then e-mailed a link to the online questionnaire. Participants were informed that a

reminder e-mail would be sent two weeks later, if they had not yet participated. The second option was to provide the participant with the link over the phone, which they could then type into the address bar of their internet browser to access the research website. Participants were encouraged to provide their email because the link proved to be cumbersome for people to copy down correctly over the phone (e.g., www.winnipegcrimeresearch.com/link100.html). The potential participants were also informed, prior to asking for their e-mail address, about the criteria for participating in the research, which were described above. Potential participants were informed that they would be eligible for a draw for one $100 prize and five $50 prizes (St. Vital Centre Shopping Centre gift cards) if they agreed to participate in the research. Community participants were presented with a modified version of the instructions that were presented to the university students (Appendix A). The instructions for the community participants outlined how to provide contact information for entering the prize draw. They were then presented with a consent form (Appendix B). Community participants were also provided with an opportunity to print a copy of the consent form for their records. Community respondents were informed that they could receive a summary of the findings of the research if they provided some form of contact information (e-mail or mailing address), or that they could view the summary on a website created for that purpose.

Of the eligible community respondents that were invited to participate, 3299 indicated that they did not want to participate or were too busy to complete the research, 1183 people indicated that they intended to participate and were given a link (by email or phone) to participate, and 582 respondents completed the questionnaire. This constituted an 11% response rate, which was fairly low compared with other telephone surveys (e.g.,

Eschholz et al., 2003). Part of the reason for this lower response rate may have been the length of the survey, which took approximately 25 minutes to complete. In addition, the survey was not completed directly over the phone, but instead required respondents to complete the survey online at a later time, which likely contributed to people not responding.

Measures

To aid with reading the measures section and the results of this investigation, a table of some of the basic information (e.g., acronym, number of items, etc.) for the measures used in this study was created for reference purposes (Table 3).

Social-demographic Characteristics. This section of the questionnaire contained social-demographic questions (Appendix C) which asked for the respondents' gender, age, marital status, and education. These questions were adapted from Anderson (2001) and were chosen because they were in a proven and understandable format.

Two additional questions were added for this research, namely how many years the participants have lived in Winnipeg and their postal code. In order to participate in the research, the respondents must have lived a substantial amount of time in Winnipeg. As already mentioned, this was included as a criterion because the research was interested in the fear of crime produced by the experience of living in Winnipeg. Asking participants to provide their postal code allowed the investigator to approximate the geographic distribution of the respondents' residences.

Criminal trauma history. This section asked about the participants' past criminal victimization (Appendix D). This measure was developed by the investigator in order to follow the recommendation of Bilsky and Wetzels (1997) who suggested that the fear of crime measure and victimization history measure should mirror each other. In

Table 3

Summary of Measure Acronyms, Number of Items, Response Scale and Scale Direction

Measure	Acronym	# of Items	Response Scale	Scale Direction
Revised Eysenck Personality Questionnaire Short Scale Version	EPQR-S	12	1 (yes) - 2 (no)	Higher = greater social desirability
Marlow-Crowne Social Desirability Scale	M-C SDS	33	1 (yes) - 2 (no)	Higher = greater social desirability
Sutton-Farrall Fear of Crime Inventory	S-F FCI	6	1 (not at all) - 5 (all the time)	Higher = greater fear of crime
Threat to Victimization	Threat	94	1 - 10	Higher = greater fear of crime
Threat Subscales				
Farrall-Gadd Fear of Crime Inventory	F-G FCI	32	1 (not very fearful) - 10 (very fearful)	Higher = greater fear of crime
Crime Precautions Scale	-	29	1 (never) - 10 (most of the time), (yes/no)	Higher = more protective behaviours
Risk of Victimization Scale	RSV	16	1 (not at all likely) - 10 (very likely)	Higher = greater perceived risk
Concern about Crime	-	17	1 (not worried at all) - 10 (very worried)	Higher = greater worry
Threat to Sexual Victimization	Sex Threat	8	1-10	Higher = greater sexual fear
Threat to Non-Sexual Victimization	Non-Sex Threat	52	1-10	Higher = greater non-sexual fear
Criminal Trauma History	HV	15	0 (never) - 4 (many times)	Higher = more past victimization
Auburn Differential Masculinity Inventory	ADMI	60	1 (not at all like me) - 5 (very much like me)	Higher = greater hyper-masculinity

order to follow this recommendation, the criminal trauma history questions ask about the same types of crime as the fear of crime measures. In addition, the form of the criminal trauma questions was modeled after the form of the Farrall-Gadd Fear of Crime Index (F-G FCI; Farrall & Gadd, 2004). The measure was named History of Victimization (HV).

The questions in this section asked about the various types of crime the respondents had experienced and how frequently they had experienced each type. Each of the fifteen sections of the measure asked about a specific form of victimization. As already described, the different types of victimization that were used for this section were the same ones used in the Threat to Victimization measure that was developed for this research. This list was taken from the Risk of Victimization measure, which is a subscale of the Threat to Victimization measure.

Respondents were first asked whether they had experienced a crime before being asked how frequently, just as the F-G FCI questions first asked whether the respondents had experienced fear before asking further questions. For example, section 14 first asks "Have you ever had your property damaged by vandals?" If the respondent indicates "no" then the survey takes them to the next section of the questionnaire. However, if the respondent indicates "yes" to this first question he or she is asked a second question "How frequently has this happened to you?" which is answered on a four point scale (A = once, B = a couple of times, C = a number of times, D = many times). These two questions were combined to create a five point scale where 0 was recorded for all respondents who indicated "no" to the first question, and the four responses on the second question were recorded in order from 1 for "once" to 4 for "many times." An average score was created by finding the mean for the respondents' answers to the fifteen different crime types. Using this same method, total scores were also found for the

questions asking about sexual victimization and the questions asking about property and violent victimization. Although the respondents' victimization history was not used in any hypothesis testing, this section of the questionnaire allowed for a more complete description of the sample.

Social desirability scales. Sutton and Farrall (2005) used the Revised Eysenck Personality Questionnaire – Short Scale Version (EPQR-S; Francis, Brown, & Philipchalk, 1992; Appendix E) in their research. This measure was included in the present research as part of the replication of Sutton and Farrall (2005). The EPQR-S is a personality inventory developed with a Lie Scale to measure social desirability. Although the entire 48-question personality inventory was administered to ensure that the replication was as accurate as possible, only the 12 questions that comprise the Lie Scale were of interest.

This lie scale assessed social desirability by asking questions that are false or true of almost everyone but are socially desirable. Thus, the more questions respondents answer in a socially desirable and (probably) untruthful way, the higher will be their score. One example is, "Were you ever greedy by helping yourself to more than your share of anything?" The respondents answer the measure's questions using a yes/no scale (yes = 1, and no = 2). In this example, the statement is socially undesirable but almost certainly true for respondents. Thus, if participants respond by saying "No," it is untrue of them, they are very likely responding with a social desirability bias. Four of the items on this scale were the opposite of the example presented (i.e., presented socially desirable situations that are false of almost everyone). For example, "Are *all* of your habits good and desirable ones?" These items were reversed scored so that, again, higher scores reflected greater social desirability. All 12 items from the lie scale were used to create an

average score. On this scale, a score of one indicates no social desirability bias, whereas a score of two indicates the highest possible social desirability bias.

Francis et al. (1992) tested the EPQR-S on undergraduate students in Canada, the United States, Australia, and Britain. In their analysis, the Cronbach alphas of the Lie Scale was acceptable for research purposes (0.65 - 0.71). They also found that the Lie Scale was independent of the other EPQR-S scales.

Sutton and Farrall used only the lie scale of the EPQR-S to measure social desirability and this was a methodological shortcoming because it is unlikely that one measure can adequately capture all pertinent aspects of one construct. This problem is especially important when the construct being measured is key to the central hypothesis of the research. To help correct this shortcoming, the present investigation included the Marlow-Crowne Social Desirability Scale (M-C SDS; Crowne & Marlowe, 1960; Appendix E) in addition to the EPQR-S. The M-C SDS uses the same type of question used by the EPQR-S lie scale. For example, one M-C SDS question is, "I like to gossip at times." The respondents answered the M-C SDS questions using a yes/no scale (yes = 1 and no = 2). Eighteen questions were presented in an opposite manner (i.e., presented socially desirable situations that are false of almost everyone) and these questions were reverse scored, so a higher score would represent greater social desirability. Once again, averages were taken. On this scale, a score of one indicated no social desirability bias, whereas a score of two indicated the highest possible social desirability bias.

Crowne and Marlowe (1960) administered the M-C SDS to university students and found that its internal consistency was 0.88 as measured by the Kudar-Richardson test and the test re-test reliability over a month was 0.89. Beretvas, Meyers, and Leite (2002) meta-analysis indicated that male respondents' scores have a Cronbach's alpha

reliability of 0.80 and female respondents' scores have a Cronbach's alpha reliability of 0.70. The M-C SDS was chosen for the current study because it was developed to be used on 'normal' populations, which made it appropriate for use with the present sample.

Fear of crime. Sutton and Farrall (2005) used one overall index of fear of crime in their research (Appendix F). They did not name this measure; so the present research will refer to it as the Sutton and Farrall Fear of Crime Inventory (S-F FCI). The S-F FCI has six items that ask participants to rate their fear of and how much they think about three types of crime, namely, burglary, assault, and vandalism. An example of one of this measure's items is, "In your everyday life are you AFRAID of someone breaking into your home?" The respondents answer the questions on a 1-5 scale (1 = not at all, 2 = hardly ever, 3 = don't know, 4 = some of the time, and 5 = all of the time). From these six questions, Sutton and Farrall created an overall index for fear of crime (Cronbach's α = 0.80). In the present investigation, an average score was created.

The current investigation improved upon Sutton and Farrall's research methodology by utilizing more than one measure of fear of crime. The second measure that was used in the present research for fear of crime was Rader's (2004) 'threat to victimization.' As already discussed, the threat to victimization includes three aspects of the fear of crime construct; the emotional, cognitive, and behavioural dimension. To measure these constructs, a number of different scales were used.

Emotional fear of crime. To assess the emotional dimension of threat to victimization, a measure was adapted from Farrall and Gadd (2004); the Farrall-Gadd Fear of Crime Inventory (F-G FCI) (Appendix F). The F-G FCI has 11 sections, each of which has three questions about one type of crime. The first question asks whether the respondent has "felt fearful about the possibility of (e.g., being a victim of crime) in the

past year?" and is answered on a "Yes/No" scale. The second question asks, "How frequently have you felt like this in the past year?" This is answered from 1-4 (1 = rarely, 2 = sometimes, 3 = often, and 4 = all the time). The third question asks, "On the last occasion, how fearful did you feel?" This is also answered from 1-4 (1 = not very fearful, 2 = a little bit fearful, 3 = quite fearful, and 4 = very fearful). On both scales, respondents were also given the option of indicating that they "don't know." These responses were considered missing data. The respondents who answered "no" to the first question were not asked the second and third question because some authors have suggested that these questions can lead people with no fear of crime to indicate some level of fear because of their wording. The respondents who answered "no" to the first question were automatically scored with 1 on the second question (indicating that they had never felt this way in the past year) and 1 for the third question (indicating that they had not felt fearful). A total score for this measure was created by first recoding the responses to the second and third question so that they fell on a 1-10 scale. This recoding was done so that the responses from this measure would be commensurate with two other measures that use a ten point scale (RVS and Concern about Crime). These recoded responses were then used to create an average score.

The F-G FCI addresses many of the criticisms in the literature about past measures of fear of crime. Farrall and Gadd (2004) reviewed these and recommended how researchers should measure the construct in the future. A brief review of the multiple criticisms of previous fear of crime measures include: (a) beginning questions with the word "how" because it has been suggested to be leading, (b) failing to mention crime at all, (c) referring to imprecise geographical areas (e.g., neighbourhood), (d) asking about activities in which many people do not engage (e.g., walking alone at night), (e) mixing

fear with risk assessment, (f) mixing real ("do you") with imagined ("would you"), and (q) failing to refer to a specific time period. Farrall and Gadd addressed these issues by breaking down the fear of crime into three separate questions already described.

Farrall and Gadd (2004) suggest that the F-G FCI can be used to assess fear of different specific crimes. The present study was interested in the populations' general fear of crime, as well as their fear of many specific crimes. Thus, the questionnaire used a list of crimes reproduced from the Risk of Victimization Scale discussed below. Unfortunately, because the F-G FCI utilizes the most recent literature regarding fear of crime measurement, it lacks the history that would provide psychometric data.

Risk of Victimization. To measure the cognitive dimension of the Threat to Victimization, a measure of risk of victimization was adapted from LaGrange et al. (1992) (Appendix H) to be referred to as the measure as the Risk of Victimization Scale (RVS). An example of one of the RVS's 17 questions is, "How likely do you think it is that you will have your car stolen?" Respondents are given a ten-point scale where 1 is equal to "it's not very likely" and 10 is equal to "it's very likely." Average scores wer then calculated. LaGrange et al. found a Cronbach's alpha of 0.87.

Three questions on the RVS were adapted for the purposes of the proposed investigation. The first change was to split the assault with a weapon question into two separate questions. Instead of having one question ask about the risk of being attacked by someone with a weapon, two questions were asked - one question about being attacked by a stranger and one about being attacked by someone known. This change allowed the RVS to assess both public and private crime. The second change was to remove a question which asks about being approached by a beggar or panhandler, as this is not a crime in Winnipeg. Finally, one question was added that asks about the risk of being

victimized by crime in general. This question was added to capture the respondents' overall assessment of their risk of being victimized.

Concern about Crime. The cognitive dimension of Threat to Victimization was also measured by a second set of questions that asked about concern about crime. Concern about crime refers to people's general worry about crime. This concern could be thought of as a personal value because people who value a crime-free society will be very concerned and are likely to worry about escalating crime. This construct was measured using the Concern about Crime Scale (Williams et al., 2000; Appendix I). Concern about Crime is a one-item measure that asks, "On a scale of 1 to 10, how concerned are you about crime in general?" The respondents were required to answer on a scale from 1 (not worried at all) to 10 (very worried). As it is a one-item measure, Williams et al. (2000) were unable to provide any reliability statistics.

In the present study, the above measure was adapted to make it more comprehensive. Instead of only addressing concern about crime in general, the adapted measure had seventeen questions that asked about concern regarding a variety of different types of crime. For example, one question asked, "On a scale of 1-10, how concerned are you that you will be murdered?" The response scale for the new questions remained unchanged. The list of different crimes was the same as the list used in the RVS. Average scores were calculated.

Crime Precautions. The behavioural dimension of the Threat to Victimization was measured using the Crime Precautions scale (Williams et al., 2000; Appendix G). This measure contains 29 questions regarding different precautions people take against crime. Eleven questions are answered from 1 (most of the time) to 4 (never). For example, one item asks if the person takes the precaution of getting "someone to go with

[him/her] when [he/she goes] out after dark?" Eighteen items are answered either yes/no (1 = yes, 2 = no). For example, one question asks if the respondent had installed a door security chain. Again, the responses from all 29 questions was placed on a 10 point scale in order to be commensurate with other measures (RVS and Concern about Crime) with which it was combined. Responses were reverse scored so a higher number would indicate greater crime precaution. Once all of the questions were on the ten point scale, an average score for this measure was calculated. Williams et al. (2000) mailed-out the Crime Precautions Scale to a random sample of 2,000 respondents from the southwestern United States. Based on 1,152 responses (58% response rate), Williams et al. (2000) reported the scale had a Cronbach's alpha of 0.71.

Threat to Victimization. Based on Rader's (2004) threat to victimization conceptualization and subsequent empirical testing (May et al., 2010; Rader, May & Goodrum, 2007), an omnibus measure of fear of crime was created by the investigator to measure the emotional, cognitive, and behavioural components of fear of crime. However, the cognitive component of this measure was created to also be consistent with Ferraro and LaGrange's (1987) conceptualization of the cognitive component of fear of crime. That is, instead of only considering risk to victimization, as Rader (2004) did, for the cognitive component, both risk of victimization and concern about crime were measured. Therefore, the omnibus measure of fear of crime included the following components. For the emotional component, the F-G FCI was used, for the cognitive component, both the RSV and Concern about Crime were used, and for the behavioural component, Crime Precautions was used. All of these measures were combined into one omnibus Threat to Victimization Scale by converting the totals scores for each subscale

(F-G FCI, RSV, Concern about Crime, and Crime Precautions) into z-scores and then finding the mean these z-scores.

Threat to Non-Sexual Victimization. The Threat to Non-Sexual Victimization Scale is a subset of questions from the Threat to Victimization scale. This scale contained all of the questions from the FG-FCI, RVS, and Concern about Crime except the six questions that refer to sexual victimization and the five questions that refer to crime in general in these scales. In addition, the Crime Precautions scale was not used in this measure because it is impossible to distinguish what type of crimes these precautions are attempting to prevent. That is, if a respondent indicated that they bought a security system for their home, it is not possible to know whether they bought this system to prevent a non-sexual crime (e.g., burglary) or a sexual crime (e.g., sexual assault). The combination of these different questions measured the threat of specifically non-sexual crime. Similarly to Threat to Victimization, this scale was tabulated by finding the z-score of the relevant subscales and then calculated the mean of these scores to create the overall scale.

Threat to Sexual Victimization. The Threat to Sexual Victimization Scale is another subset of the questions from the Threat to Victimization scale. This scale included the six questions from the FG-FCI, RVS, and Concern about Crime that refer to sexual crime. Again, the Crime Precautions scale was not used in this measure because it is impossible to distinguish what type of crimes these precautions are attempting to prevent. These questions assessed respondents' responses to specifically sexual crime. Again, this scale was calculated by calculating the z-scores for the relevant subscales and then finding the mean of these scores to create the overall scale.

Hyper-masculinity. Burk et al. (2004) developed the Auburn Differential Masculinity Inventory (AMDI; Appendix J), which measures "hyper-masculinity." This measure was only administered to the men in the university sample. The community sample was not given this measure to because it was not necessary to test the research hypotheses and because of the possibility that this added length would contribute to a low response rate. Mosher and Sirkin (1984) define hyper-masculinity as the exaggeration of the masculine stereotype and as being made up of three components: (a) calloused sex attitudes toward women, (b) a conception of violence as manly, and (c) a view of danger as exciting (p. 151). This construct is associated with a number of characteristics including being aggressive, rebellious, controlling, unsympathetic, uncurious, and inconsistent generally. This measure was included for post-hoc analysis to test the possibility that hyper-masculinity may be a factor contributing to men's reduced fear of crime. The ADMI asks participants to respond on a 5-point scale (1 = very much like me, 2 = like me, 3 = a little like me, 4 = not much like me, and 5 = not at all like me) that rates how much masculine and non-masculine sentences (e.g., "If another man made a pass at my girlfriend/wife, I would tell him off") describe their personality. The responses were recoded so that a score of one would indicate a low score on hyper-masculinity and a score of 5 would indicate high hyper-masculinity.

Although the research on the ADMI is limited, it has showed good internal reliability (Cronbach's alpha of 0.85) and displayed appropriate convergent and divergent validity when correlated with similar (e.g., HMI) and dissimilar (e.g., empathy) measures (Burk et al., 2004). This measure was chosen over Mosher and Sirkin's Hyper-masculinity Inventory (HMI; 1984) because the ADMI was developed in order to address some of the concerns seen in the earlier HMI. The primary concern was the HMI's

forced-choice format, in which respondents had to choose which of two sentences best described their personality. These sentences described extremes, which may limit variability by causing respondents to over-endorse either hyper-masculine or non-hypermasculine descriptions.

Results

Data Cleaning

After the data was collected from both samples, it was transferred from the online program (www.surveymonkey.com) to a statistics software program, Statistical Product and Services Solution version 17 (SPSS). Once the data was imported, it was inspected for respondents who had large amounts of missing data. A large amount of missing data was operationalized, in this research, as participants who did not complete one full measure.

University sample. The first check completed with the university students was to ensure that all respondents met the eligibility criteria. Fifteen of the students indicated that they had lived in Winnipeg for four years instead of the required five. To increase the number of usable records, the restriction that student participants must have been living in Winnipeg for five years or longer was relaxed to four years or longer. A total of 66 participants were removed from the 1075 participants for: (a) having significant amounts of missing data (n = 19), (b) indicating that they had not lived in Winnipeg for four years or more (n = 38), (c) indicating that they had not completed grade 8 (n = 1), (d) indicating that they were not 18 years of age or older (n = 8), and (e) not indicating their gender (n = 2). Although it initially appeared alarming to have a respondent from a university sample indicate that they had only completed grade 8, these classes are open to being audited and sometimes mature students are admitted to the university. After excluding this data, there

were 1009 usable records (399 male respondents and 610 female respondents). The remaining missing data was very infrequent (all having less than 0.01% missing data) and was replaced with the series mean, which is the mean of the sample for that particular question. This type of data replacement method has some risk of causing an underestimation of standardized errors and an overestimation of test statistics, but the missing data was so infrequent that this risk was deemed acceptable. The missing data for the demographic variables was not replaced.

Community sample. The community sample was checked to ensure that all of the participants met the outlined criteria and did not have significant missing data. Although the criteria for living in Winnipeg for five years had been relaxed for the university sample, this criteria maintained for the community sample because it affected only seven participants. A total of 74 participants were removed from the sample for (a) showing significant amounts of missing data (n = 57), (b) indicating that they had not lived in Winnipeg for five years or more (n = 11), (c) indicating that they had not completed grade 8 (n = 1), and (d) not indicating their gender (n = 3). After excluding this data, there were 508 usable records (258 male respondents and 250 female respondents). The remaining missing data was infrequent (all having less than 0.01% missing data) and was replaced with the series mean, which is the mean of the sample for that particular question. Again, although this method of missing data replacement carries some risks, the frequency of missing data in the sample was so infrequent that these risks were deemed acceptable. The missing data for the demographic variables was not replaced.

Description of University Sample

University sample demographics. The results from the social-demographics questionnaire for the university sample are summarized in Table 4. As expected, the age of the sample is fairly young and there was not much variance, (M = 19.9, SD = 3.81). The average number of years lived in Winnipeg was quite high (M = 16, SD = 5.87), suggesting that the majority of the sample grew up in the city. Most of the sample indicated that they were single/never married (90%) and the remainder of the sample indicated that they were common-law/cohabitating with partner (6%), married (3%), or divorced/separated (1%). The education of the sample was somewhat unexpected as there were a number of students (8%) who indicated that they had graduate level degrees. Although unexpected, registration for these classes are open to students will all levels of educational background.

Collection of the participants' postal codes enabled an analysis of the distribution of the sample within the city of Winnipeg (Figure 9). In addition to the 31 respondents who did not provide their postal code, 91 respondents provided postal codes that were not from Winnipeg. However, they still indicated that they had lived within Winnipeg for the previous five years. This latter group probably had other residences (e.g., parental homes) that they used as a mailing address and perhaps as a residence during breaks from the university. This theory was supported when the same pattern was not observed in the community sample. On the basis of these students' indication that they had lived within Winnipeg for the previous five years, they were included in the analysis.

Inspection of the distribution of the sample over the city of Winnipeg (Figure 9) shows that, although the majority of the city had some representation, certain areas had greater representation than others. The main reason for this uneven distribution was likely

Table 4

Demographics for the University Sample

	Total Sample (N = 1009)		Males (n = 399)		Females (n = 610)	
Age						
Mean (*SD*)	19.9 (3.8)		20.0 (3.5)		19.8 (4.0)	
Missing (N)	6		2		4	
Years in Winnipeg						
Mean (*SD*)	16.1 (5.9)		16.0 (5.7)		16.2 (6.0)	
Missing (N)	11		6		5	
	Total	%	Males	%	Females	%
Marital Status						
Single	907	90	363	91	544	89
Cohabitating	64	6	23	6	41	7
Married	29	3	11	3	18	3
Divorced	8	1	1	0	7	1
Education						
Post Secondary Diploma	822	82	325	82	497	82
Undergrad	100	10	32	8	68	11
Masters	84	8	40	10	44	7
Ph.D.	1	0	1	0	0	0

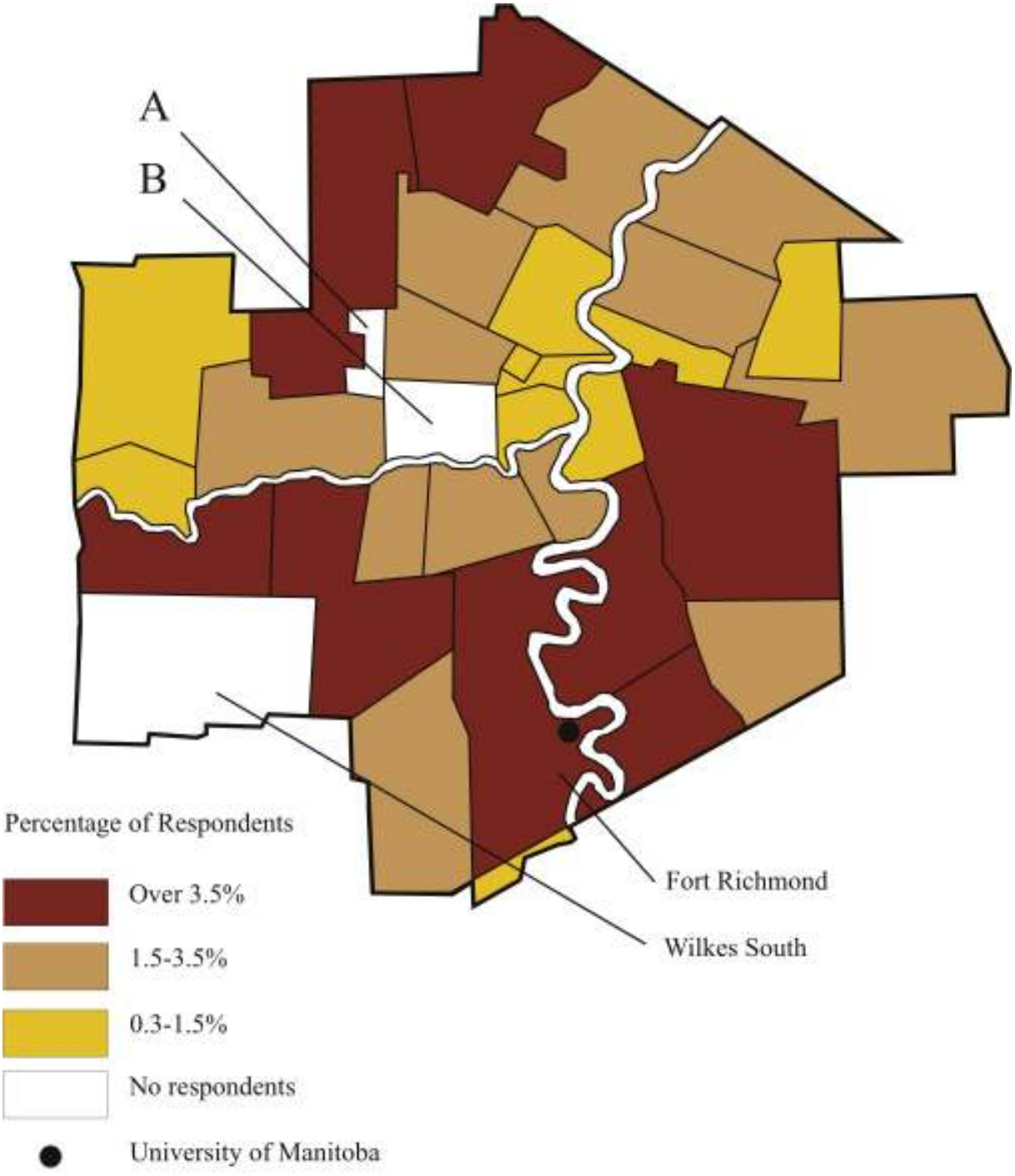

Figure 9. Distribution of university respondents within the city of Winnipeg (n = 887).

due to the location of the University of Manitoba in the south of the city, which would obviously attract students to live in that area. However, this explanation does not account for either the concentration of respondents in the north of Winnipeg or the relative sparse distribution near the center of the city. These features of the distribution are likely due to the relative affluence of people who live in different areas of the city. Figure 10 shows the percentage of residents in different Winnipeg neighbourhoods who are considered to have "low income" (in this figure the city is divided by Statistics Canada according to their census areas or "Census Tracts") (Statistics Canada, 2006g). Statistics Canada defined low income in the 2006 Census as people who spend 20% more than the average amount of their after-tax income on food, shelter, and clothing. Figure 10 shows that neighbourhoods in the center of the city have a higher percentage of residents who are "low income" as defined by Statistics Canada. This distribution of low income residents roughly corresponds to the distribution of university respondents in Figure 9. This would suggest that university students are living in areas of the city that have relatively higher socio-economic status (SES), which corresponds with research indicating that university education is more accessible for people with higher SES (Young, 2004).

Further, some of the areas on Figure 9 are white, indicating that there were no respondents from that section of the city. The lack of respondents from the area located at the lower left of the map could be explained by very low population densities in that neighbourhood. For example a regular suburban neighborhood near the University of Manitoba (Fort Richmond) had a good response rate and has a population density of 2,523 people per square kilometer (Statistics Canada, 2006b). However, the large rectangular white area (Wilkes South) has no respondents and had a population density of 25 people per square kilometer (Statistics Canada, 2006d). As for the two central regions

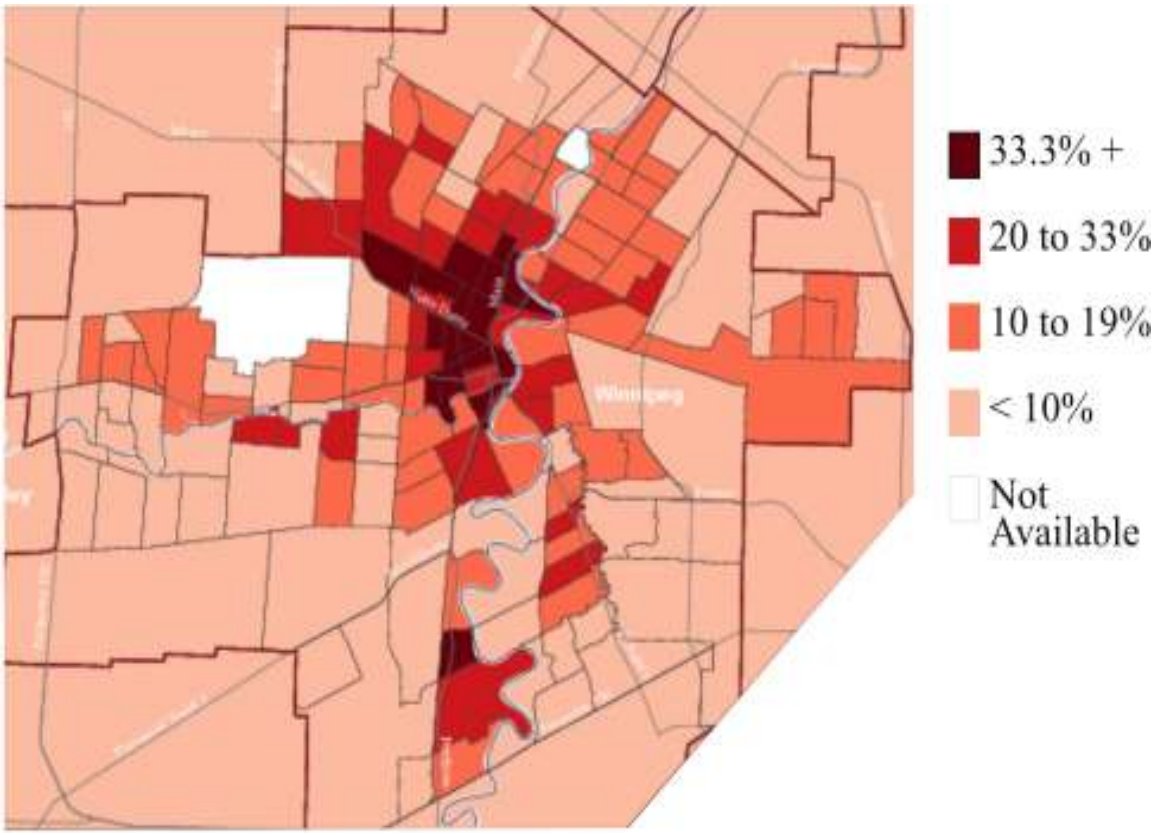

Figure 10. Distribution of low income residents in the city of Winnipeg in 2005 (Statistics Canada, 2006g) (This reproduction is a copy of an official work that is published by the Government of Canada and has not been produced in affiliation with, or with the endorsement of the Government of Canada).

on Figure 9 that had no respondents, the one to the West (region A) can also be explained by low population density. It is part of the Winnipeg neighbourhood that has so few residents that no demographic data was produced by Statistics Canada in the 2006 census (Statistics Canada, 2006c). The second area in the centre of the map (region B) on Figure 9 cannot be explained by low population density. Instead, this neighbourhood likely has no representatives for the same reason that the surrounding central regions have lower representation (i.e., low SES).

Community sample demographics. As discussed earlier, in the present sample there were 258 male respondents (51%) and 250 female respondents (49%), which was very similar to the ratio found in Winnipeg, where men make up 49% of the population and women make up 51% of the population in 2011 (Statistics Canada, 2012). The age and marital status distributions for the community sample was noticeably different from those of the university sample (Table 5). The mean age for the community sample (M = 47.6, SD = 14.3) was very similar to the average age of Winnipeg residents 18 years of age or older, which was 47 in 2011 (Statistics Canada, 2012). The majority (64%) of the sample indicated that they were married, 17% indicated that they were single/never married, 13% indicated that they were divorced/separated, and 6% indicated that they were common-law/cohabitating with partner. Statistics Canada (2006e) found that, in 2006, 65% of Manitobans indicated they were married or in a common-law relationship, which was similar to the percentage found in the community sample (70%). Their educational attainment was higher than expected, with almost 100% of the sample reporting some type of post-secondary education and 72% reporting an undergraduate degree or higher. Statistics Canada (2006f) found that 56% of the general population that

Table 5

Demographics for the Community Sample

	Total Sample (N = 508)		Males (n = 258)		Females (n = 250)	
Age						
Mean (*SD*)	47.6 (14.3)		49.3 (15.0)		45.9 (13.4)	
Missing (N)	3		2		1	
Years in Winnipeg						
Mean (*SD*)	32.0 (17.2)		33.1 (17.9)		30.8 (16.4)	
Missing (N)	5		2		3	
	Total	%	Males	%	Females	%
Marital Status						
Single	84	17	39	15	45	18
Cohabitating	32	6	17	7	15	6
Married	325	64	178	69	147	59
Divorced	65	13	24	9	41	16
Education						
Elementary	0	0	0	0	0	0
Junior High	0	0	0	0	0	0
Senior High	1	0	0	0	1	0
Post Secondary Diploma	127	25	59	23	68	27
Undergrad Degree	164	32	83	32	81	32
Masters	158	31	82	32	76	30
Ph.D.	43	9	24	9	19	8

was 15 years of age or older had high school or less in Manitoba in 2006. The community sample clearly does not represent this portion of the population.

Participants' postal codes enabled an analysis of the distribution of the sample within the city of Winnipeg (Figure 11). Inspection of the distribution reveals that the community sample was not evenly distributed over the different neighborhoods of Winnipeg. The majority of the respondents were from the southern and eastern areas of the city, as compared to the central and north eastern areas. Each neighbourhood in the city represents a different community make-up in terms of SES, age, education, ethnicity, etc. and the differential response rate is likely caused by a combination of many factors associated with these community differences. For example, it appears that, similar to the university sample, the higher response neighbourhoods correspond roughly to the higher SES regions of the city (Figure 10). This interpretation is strengthened by the finding, discussed earlier, that the community sample is primarily made up of well-educated respondents. A few possible explanations for the high response rate from these higher SES neighbourhoods are that they would be more computer literate, were not intimidated by surveys, and would have discretionary time to participate.

Similar to the university sample, the lack of respondents in the Wilkes South area (Figure 11) as well as region A can be explained by low population density in those neighbourhoods. However, the central region to the East (region C) had a higher population density, so the lack of responses in this area was likely because of the same factors that caused low response rates in the surrounding central regions.

Criminal trauma history for both samples. Both samples were asked about their history of criminal victimization (Tables 6 & 7). Respondents were first asked whether they had experienced a particular type of crime. The percentage of respondents

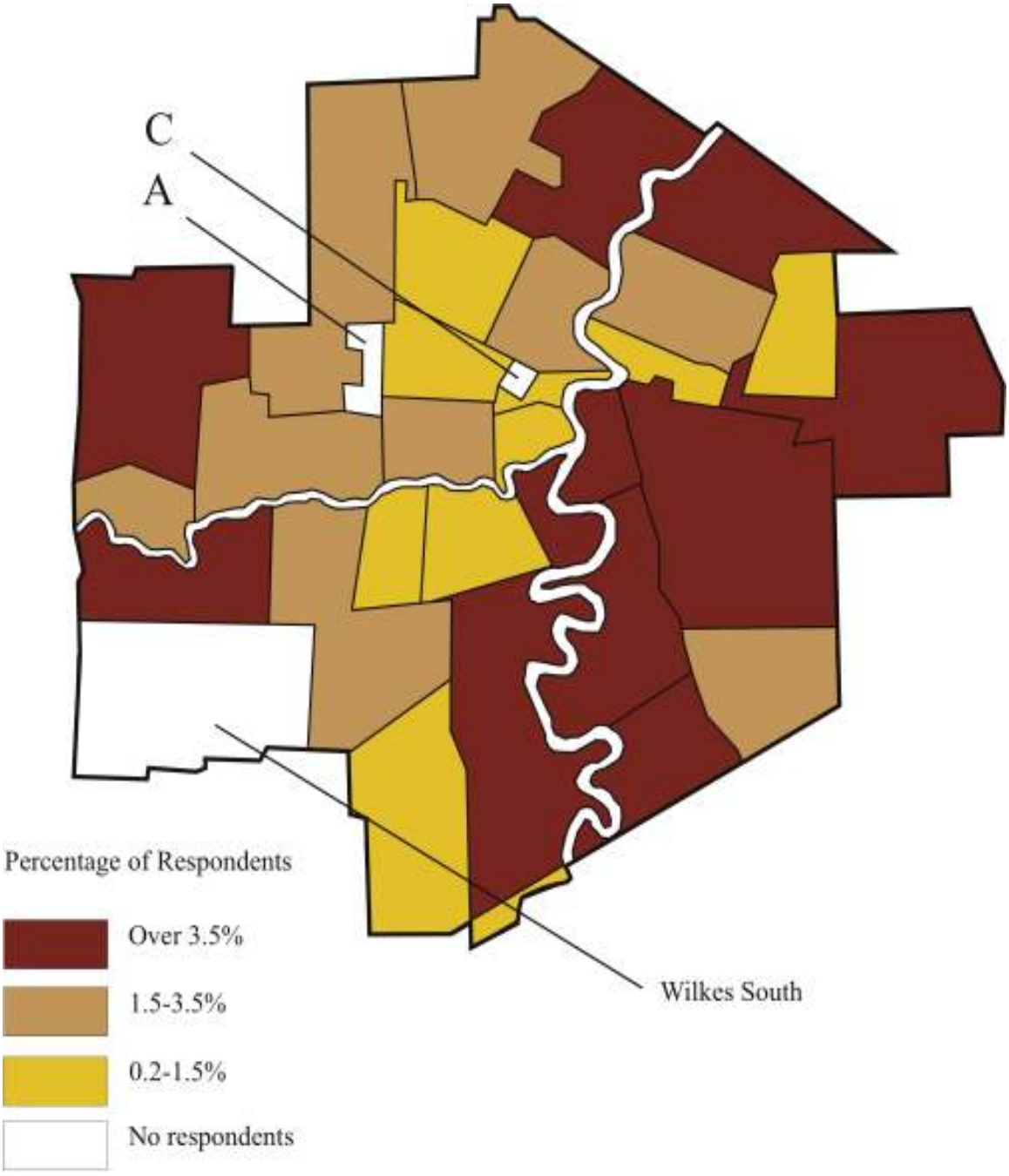

Figure 11. Distribution of community respondents within the city of Winnipeg (n = 495).

Table 6

Descriptive Statistics for Victimization History for the University Sample

	Total Sample (N = 1009)			Male Sample (n = 399)			Female Sample (n = 610)		
		Victimization Frequency			Victimization Frequency			Victimization Frequency	
Type of Crime	% Yes	*M*	*SD*	% Yes	*M*	*SD*	% Yes	*M*	*SD*
Property Crime									
1) Cheated financially	24	0.37	0.74	30	0.48	0.83	20	0.29	0.66
2) Identity theft	3	0.04	0.26	5	0.07	0.34	2	0.03	0.19
3) Computer hacked / virus	71	1.34	1.05	72	1.41	1.08	71	1.29	1.03
4) Stealing electronic communication (e.g., cable)	21	0.40	0.85	21	0.39	0.84	21	0.40	0.86
5) Break and enter while away by stranger	24	0.31	0.62	26	0.31	0.59	23	0.31	0.63
6) Break and enter while away by known person	11	0.15	0.46	12	0.17	0.50	10	0.13	0.43
7) Break and enter while at home	8	0.10	0.36	7	0.09	0.35	8	0.10	0.37
8) Car stolen	15	0.22	0.58	14	0.21	0.58	16	0.22	0.58
9) Vandalism	55	0.98	1.03	60	1.08	1.05	51	0.91	1.02
Total Property Crime	26	0.43	0.66	27	0.47	0.68	25	0.41	0.64

Table 6 continued

	Total Sample (N = 1009)			Male Sample (n = 399)			Female Sample (n = 610)		
		Victimization Frequency			Victimization Frequency			Victimization Frequency	
Type of Crime	% Yes	*M*	*SD*	% Yes	*M*	*SD*	% Yes	*M*	*SD*
Violent Non-sexual Crime									
10) Attack by stranger	14	0.21	0.57	22	0.36	0.76	9	0.11	0.38
11) Attack by known person	20	0.36	0.81	30	0.52	0.89	13	0.26	0.72
12) Family or friend murdered	12	0.15	0.45	10	0.12	0.41	13	0.17	0.47
13) Robbed or mugged on street	7	0.09	0.37	11	0.15	0.49	5	0.05	0.25
Total Violent, Non-Sexual Crime	13	0.20	0.55	18	0.29	0.64	10	0.15	0.46
Total Non-Sexual Crime	22	0.36	0.63	24	0.41	0.67	20	0.33	0.58
Violent Sexual Crime									
14) Rape or sexual assault by stranger	4	0.06	0.30	2	0.03	0.25	6	0.08	0.33
15) Rape or sexual assault by known person	8	0.13	0.50	3	0.04	0.28	11	0.18	0.60
Total Sexual Crime	6	0.10	0.40	2	0.04	0.27	8	0.13	0.47

Table 7

Descriptive Statistics for Victimization History for the Community Sample

	Total Sample (N = 508)			Male Sample (n = 258)			Female Sample (n = 250)		
		Victimization Frequency			Victimization Frequency			Victimization Frequency	
Type of Crime	% Yes	*M*	*SD*	% Yes	*M*	*SD*	% Yes	*M*	*SD*
Property Crime									
1) Cheated financially	30	0.45	0.78	36	0.57	0.87	24	0.33	0.66
2) Identity theft	4	0.05	0.25	5	0.05	0.24	3	0.04	0.26
3) Computer hacked / virus	61	1.12	1.06	68	1.31	1.08	54	0.92	1.00
4) Stealing electronic communication (e.g., cable)	5	0.08	0.40	5	0.85	0.40	5	0.08	0.40
5) Break and enter while away by stranger	31	0.42	0.69	31	0.44	0.73	30	0.39	0.66
6) Break and enter while away by known person	9	0.12	0.41	9	0.11	0.39	10	0.13	0.44
7) Break and enter while at home	6	0.07	0.29	5	0.07	0.30	7	0.07	0.27
8) Car stolen	21	0.27	0.57	23	0.29	0.59	19	0.24	0.54
9) Vandalism	62	1.08	0.99	67	1.21	0.99	56	0.96	0.99
Total Property Crime	25	0.41	0.6	28	0.54	0.62	23	0.35	0.58

Table 7 continued

	Total Sample (N = 508)			Male Sample (n = 258)			Female Sample (n = 250)		
		Victimization Frequency			Victimization Frequency			Victimization Frequency	
Type of Crime	% Yes	*M*	*SD*	% Yes	*M*	*SD*	% Yes	*M*	*SD*
Violent Non-sexual Crime									
10) Attack by stranger	16	0.26	0.65	22	0.36	0.77	10	0.14	0.49
11) Attack by known person	15	0.27	0.71	16	0.28	0.72	15	0.27	0.70
12) Family or friend murdered	11	0.13	0.37	8	0.09	0.31	15	0.17	0.42
13) Robbed or mugged on street	6	0.06	0.27	8	0.08	0.29	3	0.04	0.26
Total Violent, Non-Sexual Crime	12	0.18	0.50	13	0.20	0.52	11	0.16	0.47
Total Non-Sexual Crime	21	0.34	0.57	23	0.44	0.60	19	0.29	0.55
Violent Sexual Crime									
14) Rape or sexual assault by stranger	4	0.06	0.33	1	0.01	0.09	8	0.12	0.46
15) Rape or sexual assault by known person	10	0.15	0.52	3	0.04	0.30	18	0.27	0.66
Total Sexual Crime	7	0.11	0.43	2	0.03	0.20	13	0.20	0.56

who indicated that they had experienced the particular type of crime appears in the first column of the tables. The respondents who stated that they had experienced the particular type of crime were then asked how frequently they had been victimized by that type of crime. The mean and standard deviation of these responses are in the second and third column. Before comparing the rates of the different crimes, it is important to appreciate the overall uncommonness of criminal victimization in the sample. When examining the types of crime individually the large majority of respondents indicated that they had never experienced victimization. The one exception to this was computer crimes (being hacked or getting a computer virus), which was a relatively common experience in the sample. Overall, the most common types of victimization in both samples was property crime, with the most common types being computer hacking/viruses and vandalism. The second most common type of victimization was violent non-sexual crime and the rarest was sexual victimization.

An examination of Tables 6 and 7 reveals that the university students' victimization history was remarkably similar to that of the community residents. This difference was not tested statistically because this type of testing was beyond the scope of this thesis, but this general similarity was surprising because it was expected that the community sample would have more victimization in their past because they had lived longer, giving them more time to accumulate victimization experiences. It may be that many types of crime are not of sufficient significance to individuals for them to be accurately remembered over a lifetime. For property crime, the largest difference between the two samples was that the university students reported much higher technology oriented victimization, especially theft of electronic communication. This may be due to university students' greater use of and familiarity with technology. The

university students also reported less car theft and vandalism, which may be due to that sample having lower rates of owning vehicles or property.

Finally, university students had a much lower rate of rape or sexual assault by known persons. This difference may be due to a combination of two factors. The first factor being that the community sample's older age causes them to have a greater chance of being victimized by this type of crime. The second factor being that this type of crime is particularly traumatizing making it more likely for older victimization experiences to be remembered accurately by the community residents when completing the questionnaire.

The pattern of gender differences was also fairly similar in for both samples. For property and violent non-sexual crime, men reported higher victimization rates than women. In the university sample, the difference between men and women was much greater for violent non-sexual victimization than it was for property victimization. Specifically, in the university sample men reported slightly more overall property victimization, but approximately twice the rate of being attacked by a stranger or friend, and twice the rate of being mugged. In the community sample, men also experienced more property and non-sexual violent victimization than women, but, unlike the university sample, the difference between men and women was roughly the same in both of these types of victimization. The difference in patterns between the university and community sample can be attributed to one crime in particular. In the university sample, men reported a similar rate of computer hacking/virus victimization, but in the community sample men reported a much higher rate of this type of victimization. This difference in patterns caused the overall difference in overall property victimization to be

greater for community sample than for the university sample. For sexual victimization, women consistently reported higher victimization than men in both samples.

Measure Rescoring

A number of the measures' scales were transformed and subsequently combined in order to create the Threat to Victimization (Threat) measure. The subscales of the Threat measure were originally on different scales and this needed to be corrected so they could be combined. Of the measures that constitute Threat, the Risk of Victimization (RSV) and Concern about Crime Scale were already on a ten-point scale and did not require transformation. The Farrall-Gadd Fear of Crime Inventory (F-G FCI) was on a 1-4 scale so the scores were transformed to a ten-point scale, such that 1 = 1, 2 = 3.33, 3 = 6.66, and 4 = 10. The Crime Precautions measure had two separate scales, the first eleven questions were answered on a 1 (most of the time) to 4 (never) scale, which was transformed similar to the F-G FCI. The remaining questions on the scale were answered on a yes/no scale where 1 = yes and 2 = no, and these responses were transformed such that 1 = 1, and 2 = 10. Items were then reverse scored (so that higher scores would indicate greater crime precaution), and finally average scores were calculated.

Once all of the Threat subscales were on a 10 point scale and the average score for each of the subscales had been calculated they were converted into z-scores and then combined into the Threat measure by finding the mean of the subscale's average z-scores (i.e., F-G FCI, RSV, Concern about Crime, and Crime Precautions).

The average scores for Threat to Non-Sexual Victimization (Non-Sex Threat) and Threat to Sexual Victimization (Sex Threat) were calculated in a similar fashion.

Measure Validation

University sample. All scales and subscales were subsequently examined for normality and reliability. None of the scales were problematic in their univariate skewness (i.e., 3.00 or higher) or kurtosis (i.e. 20 or higher; Appendix K; Kline, 1998). The scales mean (*M*), standard deviations (*SD*), minimum (Min), and maximum (Max) were computed for each gender and the total university sample (Table 8). The scale's alpha reliabilies (Appendix K) were evaluated according to Kline's (1995) rough guidelines, which are as follows: excellent (approximately 0.90), very good (approximately 0.80), and adequate (approximately 0.70). All of the alpha coefficients in the for the university sample were well above 0.70, except for the two social desirability measures and History of Victimization (HV). The M-C SDS was 0.69 for the male sample, with an overall alpha reliability of 0.72. This measure was judged to have met the "adequate reliability" standard outlined by Kline, because the overall reliability was above the 0.70 reliability benchmark and because the guideline was only meant to be an approximate marker. The EPQR-S overall alpha reliability was 0.64, which was somewhat below the "adequate standard." This measure was kept in the analysis because it was utilized by Sutton and Farrall (2005) and a main goal of the present research was to replicate Sutton and Farrall's findings. However, the greater reliability of the M-C SDS as well as the design of the M-C SDS gave this measure greater weight than the EPQR-S. HV also had an overall alpha (0.66) that was slightly lower than the 0.70 cut-off. However, it was judged to be sufficiently close to the cut-off to be adequate for the present research.

Convergent and discriminant validity was also examined for each measure. An intercorrelation matrix was completed for all measures completed by the university

Table 8

Descriptive Statistics for Psychological Measures for the University Sample.

	Total Sample (N = 1009)				Males (n = 399)				Females (n = 610)			
Scale/Subscale	*M*	*SD*	Min	Max	*M*	*SD*	Min	Max	*M*	*SD*	Min	Max
Social Desirability												
EPQR-S	1.33	0.20	1.00	2.00	1.34	0.20	1.00	2.00	1.32	0.20	1.00	2.00
M-C SDS	1.47	0.15	1.09	1.97	1.48	0.14	1.09	1.91	1.46	0.15	1.09	1.97
Fear of Crime												
S-F FCI	2.41	1.03	1.00	5.00	2.21	1.02	1.00	5.00	2.53	1.01	1.00	5.00
Total Threat	0.00	0.75	-1.44	3.19	-0.24	0.69	-1.44	2.70	0.16	0.75	-1.37	3.19
Non-Sex Threat	0.00	0.84	-0.66	4.35	-0.18	0.77	-1.17	3.47	0.12	0.86	-1.17	4.30
Sex Threat	0.00	0.81	-1.17	4.30	-0.38	0.51	-0.66	2.46	0.25	0.88	-0.66	4.35
Threat to Victimization Subscales												
F-G FCI	0.00	1.00	-0.98	5.78	-0.22	0.85	-0.98	4.71	0.15	1.06	-0.98	5.78
Crime Precautions	0.00	1.00	-2.35	4.38	-0.30	1.05	-2.35	3.16	0.20	0.92	-2.20	4.38
RVS	0.00	1.00	-1.36	4.87	-0.18	0.94	-1.36	4.87	0.12	1.04	-1.36	4.87
Concern about Crime	0.00	1.00	-1.17	3.33	-0.26	0.89	-1.17	3.33	0.17	1.03	-1.17	3.33
HyperMasculinity (ADMI)	-	-	-	-	3.44	0.30	1.98	4.58	-	-	-	-
History of Victimization (HV)	0.33	0.27	0.00	2.53	0.36	0.30	0.00	2.53	0.30	0.25	0.00	2.47

Notes. EPQR-S = Revised Eysenck Personality Questionnaire Short Scale Version. M-C SDS = Marlow-Crowne Social Desirability Scale. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. Sex Threat = Threat to Sexual Victimization. F-G FCI = Farrall-Gadd Fear of Crime Inventory. RVS = Risk of Victimization Scale.

sample (Table 9). Regarding the fear of crime measures, Threat to Victimization (Threat), Threat to Sexual Victimization (Sex Threat), and Threat to Non-Sexual Victimization (Non-Sex Threat) were of particular interest because they were new measures developed for this investigation. Threat and Non-Sex Threat both showed good convergent validity with Sutton-Farrall's (2005) Fear of Crime Index (S-F FCI). The correlations between the Threat and the S-F FCI, $r(1009) = 0.68$, $p < .001$, and Non-Sex Threat and S-F FCI, $r(1009) = 0.67$, $p < .001$, were both significant. These relationships further support the proposition that Threat and Non-Sex Threat were measuring fear of crime, but were not perfectly correlated with Sutton and Farrall's measure because they provided additional information. The S-F FCI was also significantly related to the Sex Threat, $r(1009) = 0.49$, $p < .001$. This relationship was somewhat lower than those of Threat and Non-Sex Threat, which evidences discriminant validity, because S-F FCI does not include fear of sexual victimization. However, the two measures remained significantly related because fear of sexual victimization and fear of non-sexual victimization are related $r(1009) = 0.70$, $p < .001$. The two social desirability measures also showed good convergent validity, as evidenced by a significant correlation between the two variables, $r(1009) = 0.55$, $p < .001$. Again, this relationship suggested that the two measures are measuring similar constructs, but also are each providing additional information.

Community sample. The questionnaire scales and subscales were examined for normality in the community sample in the same fashion as the university sample and none of the scales were problematic in their univariate skewness (i.e., 3.00 or higher) or kurtosis (i.e. 20 or higher; Appendix K; Kline, 1998). The scales mean (*M*), standard deviations (*SD*), minimum (Min), and maximum (Max) were computed for each gender and the total sample (Table 10). The scale's alpha reliabilities (Appendix K) were

Table 9

Pearson Correlation Coefficients for Measures for University Sample

Measure	EPQR-S	Fear of Crime					
		S-F FCI	Total Threat	Sex Threat	Non-Sex Threat	HV	Hyper-Masculinity
			Total Sample (N = 1009)				
M-C SDS	0.55***	-0.04	-0.03	-0.02	-0.05	-0.07*	-
EPQR-S		0.00	-0.05	-0.05	-0.08**	-0.10**	-
S-F FCI			0.68***	0.49***	0.67***	0.19***	-
Total Threat				0.74***	0.94***	0.26***	-
Sex Threat					0.70***	0.14***	-
Non- Sex Threat						0.30***	-

Table 9 continued

Measure	EPQR-S	Fear of Crime				HV	Hyper-Masculinity
		S-F FCI	Total Threat	Sex Threat	Non-Sex Threat		
				Men (n = 399)			
M-C SDS	0.50***	-0.04	0.04	0.14**	-0.01	-0.08	0.19***
EPQR-S		0.00	-0.01	0.12*	-0.06	-0.12*	0.12*
S-F FCI			0.62***	0.33***	0.63***	0.19***	-0.08
Total Threat				0.61***	0.93***	0.32***	-0.10
Sex Threat					0.60***	0.19***	-0.20***
Non-Sex Threat						0.35***	-0.08
HV							-0.22***
				Women (n = 610)			
M-C SDS	0.58***	-0.02	-0.04	-0.05	-0.06	-0.07	-
EPQR-S		0.01	-0.06	-0.08*	-0.08*	-0.10*	-
S-F FCI			0.70***	0.54***	0.69***	0.22***	-
Total Threat				0.77***	0.95***	0.29***	-
Sex Threat					0.74***	0.21***	-
Non- Sex Threat						0.31***	-

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. M-C SDS = Marlow-Crowne Social Desirability Scale. EPQR-S = Revised Eysenck Personality Questionnaire Short Scale Version. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Sex Threat = Threat to Sexual Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. HV = History of Victimization.

Table 10

Descriptive Statistics for Psychological Measures for the Community Sample

	Total Sample (N = 508)				Males (n = 258)				Females (n = 250)			
Scale/Subscale	*M*	*SD*	Min	Max	*M*	*SD*	Min	Max	*M*	*SD*	Min	Max
Social Desirability												
EPQR-S	1.41	0.21	1.00	2.00	1.39	0.22	1.00	2.00	1.44	0.21	1.00	1.92
M-C SDS	1.54	0.16	1.09	1.97	1.55	0.17	1.15	1.97	1.55	0.15	1.09	1.94
Fear of Crime												
S-F FCI	2.45	0.98	1.00	5.00	2.29	0.90	1.00	4.67	2.61	1.04	1.00	5.00
Total Threat	0.00	0.76	-1.38	3.41	-0.18	0.69	-1.36	3.41	0.19	0.79	-1.38	2.98
Non-Sex Threat	0.00	0.86	-1.16	4.05	-0.13	0.79	-1.16	4.05	0.14	0.91	-1.16	3.53
Sex Threat	0.00	0.79	-0.42	5.98	-0.27	0.54	0.42	5.98	0.28	0.91	-0.42	4.84
Threat to Victimization Subscales												
F-G FCI	0.00	1.00	1.00	6.66	-0.19	0.89	-1.05	6.66	0.20	1.07	-1.05	4.53
Constrained Behaviour	0.00	1.00	1.00	2.50	-0.27	0.98	-2.71	2.47	0.29	0.94	-2.47	2.50
RVS	0.00	1.00	1.00	3.72	-0.12	0.89	-1.34	3.18	0.12	1.09	-1.34	3.72
Concern about Crime	0.00	1.00	1.00	4.67	-0.16	0.87	-1.12	4.11	0.16	1.10	-1.12	4.67
History of Victimization (HV)	0.31	0.21	0.00	1.20	0.33	0.20	0.00	1.07	0.28	0.22	0.00	1.20

Notes. EPQR-S = Revised Eysenck Personality Questionnaire Short Scale Version. M-C SDS = Marlow-Crowne Social Desirability Scale. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. Sex Threat = Threat to Sexual Victimization. F-G FCI = Farrall-Gadd Fear of Crime Inventory. RVS = Risk of Victimization Scale.

evaluated according to Kline's (1998) rough guidelines and all of the alpha coefficients were above 0.70, except for the EPQR-S, which is one of the social desirability measures and History of Victimization. The EPQR-S overall reliability alpha coefficient was 0.69, was judged to be sufficiently close to benchmarks to be deemed adequate for the present research. History of Victimization's (HV) overall alpha (0.50) was considerably below the 0.70 benchmark, which is a definite weakness. Results involving this measure were interpreted with caution for this reason.

The convergent and discriminant validity for each of the measures was also examined. An intercorrelation matrix was completed for all of the measures used with the community sample (Table 11). For the fear of crime measures, Threat and Non-Sex Threat both showed good convergent validity with the Sutton and Farrall Fear of Crime Inventory (S-F FCI). The correlations between Threat and the S-F FCI, $r(508) = 0.66$, $p < .001$, and Non-Sex Threat and S-F FCI, $r(508) = 0.63$, $p < .001$, were both significant. These relationships further support the proposition that Threat and Non-Sex Threat were measuring fear of crime, but were not perfectly correlated with Sutton and Farrall's measure because they provided additional information. The S-F FCI was also significantly related to the Sex Threat of $r(508) = 0.31$, $p < .001$. This relationship was somewhat lower, which evidences discriminant validity, because S-F FCI doesn't include fear of sexual victimization. However, the two measures remain significantly related because fear of sexual and fear of non-sexual victimization were significantly related in the community sample, as they had been in the university sample, $r(508) = 0.61$, $p < .001$. The two social desirability measures also showed good convergent validity with a correlation of $r(508) = 0.58$, $p < .001$. Again, this relationship suggests that the two

Table 11

Pearson Correlation Coefficients for Measures for Community Sample

		Fear of Crime				
Measure	EPQR-S	S-F FCI	Total Threat	Sex Threat	Non-Sex Threat	HV
			Total Sample (N = 508)			
M-C SDS	0.58***	-0.14**	-0.06	-0.04	-0.12**	-0.10*
EPQR-S		0.02	0.03	0.05	0.03	-0.15**
S-F FCI			0.66***	0.31***	0.63***	0.09*
Total Threat				0.61***	0.94***	0.16***
Sex Threat					0.61***	0.01
Non-Sex Threat						0.21***
			Men (n = 258)			
M-C SDS	0.56***	-0.21**	-0.14*	0.04	-0.18**	-0.09
EPQR-S		-0.06	-0.06	-0.09	-0.12	-0.17**
S-F FCI			0.71***	0.10	0.67***	0.11
Total Threat				0.39***	0.93***	0.22**
Sex Threat					0.42***	-0.01
Non-Sex Threat						0.25***
			Women (n = 250)			
M-C SDS	0.62***	-0.07	0.00	-0.08	-0.07	-0.12
EPQR-S		0.05	0.05	-0.05	0.01	-0.11
S-F FCI			0.62***	0.37***	0.60***	0.14*
Total Threat				0.67***	0.95***	0.20**
Sex Threat					0.67***	0.11
Non-Sex Threat						0.24***

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. M-C SDS = Marlow-Crowne Social Desirability Scale. EPQR-S = Revised Eysenck Personality Questionnaire Short Scale Version. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Sex Threat = Threat to Sexual Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. HV = History of Victimization.

measures are assessing similar constructs, but also that each is providing additional information.

Threat to Victimization validation. As already discussed, the Threat to Victimization (Threat) measure was based on a conceptualization that suggests that the emotional, cognitive, and behavioural components of fear of crime could be combined into one overall measure (Rader, 2004). In follow-up studies, the positive correlations between these components were generally supportive of this conceptualization, except for the lack of relationship between the cognitive and behavioural components (May et al., 2010; Rader et al., 2007). One of the two studies also failed to find a relationship between gender and both the cognitive and behavioural components (Rader et al., 2007). In the present samples correlations were calculated between the Threat subscales (Table 12 and Table 13) and for both samples the Threat subscales were significantly correlated with each other. Thus, the previous the lack of relationship between the cognitive and behavioural components was not found in the present investigation.

Further analysis was completed to investigate the Threat subscale's relationships with the other measures in the study (Table 14 and Table 15). This analysis revealed that the Threat subscales were also positively correlated with the other fear of crime measure in the study (S-F FCI), which was evidence of convergent validity. Another important finding from this analysis was that the subscales related differently to the two social desirability measures. The results suggest that for men and women all of the subscales were, albeit somewhat inconsistently and weakly, negatively related to social desirability, except Crime Precautions, which was positively related to social desirability. Thus, it appears that it is socially undesirable to report fear of crime, but it is socially desirable to report engagement in protective behaviours.

Table 12

Correlation Coefficients for Threat to Victimization Subscale Measures and Gender for University Sample

Measure	Crime Precautions	Risk (RSV)	Concern about Crime	Gender
		Total Sample (N=1009)		
Emotional Fear (F-G FCI)	0.31***	0.46***	0.55***	0.18***
Crime Precautions		0.21***	0.28***	0.24***
Risk (RSV)			0.68***	0.14***
Concern about Crime				0.21***
		Men (n = 399)		
Emotional Fear (F-G FCI)	0.31***	0.42***	0.49***	
Crime Precautions		0.20***	0.27***	
Risk (RSV)			0.71***	
		Women (n = 610)		
Emotional Fear (F-G FCI)	0.26***	0.46***	0.56***	
Crime Precautions		0.18***	0.23***	
Risk (RSV)			0.65***	

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

Table 13

Correlation Coefficients for Threat to Victimization Subscale Measures and Gender for Community Sample

Measure	Crime Precautions	Risk (RSV)	Concern about Crime	Gender
		Total Sample (N = 508)		
Emotional Fear (F-G FCI)	0.35***	0.55***	0.58***	0.19***
Crime Precautions		0.22***	0.27***	0.27***
Risk (RSV)			0.70***	0.12**
Concern about Crime				0.16***
		Men (n = 258)		
Emotional Fear (F-G FCI)	0.34***	0.59***	0.62***	
Crime Precautions		0.24***	0.23***	
Risk (RSV)			0.72***	
		Women (n = 250)		
Emotional Fear (F-G FCI)	0.29***	0.50***	0.54***	
Crime Precautions		0.15**	0.24***	
Risk (RSV)			0.68***	

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

Table 14

Correlation Coefficients for Threat to Victimization Subscales and Other Measures for the University Sample

Measure	Social Desirability		Fear of Crime					
	M-C SDS	EPQR	S-F FCI	Total Threat	Sex Threat	Non-Sex Threat	HV	Hyper-Masculinity
				Total Sample (N = 1009)				
Emotional Fear (F-G FCI)	-0.09**	-0.10**	0.64***	0.74***	0.55***	0.73***	0.31***	-
Crime Precautions	0.06	0.07*	0.33***	0.56***	0.27***	0.30***	0.05	-
Risk (RSV)	-0.06*	-0.10**	0.48***	0.80***	0.64***	0.85***	0.25***	-
Concern	0.01	-0.02	0.59***	0.88***	0.77***	0.91***	0.17***	-
				Men (n = 399)				
Emotional Fear (F-G FCI)	-0.08	-0.15**	0.58***	0.69***	0.21***	0.71***	0.34***	0.01
Crime Precautions	0.09	0.10*	0.28***	0.59***	0.22***	0.30***	0.11*	-0.05
Risk (RSV)	0.00	-0.05	0.45***	0.80***	0.64***	0.86***	0.30***	-0.16**
Concern	0.08	0.05	0.55***	0.87***	0.74***	0.91***	0.23***	-0.08
				Women (n = 610)				
Emotional Fear (F-G FCI)	-0.08	-0.06	0.66***	0.75***	0.63***	0.74***	0.35***	-
Crime Precautions	0.06	0.07	0.32***	0.50***	0.20***	0.27***	0.06	-
Risk (RSV)	-0.09*	-0.12**	0.49***	0.80***	0.66***	0.84***	0.25***	-
Concern	-0.01	-0.04	0.59***	0.88***	0.78***	0.91***	0.18***	-

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. M-C SDS = Marlow-Crowne Social Desirability Scale. EPQR-S = Revised Eysenck Personality Questionnaire Short Scale Version. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Sex Threat = Threat to Sexual Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. HV = History of Victimization.

Table 15

Pearson Correlation Coefficients for Threat to Victimization Subscales and Other Measures for the Community Sample

Measure	Social Desirability		Fear of Crime				
	M-C SDS	EPQR	S-F FCI	Total Threat	Sex Threat	Non-Sex Threat	HV
				Total Sample (N = 508)			
Emotional Fear (F-G FCI)	-0.14**	-0.05	0.68***	0.79***	0.46***	0.79***	0.20***
Crime Precautions	0.10*	0.15**	0.37***	0.60***	0.17***	0.31***	-0.02
Risk (RSV)	-0.10*	-0.05	0.46***	0.80***	0.53***	0.87***	0.21***
Concern	-0.08	0.03	0.53***	0.86***	0.67***	0.90***	0.13***
				Men (n = 258)			
Emotional Fear (F-G FCI)	-0.16**	-0.10	0.66***	0.80***	0.31***	0.82***	0.17**
Crime Precautions	0.03	0.09	0.41***	0.61***	0.01	0.29***	0.07
Risk (RSV)	-0.16**	-0.14*	0.54***	0.81***	0.30***	0.88***	0.27***
Concern	-0.15**	-0.04	0.56***	0.84***	0.57***	0.90***	0.17**
				Women (n = 250)			
Emotional Fear (F-G FCI)	-0.12	-0.05	0.67***	0.76***	0.50***	0.76***	0.27***
Crime Precautions	0.20**	0.16*	0.28***	0.54***	0.14*	0.27***	-0.05
Risk (RSV)	-0.04	0.01	0.38***	0.79***	0.64***	0.86***	0.21***
Concern	-0.02	0.04	0.49***	0.87***	0.72***	0.90***	0.14*

Personality Questionnaire Short Scale Version. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Sex Threat = Threat to Sexual Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. HV = History of Victimization.

Finally, an analysis was completed to determine the Threat subscale's relationship with the demographic variables in the study (Table 16 and Table 17). This analysis confirmed that each of the subscales was positively correlated with gender, which should be present because the relationship between fear of crime and gender is one of the most consistent in the literature.

Social Demographic Variables' Relationship with Other Measures

The relationships between the demographic variables and the dependent measures were also examined in both samples (Table 18 & Table 19). University students were younger and had less variance in age (M = 19.89, SD = 3.81) when compared with the community sample (M = 47.64, SD = 14.29). Given the lack of age variance, it was not surprising that age was not related generally to fear of crime in the university population. The only exception was amongst women, which indicated that younger women were more afraid of sexual crime (Table 18).

In the community sample, the relationship between age and fear of crime was inconsistent across the three general fear of crime measures (Table 19). Increased age was related to decreased fear of non-sexual crime for men, but not for women. The other two measures of general fear of crime (Threat and S-F FCI) did not show significant relationships with age. It was puzzling, initially, to observe that Non-Sex Threat was negatively related to age for men while Threat was not related to age because these two measures share many of the same questions. Further inspection revealed that Crime Precautions, a subscale of Threat, was the cause of this aberration. Crime Precautions was included in Threat, but was excluded from Non-Sex Threat because protective behaviour (e.g., locking cars or windows) could be done in order to prevent either non-sexual crime or sexual crime. Additional analysis revealed that Crime Precautions was positively

Table 16

Correlation Coefficients for Threat to Victimization Subscales and Demographic Variables for the University Sample

Measure	Age	Education	Yrs in WPG	Gender
	(N = 1003)	(N = 1008)	(N = 998)	(N = 1008)
Emotional Fear (F-G FCI)	0.03	-0.02	-0.05	0.18***
Crime Precautions	-0.02	0.01	0.09**	0.24***
Risk (RSV)	-0.04	0.03	-0.06	0.14***
Concern	-0.03	0.03	-0.09**	0.21***
	Men			
	(n = 397)	(n = 398)	(n = 393)	
Emotional Fear (F-G FCI)	0.03	-0.04	0.00	
Crime Precautions	-0.03	0.03	0.08	
Risk (RSV)	-0.03	0.04	-0.07	
Concern	-0.02	0.03	-0.09	
	Women			
	(n = 606)	(n = 610)	(n = 605)	
Emotional Fear (F-G FCI)	0.04	0.00	-0.08*	
Crime Precautions	-0.01	0.01	0.10*	
Risk (RSV)	-0.04	0.03	-0.06	
Concern	-0.03	0.03	-0.10*	

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

Table 17

Correlation Coefficients for Threat to Victimization Subscales and Demographic Variables for the Community Sample

Measure	Age	Education	Yrs in WPG	Gender
	(N = 505)	(N = 508)	(N = 503)	
Emotional Fear (F-G FCI)	-0.10*	-0.04	-0.07	0.19***
Crime Precautions	0.24***	-0.01	0.12**	0.27***
Risk (RSV)	-0.15**	-0.04	-0.08	0.12**
Concern	-0.14**	-0.09*	-0.07	0.16***
	Men			
	(n = 256)	(n = 258)	(n = 256)	
Emotional Fear (F-G FCI)	-0.14*	0.04	-0.10	
Crime Precautions	0.29***	0.13*	0.12	
Risk (RSV)	-0.18**	-0.04	-0.06	
Concern	-0.13*	-0.07	-0.03	
	Women			
	(n = 249)	(n = 250)	(n = 247)	
Emotional Fear (F-G FCI)	-0.02	-0.08	-0.02	
Crime Precautions	0.27***	-0.13*	0.17**	
Risk (RSV)	-0.04	-0.04	-0.07	
Concern	-0.09	-0.09	-0.08	

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

Table 18

Correlation Coefficients for Demographics and Measures for the University Sample

Measure	Social Desirability		Fear of Crime				HV	Hyper-Masculinity
	M-C SDS	EPQR-S	S-F FCI	Total Threat	Sex Threat	Non-Sex Threat		
Total Sample								
Age (N = 1003)	0.10**	0.12***	0.04	-0.02	-0.08*	-0.01	0.08*	-
Education (N = 1008)	0.09**	0.14***	0.06*	0.02	-0.02	0.03	0.01	-
Years in WPG (N = 998)	-0.08*	-0.08*	-0.09**	-0.04	-0.08**	-0.08*	0.01	-
Men								
Age (n = 397)	0.15**	0.13**	0.03	-0.02	-0.08	-0.01	0.10	-0.15**
Education (n = 398)	0.11*	0.13*	0.13**	0.02	0.08	0.02	0.05	-0.09
Years in WPG (n = 393)	-0.13**	-0.10*	-0.07	-0.02	-0.17***	-0.06	-0.04	0.07
Women								
Age (n = 606)	0.06	0.12**	0.05	-0.02	-0.08*	0.00	0.06	-
Education (n = 610)	0.06	0.15***	0.02	0.03	-0.05	0.05	-0.02	-
Years in WPG (n = 605)	-0.04	-0.06	-0.11**	-0.05	-0.08	-0.10*	0.06	-

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. M-C SDS = Marlow-Crowne Social Desirability Scale. EPQR-S = Revised Eysenck Personality Questionnaire Short Scale Version. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Sex Threat = Threat to Sexual Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. HV = History of Victimization.

Table 19

Correlation Coefficients for Demographics and Measures for the Community Sample

Measure	Social Desirability		Fear of Crime				
	M-C SDS	EPQR-S	S-F FCI	Total Threat	Sex Threat	Non-Sex Threat	HV
			Total Sample				
Age (N = 505)	0.23***	0.18***	0.03	-0.05	-0.19***	-0.14**	-0.14**
Education (N = 508)	0.02	0.06	-0.10*	-0.06	-0.06	-0.06	-0.10*
Years in Winnipeg (N = 503)	0.06	0.04	0.08	-0.03	-0.14**	-0.08	-0.05
			Men				
Age (n = 256)	0.24***	0.19**	0.06	-0.04	-0.09	-0.18**	-0.19**
Education (n = 258)	0.05	0.13*	-0.07	0.03	0.00	-0.02	-0.15*
Years in Winnipeg (n = 256)	0.09	0.05	0.06	-0.02	-0.10	-0.08	-0.07
			Women				
Age (n = 249)	0.21**	0.22**	0.05	0.00	-0.22***	-0.08	-0.12
Education (n = 250)	-0.02	0.01	-0.11	-0.11	-0.05	-0.08	-0.07
Years in Winnipeg (n = 247)	0.03	0.05	0.12	-0.01	-0.14*	-0.07	-0.03

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. M-C SDS = Marlow-Crowne Social Desirability Scale. EPQR-S = Revised Eysenck Personality Questionnaire Short Scale Version. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Sex Threat = Threat to Sexual Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. HV = History of Victimization.

related to age, r (505) = 0.24, $p < .001$. That is, as the respondents in the community aged, they engaged in more protective behaviours. This positive relationship between Crime Precautions and age appears to have counter-balanced the negative relationship the remaining Threat subscales had with age, leaving the overall relationship non-significant. This did not occur with Non-Sex Threat and Sex Threat because Crime Precautions was not included in these measures. The relationship between age and fear of sexual crime was negative indicating that younger women reported greater fear of sexual crime. It was not surprising that younger women were more afraid of sexual crime, because younger women are more targeted for these types of crime (Brennan & Taylor-Butts, 2008).

One surprising finding was how age related to victimization history. In the university sample, age was positively associated with victimization history (Table 18), which suggests that older students had experienced greater victimization. However, in the community sample, age was negatively related to victimization history (Table 19) suggesting that older residents of Winnipeg had experienced less victimization. This result was surprising, because it was expected older members of the sample would have higher scores on victimization history scores because they have had more opportunity to be victimized. It could be that older residents do in fact experience less victimization as they age and scored lower overall on the measure because they did not consider the victimization they may have experienced earlier in life when responding to the questionnaire.

When education was examined, it was found to be positively related to social desirable responding in university students of both genders and, for male respondents, it was related to higher reported fear of crime. Of these relationships, only one was found in the community sample. That is, higher education in male respondents in the community

was related to greater socially desirable responding. The conceptual connection between higher academic achievement and social desirability bias may be a desire to appear successful, which could motivate both higher achievement and a social desirability bias.

Time spent living in Winnipeg was examined next. In the university sample, time spent living in Winnipeg was negatively associated with social desirability and fear of crime. These relationships suggest that respondents who had lived in Winnipeg longer were less biased in their responding and less fearful. These relationships may be explained by the nervousness of new students from rural areas, other provinces, or abroad who move to the city to begin university. These new students would presumably be concerned about the impression they are making, which may cause them to respond with a greater social desirability bias. These students would also be unfamiliar with the city, which could cause them to be more fearful.

In the community sample, living in Winnipeg for a longer period of time was associated with less fear of sexual crime. It could be that living in Winnipeg for longer periods is related to less fear because it causes residents to feel more comfortable in the city.

The next demographic to be examined was the respondents' area of residence. As already discussed, the sample was asked to provide their postal code, which made it possible to approximate the participants' residence within the city of Winnipeg. Both samples were split into three groups representing the outer area of the city (area "1"), the inner area of the city (area "3"), and the area between these two extremes (area "2"; Figure 12). The division of these three groups was decided by the researcher with the aim of creating three equally spaced groups that radiate out from the center of the city. A figure that was created by the government of Canada (Figure 3) to illustrate crime levels

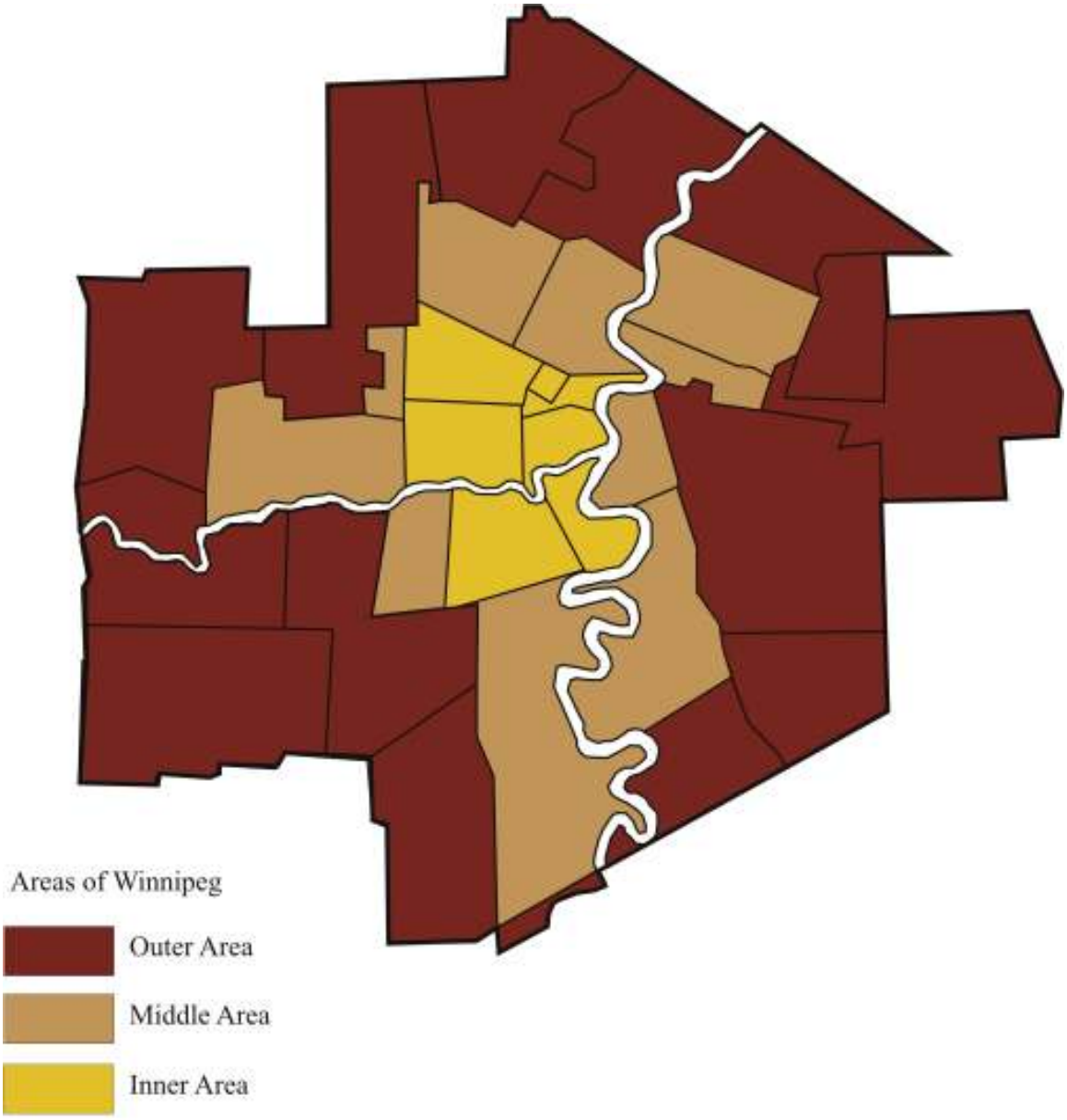

Figure 12. The three areas of Winnipeg used for the analysis of Fear of Crime by location.

in the center of the city in comparison with groups living farther from the center was used as a guide. The number of participants in these groups was unequal in both samples (Figure 9 and Figure 11). In the university sample, there were 462 respondents in the outer area, 321 respondents in the middle area, and 104 respondents in the inner area of the city (122 respondents did not give their postal code). In the community sample, there were 300 respondents in the outer area, 153 respondents in the middle area, and 42 respondents in the inner area of the city (13 respondents did not give their postal code). The means and standard deviations for fear of crime for each of these areas are shown in Table 20.

In both samples, a one-way ANOVA was calculated to compare the three different areas' fear of crime using all four of the fear of crime measures (S-F Fear, Threat, Non-Sex Threat, and Sex Threat). In the university sample (Table 21), three of the measures (S-F FCI, Threat, and Non-Sex Threat) showed significant results. Of note, the S-F Fear of Crime ANOVA was found to be significant for Levene's test for homogeneity of variance ($p < 0.05$). To ensure that the significant finding from this test was robust considering the violation of this assumption, Welch's test for the equality of means was calculated, in addition to the analysis displayed in the table, and was also found to be significant, F (2, 274.38) = 4.5, $p < .05$. Following this analysis, three post-hoc Bonferroni comparisons were conducted on S-F FCI, Threat, and Non-Sex Threat to determine the nature of the relationships among the three areas of the city (Table 22). These analyses revealed that the middle area had higher fear of crime scores than the outer area for all three measures. In addition, the inner area had higher scores than the outer area on S-F Fear and Threat.

Table 20

Descriptive Statistics for Fear of Crime by Location

	University Sample (N = 887)			Community Sample (N = 495)		
	n	*M*	*SD*	*n*	*M*	*SD*
Fear of Crime/Location						
S-F FCI						
Outer Area (1)	462	2.34	1.00	300	2.48	0.97
Middle Area (2)	321	2.43	1.00	153	2.37	1.02
Inner Area (3)	104	2.71	1.16	42	2.34	0.92
Total Threat						
Outer Area (1)	462	0.02	0.74	300	0.04	0.77
Middle Area (2)	321	-0.07	0.75	153	-0.09	0.74
Inner Area (3)	104	0.22	0.79	42	0.08	0.76
Non-Sex Threat						
Outer Area (1)	462	0.00	0.83	300	0.03	0.89
Middle Area (2)	321	-0.04	0.85	153	-0.11	0.82
Inner Area (3)	104	0.21	0.88	42	0.04	0.80
Sex Threat						
Outer Area (1)	462	-0.01	0.79	300	0.02	0.84
Middle Area (2)	321	-0.04	0.83	153	0.04	0.70
Inner Area (3)	104	0.17	0.87	42	0.07	0.76

Notes. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. Sex Threat = Threat to Sexual Victimization.

Table 21

Analysis of Variance for Location and Fear of Crime for University Sample

Source		*SS*	*df*	Mean Square	*F*	*p*
S-F Fear	Between Subjects	11.39	2	5.69	5.44	0.004**
	Within Subjects	925.25	884	1.05		
	Total	936.64	886			
Threat	Between Subjects	6.64	2	3.32	5.94	0.003**
	Within Subjects	494.13	884	0.56		
	Total	500.77	886			
Non-Sex Threat	Between Subjects	5.15	2	2.57	3.64	0.027*
	Within Subjects	624.59	884	0.71		
	Total	629.74	886			
Sex Threat	Between Subjects	3.41	2	1.70	2.57	0.077
	Within Subjects	585.40	884	0.66		
	Total	588.81	886			

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. Sex Threat = Threat to Sexual Victimization.

Table 22

Bonferroni Comparison for Location and Fear of Crime for the University Sample

Source	Comparisons	Mean Difference	Standard Error	*p*
S-F Fear	Group 1 & 2	-0.08	0.07	0.873
	Group 1 & 3	-0.37	0.11	0.003**
	Group 2 & 3	-0.29	0.12	0.039*
Threat	Group 1 & 2	0.09	0.05	0.304
	Group 1 & 3	-0.20	0.08	0.042*
	Group 2 & 3	-0.29	0.08	0.002**
Non-Sex Threat	Group 1 & 2	0.05	0.06	1.000
	Group 1 & 3	-0.21	0.09	0.066
	Group 2 & 3	-0.25	0.10	0.022*

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. Group 1 = Outer Area, Group 2 = Middle Area, and Group 3 = Inner Area.

In the community sample (Table 23), the same ANOVA procedure was followed, but no significant differences were found for the three groups on any of the four fear of crime measures. Because no significant relationships were found in the overall ANOVA, no post-hoc analyses were completed.

History of victimization. The present study's focus of investigation was the validity of one of the core tenets of the fear victimization paradox, namely women's higher reported fear of crime. The fear victimization paradox's other core finding is that men experience greater criminal victimization than women. Specifically, statistics show that, in Canada, men experience greater property and violent victimization, while women experience greater sexual victimization (Perreault & Brennan, 2009). The means to examine this finding was also within the purview of the present investigation. The History of Victimization (HV) scale measures the frequency of the respondents' prior reported victimization. The means from this scale may seem low, but this is because many of the participants indicated that they had never experienced most of the types of crime listed. When respondents indicated no prior victimization on a particular type of crime, their response was coded as zero, which lowered the means considerably.

In both samples, property crime and violent crime were investigated together because the literature suggests that men experience greater victimization in these categories. In the university sample, for property and violent crime, men reported greater prior victimization ($M = 0.41$, $SD = 0.33$) than women ($M = 0.33$, $SD = 0.26$). Levene's test for equality of variances was significant ($p < 0.01$) so this difference was tested using an Independent Samples t-test that did not assume equality of variances. This Independent Sample's t-test found that the difference was significant, $t(708.86) = 4.20$, $p < 0.001$. For sexual victimization, women ($M = 0.13$, $SD = 0.38$) reported a greater

Table 23

Analysis of Variance for Location and Fear of Crime for the Community Sample

Source		*SS*	*df*	Mean Square	*F*	*p*
S-F Fear	Between Subjects	1.42	2	0.71	0.74	0.480
	Within Subjects	475.60	492	0.97		
	Total	477.02	494			
Threat	Between Subjects	2.09	2	1.05	1.80	0.166
	Within Subjects	285.05	492	0.58		
	Total	287.14	494			
Non-Sex Threat	Between Subjects	2.09	2	1.05	1.42	0.243
	Within Subjects	362.17	492	0.74		
	Total	364.26	494			
Sex Threat	Between Subjects	0.44	2	0.22	0.35	0.704
	Within Subjects	309.16	492	0.81		
	Total	308.60	494			

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization. Sex Threat = Threat to Sexual Victimization.

history of victimization than men ($M = 0.04$, $SD = 0.22$) and, again using an Independent Samples t-test not assuming homogeneity of variance because Levene's test was significant ($p < 0.001$), this difference was found to be significant, $t(994.42) = -4.97$, $p < 0.001$. Finally, overall history of victimization was tested and men's average score on HV was 0.36 ($SD = 0.30$) and women's was 0.30 ($SD = 0.25$). Once again, Levene's test for equality of variance was significant ($p < 0.05$), the adjusted t-test was significant, $t(748.73) = 3.29$, $p < 0.01$, thereby confirming that men reported significantly more overall criminal victimization than women in the university sample. These results also confirm what has been found in police statistics in that men experience greater property and violent victimization, while women report greater sexual victimization.

This procedure was repeated in the community sample. In this sample, men's reported property and violent victimization ($M = 0.38$, $SD = 0.23$) was greater than women's ($M = 0.29$, $SD = 0.23$) and this difference was significant, $t(506) = 4.39$, $p < 0.001$. For sexual victimization, women's victimization ($M = 0.19$, $SD = 0.48$) was greater than men's ($M = 0.03$, $SD = 0.15$). These two means were tested using an Independent Samples t-test that did not assume homogeneity of variance because Levene's test for equal variances was significant ($p < 0.001$), and it was found that this difference was significant, $t(298.72) = -5.28$, $p < 0.001$. For overall history of victimization, men's average score on HV was 0.33 ($SD = 0.20$) and women's was 0.28 ($SD = 0.22$). The difference between the two gender's means on HV was significant, $t(506) = 2.90$, $p < 0.01$. Just like the results from the university population, these findings were consistent with findings in the literature suggesting that men experience significantly more property and violent victimization, while women experience greater sexual victimization.

The relationship between criminal trauma history and fear of crime was also assessed. In the university sample, all four fear of crime measures were significantly positively correlated with History of Victimization (HV) (S-F FCI $r(1009) = 0.19$, $p < .001$; Threat $r(1009) = 0.26$, $p < .001$; Sex Threat $r(1009) = 0.14$, $p < .001$; and Non-Sex Threat $r(1009) = 0.30$, $p < .001$). In the community sample, all fear of crime measures except Sex Threat were significantly positively correlated with HV (S-F FCI $r(508) = 0.10$, $p < .05$; Threat $r(508) = 0.17$, $p < .001$; Sex Threat $r(508) = 0.02$, $p = .725$; and Non-Sex Threat $r(508) = 0.22$, $p < .001$). These results indicate that a greater history of being victimized is related to greater fear of crime.

To further explore the relationship between HV and fear of crime, correlations were conducted between each type of victimization (15 in total) and the four fear of crime measures (Table 24 and Table 25). This analysis produced a high number of correlations, which makes it likely that a number of these relationships would be significant by chance alone. For this reason, only the correlations that were significant at the 0.01 level or lower were interpreted. The possibility of using a bonferroni correction was considered, but it was felt that this correction would be too conservative for this exploratory research. In addition, although all of the participants were included in each of the correlation analyses, there was a significant positive skew. That is, the participants who had never experienced the particular type of victimization were represented with the lowest number on the scale (i.e., zero) and, for many of these crimes, a very low percentage of the sample had actually experienced victimization of that type. For example, in the community sample only 4% of the population had experienced identity theft. Thus, for this question, 96% of the sample was coded zero. This significantly limited the variance of the scores, making it more difficult to detect significant results.

Table 24

Correlation Coefficients for History of Victimization Questions and Fear of Crime for the University Sample

Type of Crime	Yes (*n*)	%	S-F FCI	Total Threat	Sex Threat	Non-Sex Threat
	University Students (N = 1009)					
Property Crime						
1) Cheated financially	240	24	0.13***	0.14***	0.06	0.18***
2) Identity theft	33	3	0.04	0.05	0.06	0.06
3) Computer hacked / virus	715	71	0.10**	0.13***	0.02	0.17***
4) Stealing electronic communication	214	21	0.12***	0.19***	0.16***	0.20***
5) B&E while away by stranger	242	24	0.06	0.08	0.01	0.08
6) B&E while away by known person	109	11	0.08**	0.07	0.06	0.09**
7) B&E while at home	76	8	0.09**	0.11**	0.08**	0.11**
8) Car stolen	149	15	0.04	0.08	0.06	0.08
9) Vandalism	550	55	0.15***	0.20***	0.01	0.20***

Table 24 continued

Type of Crime	Yes (*n*)	%	S-F FCI	Total Threat	Sex Threat	Non-Sex Threat
	University Students (*N* = 1009)					
Violent Non-sexual Crime						
10) Attack by stranger	141	14	0.05	0.06	-0.02	0.08
11) Attack by known person	198	20	0.04	0.08**	0.04	0.10**
12) Family or friend murdered	120	12	0.03	0.08	0.12***	0.08**
13) Robbed or mugged on street	74	7	0.03	0.09**	0.02	0.11***
Violent Sexual Crime						
14) Sexual assault by stranger	43	4	0.07	0.10**	0.14***	0.08
15) Sexual assault by known person	76	8	0.09**	0.14***	0.22***	0.14***

Note. ** $p < .01$, *** $p < .001$. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Sex Threat = Threat to Sexual Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization.

Table 25

Correlation Coefficients for History of Victimization Questions and Fear of Crime for the Communtiy Sample

Type of Crime	Yes (*n*)	%	S-F FCI	Total Threat	Sex Threat	Non-Sex Threat
	Community Participants (*N* = 508)					
Property Crime						
1) Cheated financially	151	30	0.01	0.07	-0.04	0.08
2) Identity theft	20	4	0.02	0.07	-0.02	0.07
3) Computer hacked / virus	310	61	0.04	0.11	-0.05	0.16***
4) Stealing electronic communication	27	5	0.13**	0.14**	0.03	0.15**
5) B&E while away by stranger	156	31	0.00	0.00	-0.10	-0.01
6) B&E while away by known person	46	9	-0.03	0.00	0.00	0.02
7) B&E while at home	31	6	-0.01	0.03	0.09	0.05
8) Car stolen	107	21	0.04	0.04	0.00	0.03
9) Vandalism	313	62	0.18***	0.12**	-0.07	0.13**

Table 25 continued

Type of Crime	Yes (*n*)	%	S-F FCI	Total Threat	Sex Threat	Non-Sex Threat
	Community Participants (*N* = 508)					
10) Attack by stranger	83	16	0.00	0.04	0.03	0.08
11) Attack by known person	78	15	-0.06	-0.01	0.01	0.05
12) Family or friend murdered	58	11	0.06	0.11	0.09	0.10
13) Robbed or mugged on street	28	6	-0.05	-0.01	0.02	0.00
Violent Sexual Crime						
14) Sexual assault by stranger	21	4	0.03	0.09	0.20***	0.10
15) Sexual assault by known person	51	10	0.10*	0.17***	0.22***	0.15**

Note. ** $p < .01$, *** $p < .001$. S-F FCI = Sutton-Farrall Fear of Crime Inventory. Threat = Threat to Victimization. Sex Threat = Threat to Sexual Victimization. Non-Sex Threat = Threat to Non-Sexual Victimization.

For this reason, the percentage of respondents who had experienced the type of victimization is shown in Table 24 and 25.

For the university students, most of the types of crime had a significant relationship with at least one of the fear of crime measures. Only four of the types of victimization were unrelated to any of the fear measures; these were identity theft, B&E while away by a stranger, car stolen, and attack by a stranger. The lack of relationship between fear of crime and experiencing identity theft may be attributed to the very low rate of identity theft in the sample. However, it would be more difficult to make this argument for the other three.

The correlation pattern was different for the community participants, for whom only a few types of victimization were related to fear of crime, which included computer hacking/virus, stealing electronic communications (e.g., cable), vandalism, having a family or friend murdered, and rape or sexual assault by stranger and by a known person. Sexual assault showed the most consistent and strongest relation to fear of crime, being primarily related to fear of sexual crime. The results with the community sample, however, should be viewed with caution because of HV's poor reliability in the community sample.

Hypothesis Testing

Hypothesis 1. The first hypothesis was that women would report greater fear of crime than men and the university sample was analyzed first. Independent Samples t-tests were calculated to test whether women's fear of crime was higher than men's on the two general fear of crime measures (Sutton Farrall Fear of Crime Index or S-F FCI and Threat to Victimization or Threat). On the S-F FCI, women were found to have higher fear of crime ($M = 2.53$, $SD = 1.01$) than men ($M = 2.21$, $SD = 1.02$). This difference was

statistically significant, $t(1007) = -4.85$, $p < 0.001$. For the Threat measure, women were also found to have higher fear of crime ($M = 0.16$, $SD = 0.75$) than men ($M = -0.24$, $SD = 0.69$). For this t-test, however, Levene's test for equality of variances was significant ($p < 0.05$). The results of a t-test, where equal variances are not assumed, was significant, $t(901.46) = -8.69$, $p < 0.001$, indicating that women reported higher fear of crime than men.

Hypothesis 1 was also tested for the community sample. For the S-F FCI, women's fear of crime ($M = 2.61$, $SD = 1.04$) was higher than men's fear of crime ($M = 2.29$, $SD = 0.90$). Levene's test for equality of variance was significant ($p < 0.01$). A modified Independent Samples t-test such that it did not assume equality of variance, was significant, $t(491.75) = -3.73$, $p < 0.001$, indicating that women's fear was significantly higher than men's. For Threat, the Independent Samples t-test was also significant, $t(506) = -5.70$, $p < 0.001$, indicating that women's fear of crime ($M = 0.19$, $SD = 0.79$) was significantly higher than men's fear of crime ($M = -0.18$, $SD = 0.69$). These results, for both the university and community sample, support Hypothesis 1, that women report greater general fear of crime than men.

Hypotheses 2-4 testing procedure. In order to test Hypotheses 2, 3, and 4 it was necessary to statistically remove the effect of social desirability. The statistical procedure used in these analyses was modeled after the procedure used in Sutton and Farrall's (2005) original investigation. The first step was to determine whether, for either gender, social desirability was related to fear of crime through a correlation analysis. If the two variables were unrelated, it was unnecessary to proceed further because two variables must be related in order for one to be able to function as a moderator. However, if the two

variables were related, a regression analysis was completed for each gender, as described below.

The linear regression allowed for the calculation of the "least squares line," which is the most accurate linear characterization possible of the relationship between the two variables and is expressed in the function $y = bx + c$. In this equation, y is the predicted value of the criterion variable, which are various types of fear of crime in this investigation, and x is the value of the predictor variable, which are the social desirability variables in this investigation. The b and c values in this equation represent the slope and a constant, which express the linear relationship between the two variables being examined. This equation can be used to calculate the value of the predicted criterion variable (fear) for different values of the predictor variable (social desirability).

In this study this equation was used to calculate the predicted fear of crime scores of the sample if they had answered with no social desirability bias. For the two social desirability measures used in this study (i.e., M-C SDS & EPQR-S) the number one represents the theoretical mean of the sample if the entire sample responding had not been influenced by social desirability. That is, the number one represents the score on the social desirability measure if the sample had been completely honest. By putting the numeral 1 into the "x" position, the equation is able to calculate the best estimate of the samples central tendency for fear of crime if the sample had responded with complete honesty. Once this best estimate is calculated, the difference between this value and the observed fear of crime mean can then be determined and used to adjust each respondent's fear of crime total score. For example, if the estimate of the sample's honest fear of crime central tendency was 0.50 higher than the observed fear of crime mean, each respondent's fear of crime total score would be increased by 0.50 in order to reflect

scores that had not been influenced by social desirability. This procedure was completed separately for the male and female sample. Once this social desirability bias is taken into account, men and women's adjusted fear of crime scores were then compared. This was the procedure used in the remaining hypothesis testing.

Hypothesis 2. The second hypothesis was that men would report greater fear of crime than women when social desirability is taken into account. For the university sample, the relationships between the social desirability and fear of crime measures were initially analyzed by reviewing the correlations between social desirability and fear of crime. The correlation analysis revealed that there was no measurable relationship between social desirability and overall fear of crime for men or women (Table 9). This indicated that the university respondents were answering the fear of crime questions without a significant social desirability bias.

However, the subscales of the Threat measure were inconsistently related to social desirability. Specifically, the Crime Precautions subscale was positively related to social desirability, whereas the other subscales were negatively related to social desirability (Table 14). This indicated that the university students may have found it socially desirable to report engaging in certain crime precautions (e.g., locking doors), while finding it socially undesirable to report emotional fear of crime. This inconsistency in the relationship between the Threat subscales and social desirability could be the reason for the lack of relationship between overall Threat measure and the social desirability measures. Given these findings, it was decided it could be informative to analyze one of the Threat subscales' relationship to social desirability independently. The F-G FCI subscale of Threat was chosen to be analyzed independently because, taken alone, it best represents the construct Sutton and Farrall (2005) were attempting to measure, namely,

the emotional aspect of fear of crime. For men in the university sample, one of the social desirability measures, the EPQR-S, was related to F-G FCI, $r(399) = -0.15$, $p < .01$. For women, the F-G FCI was unrelated to social desirability. The significant relationship between F-G FCI and the EPQR-S suggested that men responded with lower emotional fear of crime scores in order to appear socially desirable. Prior to further examining this relationship, an Independent Samples t-test was conducted to confirm that women reported higher fear of crime than men on the F-G FCI. Levene's test for equality of variance was significant ($p < 0.001$), so an Independent Samples t-test was used with the modification that it did not assume equality of variance. This test was significant, $t(967.94) = -6.11$, $p < 0.001$, indicating that women's fear of crime ($M = 2.35$, $SD = 1.27$) was significantly higher than men's fear of crime ($M = 1.90$, $SD = 1.01$).

A regression analysis was completed to quantify and statistically remove the influence of social desirability bias from men's responses to the F-G FCI. This regression analysis produced an adjusted R^2 of 0.02, F (1, 397) = 8.88, $p < .01$. This analysis further supported the finding that men were responding with a social desirability bias when answering the F-G FCI fear of crime questions. The regression equation from this analysis, Predicted F-G FCI = -0.73 (EPQR-S) + 2.89, was used to predict a best estimate for men's unbiased fear of crime mean. Table 26 displays the observed and adjusted F-G FCI means for men and women. For the women in the university sample, a regression analysis was also conducted, which produced an adjusted R^2 of 0.00, F (1, 608) = 2.45, $p = .118$. This result confirmed women were not responding with a significant social desirability bias. Because there was no evidence that social desirability was moderating women's fear of crime, no adjustment was made to the women's F-G FCI scores.

Table 26

Summary of Independent t-test of Men and Women's F-G FCI Means Adjusted for Influence of EPQR-S in University Sample

	Observed Means		Adjusted Means			
	Male	Female	Male	Female	*t*	*df*
Emotional Fear of Crime (F-G FCI)	1.90 (1.01)	2.35 (1.27)	2.16 (1.01)	2.35 (1.27)	-2.62**	967.94

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. Standard deviations appear in parentheses below means.

Men's predicted F-G FCI scores were compared with women's F-G FCI scores using an Independent Samples t-test. Levene's test for equality of variance was significant ($p < .001$) so equality of variances not assumed. Table 26 shows that when the adjusted mean's were compared, men's adjusted fear of crime, as measured by the F-G FCI, continued to be lower than women's when the effects of social desirability were removed. These results suggest that the finding that men report less fear of crime than women can be trusted.

In the community sample, the relationship for men between fear of crime and social desirability was examined and two significant relationships were found. These were between the M-C SDS and both of the measures for overall fear of crime, the S-F FCI, $r(258) = -0.21$, $p < .01$, and Threat, $r(258) = -0.14$, $p < .05$. These relationships indicated that biased responding was associated with lower fear of crime, which suggests that these men were reporting lower fear of crime scores in order to appear socially desirable. These two relationships were examined further.

For the men in the community sample, the regression analysis for the relationship between M-C SDS and S-F FCI produced an adjusted R^2 of 0.04, F (1, 256) = 12.07, $p <$ .01. This further supported the finding that men were responding with a social desirability bias when answering the S-F FCI fear of crime questions. The regression equation from this analysis, Predicted S-F FCI = -1.11 (M-C SDS) + 4.02, was used to predict a best estimate for men's unbiased fear of crime mean (Table 27). For the women in the community, the regression analysis produced an adjusted R^2 of 0.01, F (1, 248) = 1.15, p = .285. This result indicated that social desirability was not significantly related to fear of crime so no adjustment was made to the women's S-F FCI scores.

Table 27

Independent t-test of Fear of Crime Means Adjusted for Influence of the M-C SDS in Community Sample

	Observed Means		Adjusted Means			
	Male	Female	Male	Female	*t*	*df*
Sutton Farrall Fear of Crime (S-F FCI)	2.29 (0.90)	2.61 (1.04)	2.91 (0.90)	2.61 (1.04)	3.45**	491.75
Threat to Victimization	-0.18 (0.69)	0.19 (0.79)	0.12 (0.69)	0.19 (0.79)	-1.07	506

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. Standard deviations appear in parentheses below means.

Men's adjusted S-F FCI scores were compared with women's S-F FCI scores using an Independent Samples t-test (Table 27). Levene's test for equality of variance was significant ($p < .01$), so equality of variances was not assumed in the analysis. The Independent Samples t-test found that the difference between these two means was significant, which indicated that the original finding had reversed. Men's adjusted fear of crime, as measured by the S-F FCI, was higher than women's fear when the effects of social desirability were removed.

The above procedure was repeated for the Threat measure. The regression analysis for the relationship between Threat and M-C SDS for men produced an adjusted R^2 of 0.02, F (1, 256) = 4.93, $p < .05$. This analysis further supported the finding that men were responding with a social desirability bias when answering the Threat questions. The equation from this regression, Predicted Threat = -0.55 (M-C SDS) + 0.67, was used to predict a best estimate for men's unbiased fear of crime mean (Table 27). The same analysis was conducted on the women's scores, which produced an adjusted R^2 of 0.00, F (1, 248) = 0.00, $p = .950$. This indicated that the women's scores were not moderated by social desirability so they were not adjusted.

An Independent Samples t-test compared men's predicted Threat and women's original Threat scores (Table 27). The analysis found that the difference between these two means was not significant. This indicated that men's fear of crime, as measured by the Threat, was raised by removing the effect of social desirability to the point where fear was no different from women's fear.

Hypothesis 2 stated that men would report greater fear of crime overall than would women when socially desirable responding was taken into account. Support for this hypothesis was mixed. In the university sample, social desirability was not related to

either of the two primary general fear of crime measures (S-F FCI and Threat), which suggests that they were responding without bias. However, when the emotional fear of crime subscale (F-G FCI) from Threat was assessed individually, it was found to be negatively related to the EPQR-S measure of social desirability. This relationship suggested that men were reporting lower fear of crime in order to appear socially desirable. However, when the effect of social desirability was removed, men's fear continued to be lower than women's fear.

In the community sample, the results were also mixed. The original social desirability measure used by Sutton and Farrall (2005), the EPQR-S, was not related to either general fear of crime measure. However, the M-C SDS, which was added for the present investigation, was negatively related to both general fear of crime measures. When the influence of the M-C SDS was removed from the fear of crime, in one measure, the S-F FCI, the relationship reversed and men were significantly more afraid of crime than women. In the other measure, Threat, men and women's scores were made equivalent. It appears that, in the community, men lowered their reported fear of crime in order to appear socially desirable. In one instance, this effect was sufficiently powerful to reverse men and women's fear of crime, thereby replicating Sutton and Farrall's (2005) finding and supporting Hypothesis 2. However, men's social desirability bias was only detected by the M-C SDS, which was the measure added for the present analysis. This raises the question of why the two social desirability measures related to fear of crime differently. Although the original finding was discovered using the EPQR-S, the M-C SDS was judged by the researcher to be a superior measure of social desirability because it was designed to be used on the general population and, for this reason, its results carry greater weight.

Hypothesis 3. The third hypothesis was that men would report greater fear than women of non-sexual crime when social desirability is taken into account. In the university sample, an initial Independent Samples t-test indicated that men's Non-Sex Threat (M = -.18, SD = 0.77) was below women's Non-Sex Threat (M = 0.12, SD = 0.86). Levene's test for equality of variance was significant ($p < 0.01$). The t-test with equality of variance not assumed was significant, $t(911.81) = -5.61$, $p < .001$, indicating that women's fear of non-sexual crime was higher than men's.

The correlations between Non-Sex Threat and the two social desirability measures were not significant for the men (EPQR-S, $r(399) = -0.06$, $p = .217$; M-C SDS, $r(399) = -0.01$, $p = .865$). However, for or the women the relationship between the EPQR-S and Non-Sex Threat was significant ($r(610) = -0.08$, $p < .05$) while the relationship between M-C SDS and Non-Sex Threat was not ($r(610) = -0.06$, $p = .135$). Therefore, further analysis was undertaken to examine the influence of the EPQR-S on women's Non-Sex Threat scores.

The regression analysis for the relationship between Non-SexThreat and EPQR-S for women produced an adjusted R^2 of 0.01, F (1, 608) = 3.91, $p < .05$. This analysis further supported the finding that women were responding with a social desirability bias when answering the Non-Sex Threat questions. The equation from this regression, Predicted Non-Sex Threat = -0.35 (EPQR-S) + 0.57, was used to predict a best estimate for women's unbiased fear of crime mean (Table 28). The same analysis was conducted on the men's scores, which produced an adjusted R^2 of 0.00, F (1, 397) = 1.53, $p = .217$. This indicated that the men's scores were not moderated by social desirability so they were not adjusted.

Table 28

Independent t-test of Non-Sex Threat Means Adjusted for Influence of Social Desirability Measures

	Observed Means		Adjusted Means			
	Male	Female	Male	Female	*t*	*df*
			University Sample			
Non-Sex Threat (Adjusted by EPQR-S)	-0.18 (0.77)	0.12 (0.86)	-0.18 (0.77)	0.23 (0.86)	-7.75***	911.81
			Community Sample			
Non-Sex Threat (Adjusted by M-C SDS)	-0.13 (0.79)	0.14 (0.91)	0.32 (0.79)	0.14 (0.91)	2.44*	506

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. Non-Sex Threat = Threat to Non-Sexual Victimization. EPQR-S = Revised Eysenck Personality Questionnaire Short Scale Version. M-C SDS = Marlow-Crowne Social Desirability Scale. Standard deviations appear in parentheses below means.

An Independent Samples t-test compared women's predicted Non-Sex Threat scores and men's original Threat scores (Table 28). Levene's test for equality of variance was significant ($p < .01$), so equality of variances was not assumed in the analysis. The analysis found that the difference between these two means continued to be significant, with women's non-sexual fear of crime remaining higher than men's even when the effect of social desirability was taken into account.

In the community sample, an initial Independent Samples t-test indicated Non-Sex Threat ($M = -0.13$, $SD = 0.79$) was below women's ($M = 0.14$, $SD = 0.91$). The difference was significant, $t(506) = -3.60$, $p < 0.001$, indicating that women in the community sample reported higher fear non-sexual crime than men.

The correlation between the EPQR-S and the Non-Sex Threat was not significant for men, $r(258) = -0.12$, $p = .059$, or women, $r(250) = 0.01$, $p = .933$. However, the correlation was significant for men, $r(258) = -0.18$, $p < .01$, but not for women, $r(250) = -0.07$, $p = .302$. The negative correlation between M-C SDS and Non-Sex Threat for men suggested that men were lowering their non-sexual fear of crime responses to appear socially desirable. This relationship was examined further.

For the men, the regression analysis for the relationship between M-C SDS and Non-Sex Threat produced an adjusted R^2 of 0.03, $F(1, 256) = 8.67$, $p < .01$, which further supported the finding that men were responding with a social desirability bias when answering the non-sexual fear of crime questions. The equation from this regression, Predicted Non-Sex Threat = -0.83 (M-C SDS) + 1.15, was used to predict a best estimate for men's unbiased non-sexual fear of crime mean (Table 28). The same analysis was also conducted for women in the community and the regression was not

significant $R^2 < 0.00$, F (1, 248) = 1.07, $p = 0.302$, therefore women's fear of crime scores were not adjusted.

An Independent Samples t-test compared men's predicted Non-Sex Threat and women's original Non-Sex Threat scores (Table 28). The Independent Samples t-test found that the difference between these two means was significant. These results indicated that men's adjusted fear of non-sexual crime was higher than women's, when the effects of social desirability were removed.

Hypothesis 3 stated that men would report greater fear than women of non-sexual crime when socially desirable responding was taken into account. The results for this hypothesis were mixed. In the university sample the EPQR-S moderated women's fear of crime, but when this was taken into account the relationship between men and women's fear of crime remained the same, leaving the hypothesis unsupported. In the community sample the original measure of social desirability used by Sutton and Farrall (2005), the EPQR-S, did not moderate fear of crime, but the M-C SDS did significantly influence non-sexual fear of crime. However, just as with hypothesis 2, the results found by M-C SDS will be given greater weight than those found by the EPQR-S. When the influence of social desirability was removed, men and women's fear of non-sexual crime reversed and men's fear was found to be significantly higher than women's fear. This finding supported Hypothesis 3.

Hypothesis 4. The fourth hypothesis was that women would report greater fear than men of sexual crime, when social desirability is taken into account. In the university sample, an initial Independent Samples t-test indicated men's reported Sex Threat scores (M = -0.38, SD = 0.51) was below women's Sex Threat scores (M = 0.25, SD = 0.88), t(993.47) = -14.39, $p < 0.001$, using a t-test where equality of variances not assumed

because Levene's test for equality of variance was significant ($p < .001$). This indicated that women did report higher fear of sexual crime when social desirability was not taken into account.

The relationships between Sex Threat and the two social desirability measures were then examined. For men, the correlations between Sex Threat and both measures of social desirability measures were significant with the correlation between Sex Threat and the M-C SDS being $r(399) = 0.14$, $p < .01$, and the correlation between Sex Threat and the EPQR-S being $r(399) = 0.12$, $p < .05$. Unlike the relationship between social desirability and the other fear of crime measures, the relationship between Sex Threat and social desirability was positive. This result suggests that the men in the sample were increasing their fear of sexual crime scores to appear more socially desirable. This is a surprising result because no theory could be found that would suggest that men would find it socially desirable to appear more afraid sexual crime. This result may point to a new perspective men have of sexual assault, which will be explored in the discussion section. For women, one of the relationships between fear of sexual crime and the EPQR-S measure of social desirability was significant ($r(610) = -0.08$, $p < .05$) while the relationship with the M-C SDS was not ($r(610) = -0.05$, $p < .193$). The significant relationships found in the university sample allowed for further analysis of whether or not social desirability significantly moderated the relationship between gender and fear of sexual crime.

The EPQR-S was tested first. For the men in the university sample, the regression analysis for the relationship between EPQR-S and Sex Threat produced an adjusted R^2 of 0.01, $F(1, 397) = 6.16$, $p < .05$, which further supported the finding that men were indicating higher fear of sexual assault in order to appear social desirable. The equation

from this regression, Predicted Sex Threat = 0.31 (EPQR-S) – 0.79, was used to predict a best estimate for men's unbiased fear of sexual crime mean (Table 29).

The same analysis was also conducted for university women in the sample and the regression was significant with an adjusted R^2 of 0.01, F (1, 608) = 4.25, $p < .05$. This result indicated that women's fear of crime scores were negatively moderated by social desirability, which suggests that women were decreasing their reported fear of sexual crime in order to appear socially desirable. This relationship was surprising because the literature would suggest that if women were biased in their reported fear of crime, they would increase their reported fear of crime to appear more socially desirable (Sutton & Farrall, 2011). In order to predict what the women's Sex Threat scores would be without the influence of the EPQR-S, a regression equation was calculated, Predicted Sex Threat = -0.34 (EPQR-S) + 0.74. This equation was used to predict a best estimate for women's unbiased fear of crime mean. Table 29 displays the observed and adjusted S-F FCI means.

An Independent Samples t-test compared men and women's predicted Sex Threat scores (Table 29). Levene's test for equality of variance was significant ($p < .001$), so equality of variances was not assumed in the analysis. The difference between these two means was significant, which indicated that even when men and women's scores were adjusted to remove social desirability bias, men's fear of sexual crime remained lower than women's.

The same procedure was followed with the M-C SDS measure. For the men in the university sample, the regression analysis for the relationship between M-C SDS and Sex Threat produced an adjusted R^2 of 0.02, F (1, 397) = 8.00, $p < 0.01$, which further supported the finding that men were raising their fear of sexual crime responses in order

Table 29

Independent t-test of Sex Threat Means Adjusted for Influence of the EPQR-S and M-C SDS in University Sample

	Observed Means		Adjusted Means			
	Male	Female	Male	Female	*t*	*df*
			EPQR-S			
Sex Threat	-0.38 (0.51)	0.25 (0.88)	-0.49 (0.51)	0.37 (0.88)	-19.51***	993.47
			MC-SDS			
Sex Threat	-0.38 (0.51)	0.25 (0.88)	-0.62 (0.51)	0.25 (0.88)	-19.83***	993.47

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. Sex Threat = Threat to Sexual Victimization. Standard deviations appear in parentheses below means.

to appear socially desirable. The regression equation from this analysis, Predicted Sex Threat = 0.498 (M-C SDS) - 0.617, was used to predict a best estimate for men's unbiased fear of crime (Table 29). For the women in the university sample, the regression analysis produced an adjusted $R^2 < 0.00$, F (1, 608) = 1.70, $p = 0.193$. This result indicated that social desirability was not a significant moderator of fear of sexual crime so no adjustment was made to women's Sex Threat scores.

An Independent Samples t-test compared men's predicted Sex Threat and women's original Sex Threat scores (Table 29). Levene's test for equality of variance was significant ($p < .001$), so equality of variances was not assumed in the analysis. The difference between these two means was significant, which indicated that men's adjusted fear of sexual crime remained lower than women's, when the effects of social desirability were removed.

In the community sample, an initial Independent Samples t-test was performed to test whether women were higher than men on fear of sexual crime when social desirability was not taken into account. Men's reported Sex Threat scores (M = -0.27, SD = 0.54) was below women's Sex Threat scores (M = 0.28, SD = 0.90), using a t-test for equality of variances not assumed (Levene's test for equality of variance, $p < .001$), $t(405.36) = -8.17$, $p < 0.001$. These results indicated that men's fear of sexual victimization was lower than women's when social desirability was not taken into account. However, Sex Threat did not correlate with social desirability in the community sample, so no further analysis was conducted.

Hypothesis 4 stated that women would report greater fear than men of sexual crime when social desirability was taken into account. Although the hypothesis was consistently supported in the present findings, the underlying direction of the

relationships between fear of sexual crime and social desirability were surprising in the university sample. For both social desirability measures, men appeared to be increasing their fear of sexual crime responses in order to appear social desirable. On one of the social desirability measures, the EPQR-S, women appeared to be lowering their fear of sexual crime responses in order to appear socially desirable. The direction of both of these relationships was contrary to expectations and it is difficult to offer a compelling explanation for these results. These findings were only observed in the university sample, which may suggest that the younger generation has a new psychological relationship with the sexual assault construct. Despite these surprising results, in both samples men's fear of sexual crime remained lower than women's even when the effects of social desirability were taken into account, which supports Hypothesis 4.

Post-hoc Analyses

Hyper-masculinity as moderator of fear of crime. Just as social desirability was a potential moderator of the gender-fear of crime relationship, hyper-masculinity was analyzed to assess whether it was a moderator of men's fear of crime. As already mentioned, the ADMI was only administered to the university male sample, so this investigation cannot illuminate its potential relationship in the community sample. The correlation between the hyper-masculinity and the fear of crime measures was inspected first. The initial results indicated that hyper-masculinity was negatively related only to Sex Threat $r(399) = -0.20$, $p < .001$. Sutton and Farrall's (2005) S-F FCI and Non-Sex Threat were shown to be related to location of residence analysis. For this reason, the influence of location was controlled for and the results indicated that, when location was controlled, the relationship between S-F FCI and hyper-masculinity was significant, $r(347) = -0.11$, $p < .05$, but the relationship between Non-Sex Threat and hyper-

masculinity was not, $r(347) = -0.09$, $p = .094$. These results suggest that higher masculinity was related to lower reported fear of crime and lower reported fear of sexual crime. Further analyses on S-F FCI (controlling for location) and Sex Threat was completed to determine the effect of hyper-masculinity's moderating relationship.

The regression analysis for the relationship between hyper-masculinity and the S-F FCI produced an adjusted R^2 of 0.02, F (2, 347) = 4.05, $p < 0.05$, which indicated that men with higher hyper-masculinity had lower S-F FCI scores. The regression equation from this analysis, Predicted S-F FCI = -0.27 (ADMI) + 0.16 (Location) + 3.10, was used to predict the estimate for men's fear of crime if they responded with no hyper-masculinity (response of 1.0). For location, the scale used for this question was "1" representing the outer edges of the city, "2" representing the area between the outer edges and the center of the city, and "3" representing the center of the city (see Figure 12). It was found that the closer to the middle of the city respondents lived, the higher were their scores for fear of sexual crime. From this, it was concluded that of the three areas, the middle area represented the closest approximation of the area with an average amount of fear so this value (2.0) was used in the equation for location. Therefore, the equation produced the predicted central tendency for fear of crime (S-F FCI) of people who had no hyper-masculinity and who lived in the middle area of Winnipeg. Men's S-F FCI scores were adjusted based on this prediction and Table 30 displays the observed and adjusted S-F FCI means.

Although the women's scores could not be adjusted for masculinity, they were controlled for the influence of location of residence so that the comparison between men and women would be as equivalent as possible. The regression analysis for the relationship between location of residence and the S-F FCI produced an adjusted R^2 of

Table 30

Independent t-test of Fear of Crime Means Adjusted for Influence of the Hypermasculinity in University Sample

	Observed Means		Adjusted Means			
	Male	Female	Male	Female	*t*	*df*
Sutton Farrall Fear of Crime (S-F FCI)	2.21 (1.02)	2.53 (1.01)	3.15 (1.02)	2.60 (1.01)	8.36***	1007
Sex Threat	-.38 (0.51)	0.25 (0.88)	0.15 (0.51)	0.25 (0.88)	-2.34*	993.47

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. Sex Threat = Threat to Sexual Victimization. Standard deviations appear in parentheses below means.

0.01, F (2, 535) = 5.22, $p < 0.05$, which indicated that location had a significant impact on fear of crime. A regression equation was calculated, Predicted S-F FCI = 0.14 (Location) + 2.32. Similar to the male sample, 2.0 was inserted into the location position for in order to control for location. This equation was used to predict a best estimate for women's fear of crime when the effect of location was controlled. Table 30 displays women's observed and adjusted S-F FCI means.

An Independent Samples t-test compared men and women's predicted S-F FCI scores (Table 30) and indicated that the difference between these two means was significant. Men's adjusted fear of crime was now significantly higher than women's, when the effect of hyper-masculinity and the influence of location were controlled.

The relationship between hyper-masculinity and Sex Threat in the university sample was examined next. The regression analysis for the relationship between hyper-masculinity and Sex Threat produced an adjusted R^2 of 0.04, F (1, 397) = 16.96, $p <$ 0.001, which indicated that men with higher hyper-masculinity reported less fear of sexual crime. The regression equation Predicted Sex Threat = -0.21 (ADMI) + 0.36, was used to predict a best estimate for men's fear of sexual crime if they had responded with no hyper-masculinity (Table 30).

An Independent Samples t-test was used to compare men's predicted Sex Threat and women's Sex Threat scores (Table 30). Levene's test for equality of variance was significant ($p < .001$). The Independent Samples t-test, equality of variance not assumed, was significant, which indicated that men's adjusted fear of sexual crime remained significantly lower than women's, when the effect of hyper-masculinity was removed.

Hyper-masculinity, overall, trends towards a negative relationship with fear of crime. This effect was found with two measures of general fear of crime (S-F FCI) and

the measure of sexual fear of crime. When the effects of hyper-masculinity were removed, men's scores became higher than women's scores for one measure of general fear of crime (S-F FCI). There was a significant negative relationship between hyper-masculinity and Sex Threat, but it was not of sufficient strength to raise men's fear of sexual crime above women's. These results suggest that masculinity is related to lower reported fear of crime, which may be either due to hypermasculine men actually being less afraid or be a result of hypermasculine men having a greater desire to appear less afraid.

Discussion

Fear of crime continues to be a concern for society (Saad, 2010), a tool used by the media to gain audience attention (Welch et al., 2002), and an interest for investigators (Franklin & Franklin, 2009; Hale, 1996). The area of research that seems to interest researchers the most is how various factors influence the public's fear of being a victim of crime. One of the strongest and most consistent findings related to this area is that women report higher fear of crime than men (Cops & Pleysier, 2011). This finding has attracted a great deal of attention, particularly when it is viewed in conjunction with the prevalent finding that men experience greater criminal victimization than women. Many theories have been proposed to explain this interesting paradox, including women's potential feelings of vulnerability given their smaller stature (Killias & Clerici, 2000; Sacco, 1990), inaccurate assessment of women's rates of victimization (e.g., Sacco, 1990), and women's greater fear of rape (which may colour their perception of other crimes that might also involve rape; Fisher & Sloan, 2003). Still other explanations have been offered including evolutionary differences which may make men more prone to risk taking (Fetchenhauer & Buunk, 2005) and time/space inequalities (Whitley & Prince, 2005), which refer to women's unequal access to resources that enhance safety (e.g., less access to residences in safer neighbourhoods). Sutton and Farrall (2005) conducted the first study that investigated whether reported fear of crime was significantly influenced by social desirability. The investigators found that social desirability strongly influenced men's reporting of fear of crime. When men's scores were adjusted to reflect what their scores would have been without the influence of social desirability, their fear of crime was actually higher than that of the women in the sample. It was remarkable that social desirability had the potential of reversing one of the most consistent findings in the fear

of crime literature. The present research investigated whether Sutton and Farrall's (2005) finding could be replicated with a larger sample and improved methodology.

The first sample in this investigation was 1,009 Introduction to Psychology students from the University of Manitoba. The second sample was 508 randomly selected Winnipeg residents. Although neither of these samples were larger than the overall community sample utilized by Sutton and Farrall (2005), it is important to note that Sutton and Farrall were only able to give 288 participants one of the key measures in their study.

In addition to improved sampling, additional social desirability and fear of crime measures were included in the present investigation. Both of these measures promised more accurate measurement in their respective areas. The Marlowe-Crowne Social Desirability Scale (M-C SDS) was included in addition to the Revised Eysenck Personality Questionaire – Short Scale Version (EPQR-S), which had been used by Sutton and Farrall (2005). The advantages of the M-C SDS are its higher reliability and its method of construction. The M-C SDS was created to be valid with community populations, as opposed to the EPQR-S, which had been created in the context of a clinical population. An additional fear of crime measure developed by the author for this research and called the Threat to Victimization Scale, was included to supplement the measure used by Sutton and Farrall (2005). The Threat to Victimization Scale was developed in response to criticisms of previous fear of crime measures (Farrall & Gadd, 2004) and is consistent with a fear of crime conceptual framework that advocates for the inclusion of concepts closely associated with fear of crime (Rader, 2004). This measure performed well in the present analysis and should be helpful for future fear of crime research.

History of Victimization

The central focus of this investigation was testing the validity of one of the two findings that constitute the fear victimization paradox, namely that women report higher fear of crime than men. However, before discussing the results relevant to this issue, we will consider the results of the analyses pertaining to the other central finding in this paradox, that men experience greater victimization than women. In Canada, women experience higher rates of sexual assault, but men experience higher rates of other serious crime such as homicide, physical assault, and robbery (Perreault & Brennan, 2009). Thus, men have greater victimization overall because the types of victimization men experience occur more frequently in the population (Dauvergne & Tuner, 2010). Both samples in this investigation were asked to report the frequency of their past victimization. The overall rates of reported victimization were analyzed and they confirmed that, in both samples, men reported more property and violent non-sexual victimization. Also, it was found that women reported considerably more sexual victimization than men.

Although the above results are consistent with the police statistics published by Statistics Canada, they should still be viewed with a degree of caution. The fear-victimization paradox is founded on the premise that men actually experience higher rates of criminal victimization, which could be quite different from their self-reported rates of criminal victimization. However, the consistency between the police-reported rates and self-reported rates of criminal victimization provides greater confidence in the finding (Dauvergne & Turner, 2010; Perreault & Brennan, 2010)

History of victimization was also investigated to ascertain whether different victimization experiences influenced respondents' fear of crime. Generally, a greater history of victimization was positively related to respondents' fear of crime, which was

consistent with the literature (Fox et al., 2009; Tseloni & Zarafonitou, 2008). The analysis also investigated the relationship between fear of crime and each individual type of victimization. For university students, experiencing most types of crime measured was related to them experiencing greater fear of crime. The community participants had fewer types of victimization that were related to fear of crime (i.e., stealing electronic communication, computer virus/hacking, vandalism, family or friend murdered, sexual assault by a stranger, and sexual assault by a known person) and it was difficult to find a pattern in the results. These results should be viewed with caution, however, because of the low reliability of the History of Victimization measure in this sample. Taken alone, experiencing sexual assault was the variable that had the strongest and most consistent positive relationship with fear of crime and this was likely due to the significant degree of trauma that this type of victimization causes.

Hypothesis Testing

Hypothesis 1 and 2. The second part of the fear-victimization paradox is that, despite higher rates of victimization, men report lower fear of crime than women. The first hypothesis sought to confirm this tenet by predicting that men would report lower fear of crime than women. In both the university and community samples, men did report lower fear of crime than women. This finding was consistent for overall fear of crime, as well as for fear of both non-sexual and sexual crime. This finding, which was consistent with a substantial history of previous research, validated that the present sample was not deviant from the samples used in the past.

Once it was confirmed that men reported lower fear of crime than women, men and women's fear of crime was assessed to determine whether men were responding with lower fear of crime because they wanted to conform to social expectations. Sutton and

Farrall (2005) used the EPQR-S social desirability scale to measure the influence of social desirability and, subsequently, to remove its effect from their measure of fear of crime (named the Sutton-Farrall Fear of Crime Inventory or S-F FCI). In their investigation, factoring out social desirability increased men's reported fear of crime to the extent that men's fear of crime was above women's. However, in the current investigation, social desirability and fear of crime, as measured by the EPQR-S and S-FCI, were not significantly related in the university sample or the community sample. Thus, in the present study, the most methodologically similar variables to Sutton and Farrall's investigation was not able to replicate their original observation. However, greater success in replicating Sutton and Farrall's finding was evident when using the M-C SDS measure of social desirability, which may be due to the greater reliability and improved construction of this measure.

In the community sample, when using the M-C SDS it was found that social desirability was negatively related to men's fear of crime, indicating that men found it socially desirable to report lower fear of crime. Using Sutton and Farrall's (2005) fear of crime (S-F FCI), the change in the relationship between men and women's fear of crime measure, men's fear of crime was raised above women's fear of crime, replicating the original finding. For the other measure of fear of crime used in the present study (Threat to Victimization or Threat), men's fear of crime was raised but there was no difference could be detected between men and women's fear of crime. The reason for this lessened effect was the inclusion of questions concerning fear of sexual victimization and the Crime Precautions subscale. As will be discussed below, when these fear of sexual victimization questions and the Crime Precautions subscale were removed from the Threat measure (which was done to create the fear of non-sexual crime measure), Sutton

and Farrall's original observation was replicated, with men's fear of crime scores being raised above women's.

In the university sample, there were no relationships between social desirability and either general fear of crime measure. However, when the emotional subscale (F-G FCI) of the overall Threat measure was investigated in isolation, it was found that men's fear of crime was negatively related to the EPQR-S measure of social desirability. However, when the effect of social desirability was removed, no difference in the relationship between men and women's fear of crime was observed. These results indicate that Sutton and Farrall's findings were not replicated in the university sample. It should be noted, however, that Sutton and Farrall used a community sample for their investigation. Therefore, not being able to replicate their finding in the current university sample may simply indicate that it does not generalize to a university population. This may be because the younger men in this sample actually believe that they are at less risk of being victimized than the women in the sample. Research has suggested that adolescent males are vulnerable to a phenomenon termed the "Personal Fable," which, briefly, is the belief that one is invulnerable to the risks in one's environment (Alberts, Elkind, & Ginsberg, 2007; Elkind, 1967). Although the men in the present student sample are older than those typically studied in relation to this phenomenon, it may be that the students in this sample, who are relatively young when compared with the community sample, remain vulnerable to this belief and, therefore, are actually less afraid of crime.

Overall, the current study was able to replicate Sutton and Farrall's (2005) findings, but only in the community sample when not using their original social desirability measure. However, the result from using the best social desirability measure of this study was able to replicate their finding. The results also suggest that including

fear of sexual victimization questions and the Crime Precautions subscale in the fear of crime measure lessened the influence of social desirability. Overall, it seems that social desirability is biasing community men's responding to overall fear of crime to the point that when its influence is removed, men's fear of crime is greater than or equal to women's fear of crime.

Hypothesis 3 and 4. The third and fourth hypotheses investigated the relationship between social desirability and fear of sexual crimes. These analyses went beyond Sutton and Farrall's (2005) original research because sexual victimization was not considered in their study. Before investigating fear of sexual crime, however, the current study first looked at fear of non-sexual crime. The fear of non-sexual crime measure was created by removing the fear of sexual victimization questions and the constrained behaviour questions (because the constrained behaviour could be caused by either fear of sexual or non-sexual crime) from the Threat measure. Fear of non-sexual crime displayed the same pattern that was found with the general fear of crime measures. That is, the original measure of social desirability, EPQR-S, did not relate to fear of non-sexual crime in either sample, whereas the new measure of social desirability, M-C SDS, was negatively related to men's fear of non-sexual crime, but only in the community sample. When the effect of social desirability was removed from the community sample's fear of non-sexual crime, men's fear of non-sexual crime became significantly higher than women's fear of non-sexual crime, replicating Sutton and Farrall's results.

When considering sexual victimization, it is important to note that it is the one type of crime that does not fit in the fear-victimization paradox. That is, the fear victimization paradox holds that men experience more victimization but report lower fear of crime. However, sexual crimes do not show this paradox because women experience

higher rates of sexual victimization, which is consistent with their higher fear. For this reason, it was hypothesized that factoring out the influence of social desirability would not influence men's fear of sexual victimization as it did with general fear of crime in Sutton and Farrall's (2005) research.

The present results supported this overall hypothesis, but the direction of the relationships was surprising. In the community sample, there was no relationship between social desirability and fear of sexual crime, indicating that both sexes had responded without bias. Therefore, women were found to report higher fear of crime even when social desirability was accounted for. In the male university sample, social desirability was positively related to fear of sexual victimization. This positive relationship was particularly unusual because it indicated that male students found it socially desirable to report higher fear of sexual victimization, the opposite of what Sutton and Farrall (2005) found with general fear of crime. These results suggested that male students reported greater fear of sexual crime in order to conform to social norms. The reason for this result is difficult to explain. Masculinity is not generally thought of as being related to a desire to appear more afraid of rape or other forms of sexual assault. Moreover, the negative relationship between hyper-masculinity and fear of sexual crime found in a post-hoc analysis confirmed this understanding. Instead, it may be that the younger men in the university sample wanted to appear sensitive, or perhaps felt shame or guilt concerning their own insensitivity, to this type of victimization.

The university women's results were also surprising. For one of the social desirability measures (EPQR-S), women's fear of sexual victimization was negatively related to social desirability. These results suggested that women show a tendency to reduce their reported fear of sexual crime scores in order to conform to social

expectations. Again, this finding is surprising, given the expectation voiced in the literature that women would generally tend to increase their reported fear to appear socially desirable (Sutton et al., 2011). It is clear that cultural attitudes towards sex roles and sexual offending have changed over time. This cultural shift has moved women into realizing greater independence and having more of an expectation of being independent, which may be the reason why female students in this study desired to appear less afraid of sexual crime. Future research is necessary to confirm and further explore these results.

It was also clear from these findings that, in both samples, women's fear of sexual assault was higher than men's, regardless of the effects of social desirability. This supported the fourth hypothesis. Sexual fear of crime is not part of the fear victimization paradox, in that women experience greater sexual crime and report great fear of sexual crime than men.

Demographic Variables

The present research investigated whether demographic variables were related to fear of crime. Age did not show a consistent relationship with general fear of crime. For the university sample, no relationship was found between age and general fear of crime, but this was not surprising given the lack of age variance in that sample. In the community sample, age was only related to Threat (one of the general fear of crime measures). Moreover, this relationship varied depending on the subscale. Age had a significant negative relationship with all of the Threat subscales except Crime Precautions, which had a significant positive relationship. It seemed that the older respondents in the community sample were both less afraid and engaged in more protective behaviours. This apparent contradiction in the relationship between age and fear on the one hand and age and protective behaviour on the other hand highlights one of

the conceptual difficulties associated with protective behaviour. Investigators have conceptualized constrained behaviour as both a symptom of fear of crime and as a determinant of fear of crime (Liska et al., 1988). In this instance, it appears that protective behaviours might be operating as a determinant. That is, it is possible that, as people age, they engage in more protective behaviours, which contribute to reduced fear of crime.

These results were contrary to what other researchers have found, which is that protective behaviour is associated with increased fear of crime (Liska et al., 1988). Although the present results appear contradictory, the specific behaviours measured in the present study were different from Liska et al. (1988). This investigation examined specific protective behaviours (e.g., purchasing a security system), which may operate differently than the avoidance behaviour (e.g., not going out to a movie) that were examined by Liska et al. (1988). The results from the present study suggest that protective behaviours may reduce fear, whereas avoidance behaviour may cause an increase. Avoidance behaviour may prevent people from having safe experiences in the community. In contrast, protective behaviour may reduce risk, without preventing respondents from experiencing their communities.

Age had a consistent negative relationship with women's fear of sexual crime. This relationship was found in the university sample, despite the very low age variance in that sample, as well as among women in the community sample. This finding is likely the result of younger women being more targeted for these types of crime (Brennan & Taylor-Butts, 2008).

When education was examined, it was found to be positively related to social desirable responding in university students of both genders and, for male respondents, it

was related to higher reported fear of crime. This suggests that university students with higher educations are particularly concerned about their impression management and that male university students with higher education are more afraid of crime. Only one of these relationships was found in the community sample. Specifically, higher education in male respondents in the community was related to greater socially desirable responding. Thus, it seems that the relationship between education and impression management fade for women as they leave university behind, but this relationship seems to continue for men. Also, as men enter their careers, those with higher educations do not appear to be more afraid of crime anymore. The connection between higher academic achievement and greater social desirability bias may be an overarching desire to appear successful, which could motivate both higher achievement and a social desirability bias.

Time spent living in Winnipeg, for male university students, was negatively associated with socially desirable responding and fear of sexual victimization while, for female university students, it was negatively associated with fear of crime overall. These relationships suggest living longer in Winnipeg was associated with less concern about impression management and less fear of sexual victimization in male students and less fear overall in female students. These relationships may be explained by the nervousness of new students from rural areas, other provinces, or abroad who move to the city to begin university. These new students would presumably be concerned about the impression they are making, which may cause them to respond with a greater social desirability bias. These students would also be unfamiliar with the city, which could cause them to be more fearful. Although the overall magnitude of male fear of sexual victimization is relatively small, there seems to be a significant negative relationship between the number of years male students have lived in Winnipeg and their fear of

sexual victimization. This suggests that although men do not report much fear of sexual victimization, those who do report some fear are those who are least familiar with the Winnipeg context.

In the community sample, living in Winnipeg for a longer period of time was associated with less fear of sexual crime. Again, it seems likely that living in Winnipeg for longer periods is related to less fear because it causes residents to feel more comfortable in the city.

The community sample was also assessed to determine whether there was a relationship between location of residence and fear of crime. Residents living in the center of the city were compared with those living in the outer edges and those living in the area between those two regions. Significant results were only found in the university sample, which showed a significant relationship between greater fear of crime and residing in the center of the city. These results were consistent with previous research finding that those living in the center of the city have greater fear of crime (Rohe & Burby, 1988). This finding is understandable in Winnipeg, given there are greater rates of crime in this region (Fitzgerald et al., 2004).

The lack of significant differences between these three regions in the community sample is more difficult to explain. It may be attributable to community residents being more accustomed to their surroundings. University students living in central Winnipeg may not be as accustomed to their surroundings because they had not lived there as long as community residents and relatively poor students may have had to move there temporarily to find more affordable housing. This theory is supported by a negative relationship between length of time these students had lived in Winnipeg and their fear of

crime. These results suggest that, for university students, there may be some initial anxiety when arriving in the city, especially if they move downtown.

Post-hoc Analyses

Hyper-masculinity. Sutton and Farrall (2005) suggested that high levels of masculinity may be the cause of men's socially desirable responding. Other researchers have also commented on the potential importance of this factor in causing men to constrict their emotions (Norris 1996, as cited in Burk et al., 2004) and reduce men's willingness to reveal fear (Goodey, 1995; Gilchrist et al., 1998). A measure of hyper-masculinity, the Auburn Differential Masculinity Inventory, was included to explore the relationship between this characteristic and fear of crime. Only the men in the university sample responded to this measure.

General fear of crime was found to be negatively related to hyper-masculinity, indicating that hyper-masculine male students reported experiencing less fear of crime. For S-F FCI, when the effect of hyper-masculinity was removed, men's fear of crime became higher than women's. These results suggest that hyper-masculinity is a contributor to men's reporting higher fear of crime than women. It is also evident that the influence of hyper-masculinity and social desirability on general fear of crime is similar, with both variables having a negative relationship with reported general fear of crime.

In contrast, regarding fear of sexual crime, the results for hyper-masculinity were very different than the results for social desirability. Both measures of social desirability were positively related to fear of sexual crime in the university population. However, hyper-masculinity had a negative relationship, indicating that hyper-masculine male students reported lower fear of sexual crime. These results suggest that male students may find it socially desirable to respond with higher fear of sexual crime, but that this

desire is not stemming from an effort to appear masculine. From these results, it appears that hyper-masculinity may have a more consistent negative relationship with the different aspects of fear of crime than does social desirability.

It would be a mistake, however, to replace social desirability with hyper-masculinity in order to correct for men's biased responding. Hyper-masculinity is not, in itself, a bias. Social desirability is a measure of the degree to which people respond in ways that are untrue in order to conform to social expectations. This may not be conscious "lying," but it remains a bias in that socially desirable responding does not accurately reflect the reality of what is being measured. For example, although people may say they thoroughly research political candidates before voting in order to appear socially desirable, this does not reflect reality because they normally do not. Hyper-masculinity, in contrast, is an aspect of men's personality that causes men to respond differently, but is not a response bias that should be statistically corrected in order to find "true" results. For example, the finding that removing the effect of hyper-masculinity reverses university men and women's fear of sexual crime scores does not indicate that men are actually more afraid of sexual crime. Instead, it indicates that men's responses are highly influenced by hyper-masculinity. Hyper-masculinity may lead men to respond in a socially desirable fashion, but it is not socially desirable responding in itself.

Limitations of Present Study

This study had several important limitations. First, given that the study is cross-sectional, it was not able to investigate the cause of sex differences in fear of crime. Second, there was evidence that the community sample was not representative of the Winnipeg population being better educated and not evenly distributed across the city. This lack of representation is an inherent risk in the studies sampling procedures because

the participants were self-selected, which makes them imperfect representations of their respective populations. The community sample's distribution of residence as well as their educational status suggested that the sampling procedures used in this study had not been proficient in garnering participants from the lower SES segments of the Winnipeg population. The present study's use of web-based survey response technology may have been a barrier for these members of the population who may not have access to these technologies or may not have as much education in their use. This technology may have also limited the general response rate, which was lower than would be expected for a telephone survey. In future research, sampling procedures that are more focused on accessing lower SES members of the population would be recommended. For example, it may have been helpful to access community based organizations that work with lower SES populations for assistance in the advertising and collection of data. Although education and area of residence indicated a lack of accurate representation, the sample's gender ratio, age distribution, and marital status demographics were more consistent with Winnipeg's demographics. This was important given that gender and age were both important variables in the study. However, the characteristics of the present community sample would suggest that the results of the study should not be generalized to Winnipeg in general. Instead, it would be more accurate to generalize the results to the higher SES Winnipeg residents. It should be noted that the residential distribution of the university population had also been uneven, but this was expected given that students were likely to live near the University in the South of the city and because they were also more likely to be from more affluent homes.

The data itself had a number of limitations. The first was that all of the data collected was self-report, which makes it subject to bias. In particular, the focus of the

present study has been the question of whether fear of crime questionnaires are subject to significant bias. A couple of strategies were implemented to limit the presence of this bias. The first is that all of the questionnaires were answered anonymously to help participants feel free to answer honestly. The second was that participants were allowed to answer the questionnaire in a location of their choosing. It was hoped that this freedom would also permit participants to feel comfortable as they responded to the questions and limit the feeling that they were being observed. Third, of course, was that this study attempted to estimate and eliminate the social desirability bias that was present in the responses to the fear of crime measures. Another source of error present was that some of the questions, particularly those on the history of victimization questionnaire, were retrospective, which increases the likelihood of error because participant's memories are not always accurate. In addition, the reliability for the History of Victimization in the community sample was fairly low, with an alpha coefficient of 0.50, which suggests that the results from this measure should be viewed with caution. Additional support for this theory is that university students answered this questionnaire with higher reliability, which may be because the students were a younger sample who did not have as much life experience to remember in order to answer reliably.

Finally, there was significant missing data regarding university student postal codes. One reason why the students did not indicate their postal code may be that they did not know it at the time of completing the questionnaire, which may have been because they did not use their postal code regularly or because of less home ownership in this population and a greater reliance on email and other electronic communication. Not having this postal code information limited the present analysis' ability to accurately describe the student population's residential distribution across Winnipeg and also

limited the study's ability to accurately ascertain whether students living in different areas of the city differed significantly in their fear of crime. However, both of these issues were not central to the hypotheses of the present research.

Conclusion

The central question in this research is whether the fear-victimization paradox is a real phenomenon, or simply a product of biased responding to fear of crime questionnaires. The results of the present research indicate that Winnipeg men do reduce their fear of crime responses in order to manage the impression they make on others. It is also clear from these results that this bias is of a magnitude that it could raise men's fear of crime scores above women's fear of crime scores. This calls the fear of crime paradox into serious question, suggesting that men may in fact be more afraid of crime than women.

The fear-victimization paradox appears to be a true phenomenon among university students. It seems that these younger men were actually less afraid of crime than women despite experiencing greater victimization. This marks a significant difference between male students and men in the community and raises two questions in particular (a) why younger men are not afraid and (b) what changes to make men more afraid as they get older and exit university. This shift would suggest some type of either loss of courage or increase in realistic risk appraisal as men age. Victimization statistics suggest that men's risk is higher than women's, so it could well be that young men maintain the remnants of an adolescent perception of personal invulnerability. As men age, this feeling of invulnerability may fade leaving a more realistic appraisal of risk and, thus, an increased feeling of fear.

It had been suggested in previous research that the reason for men's socially desirable responding was their desire to appear masculine. The findings from this research are consistent with, but cannot provide direct evidence for, this theory. As suspected, it is seems that hyper-masculinity is associated with lower fear of crime. The desire to appear masculine may well be the explanation for why older men, who seem to experience more fear as they exit university, continue to indicate that they experience less fear.

Future Directions

The findings of the present study continue to call the fear-victimization paradox into question, which should be enough to spur more research into this area. A positive next step in this area would be to begin using experimental procedures to further test men's fear and social desirability bias. There are various methods that could be used in this testing including comparing results from fear questionnaires that are completed in complete privacy from those that are completed in the presence of others or measuring respondents' vital functions as they answer fear of crime questions. These types of procedures may help researchers to understand the type of bias that is operating.

However, it is not only important to understand the type of bias that is operating, it is also necessary to attempt to quantify or remove this bias so men and women's fear can be compared. It is always possible to work on improving the measures utilized in order to reduce error as this would aid in more accurate analysis of this question. It may also be possible to identify other experimental procedures to compare men and women's fear that bypass self-report methodology. This could take the form of exposing men and women to stimuli that is associated with increased risk of crime victimization (e.g., have participants enter a threatening environment such as a prison or downtown area) and

recording physiological responses. The present results are clearly sufficient to warrant further creative and detailed examination of this question, which will hopefully elucidate not only the question of whether men are more afraid of crime than women, but also the more fundamental nature of how men and women feel and express fear.

References

Agnew, R. S. (1985). Neutralising the impact of crime. *Criminal Justice and Behaviour, 12*, 221-239.

Alberts, A., Elkind, D., & Ginsberg, S. (2007). The personal fable and risk taking in early adolescence. *Journal of Youth and Adolescence, 36*, 71-76.

Anderson, A. L. (2001). *A structural analysis of young women's interpersonal empowerment: An empirical validation of and elaboration upon Zimmerman's (1995) nomological network of psychological empowerment*. Unpublished master's thesis, University of Manitoba, Winnipeg, Manitoba, Canada.

Bardwell, R. A., Klite, P., & Salzman, J. (1997). Local TV news: Getting away with murder. *Harvard International Journal of Press/Politics, 2*(2), 102-112.

Baumer, T. L. (1978). Research on fear of crime in the United States. *Victimology, 3*, 254-268.

Baumer, T. L. (1985). Testing a general model of fear of crime: Data from a national sample. *Journal of Research in Crime and Delinquency, 22*, 239-255.

Bazargan, M. (1994). The effects of health, environmental and socio-psychological variables on fear of crime and its consequences among urban black elderly individuals. *International Journal of Aging and Human Development*, *38*(2), 99-115.

Bem, S. L., (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology, 42*, 155-162.

Beretvas, S. N., Meyers, J. L., & Leite, W. L. (2002). A reliability generalization study of the Marlowe-Crowne social desirability scale. *Educational and Psychological Measurement, 62*, 570-589.

Bilsky, W. & Wetzels, P. (1997). On the relationship between criminal victimization and fear of crime. *Psychology, Crime & Law, 3*, 309-318.

Blalock, H. (1967). *Toward a theory of minority-group relations.* New York: John Wiley & Sons, Inc.

Brennan, S., & Taylor-Butts, A. (2008). *Sexual assault in Canada 2004 and 2007*. Ottawa: Statistics Canada.

Burk, L. R., Burkhart, B. R., & Sikorski, J. F. (2004). Construction and preliminary validation of the Auburn differential masculinity inventory. *Psychology of Men & Masculinity, 5*, 4-17.

Burkhart, B. R., Green, S. B., & Harrison, W. H. (1979). Measurement of assertive behavior: Construct and predictive behavior of self-report, role-playing, and in-vivo measures. *Journal of Clinical Psychology, 35*(2), 376-383.

Callanan, V. J., & Teasdale, B. (2009). An exploration of gender differences in measurement of fear of crime. *Feminist Criminology, 4*, 359-376.

Chadee, D., & Ditton, J. (2003). Are older people most afraid of crime?: Revisiting Ferraro and LaGrange in Trinidad. *British Journal of Criminology, 43*, 427-433.

Chiricos, T., Eschholz, S., & Gertz, M. (1997). Crime, news and fear of crime: Toward an identification of audience effects. *Social Problems, 44*, 342-357.

Chiricos, T., McEntire, R., & Gertz, M. (2001). Perceived racial and ethnic composition of neighborhood and perceived risk of crime. *Social Problems*, *48*(3), 322-340.

Chiricos, T., Padgett, K., & Gertz, M. (2000). Fear, TV news, and the reality of crime. *Criminology*, *38*, 755.

Clemente, F., & Kleiman, M. B. (1977-1978). Fear of crime in the United States: A multivariate analysis. *Social Forces, 56*, 519-531.

Cohen, S. (1972). *Folk devils and moral panics: The creation of mods and rockers*. London: MacGibbon & Kee Ltd.

Constitution Act, *1982* being Schedule B to the *Canada Act 1982* (U.K.), 1982.

Cops, D., & Pleysier, S. (2011). "Doing gender" in fear of crime: The impact of gender identity on reported levels of fear of crime in adolescents and young adults. *British Journal of Criminology*, *51*(1), 58 -74.

Criminal Code, R.S.C. 1985.

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*, 349-354.

Crowne, D. P., & Marlowe, D. (1964). *The approval motive: Studies in evaluative dependence.* New York: Wiley.

Cullen, F. T., Clark, G. G., & Wozniak, J. F. (1985). Explaining the get tough movement: Can the public be blamed? *Federal Probation, 49*, 16-24.

Dauvergne, M. (2007). Crime statistics in Canada, 2007. *Juristat* (Catalogue number 85-002 Vol. 28 no. 7). Retrieved June 16, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/85-002-x/85-002-x2008007-eng.pdf

Dauvergne, M. & Turner, J. (2010). Police-reported crime statistics in Canada, 2009. *Juristat* (Catalogue number 85-002-X Vol. 30 no. 2). Retrieved June 16, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/85-002-x/2010002/article/11292-eng.pdf

De Donder, L., De Witte, N., Buffel, T., Dury, S., & Verté, D. (2012). Social capital and feelings of unsafety later in life: A study on the influence of social networks, place attachment, and civic participation on perceived safety in Belgium. *Research on Aging, 34*(4), 425-448.

Ditton, J., Chadee, D., Farrall, S., Gilchrist, E., & Bannister, J. (2004). From imitation to intimidation: A note on the curious and changing relationship between the media, crime and fear of crime. *British Journal of Criminology, 44*(4), 595-610.

Doob, A. N., & Macdonald, G. E. (1979). Television viewing and fear of victimization: Is the relationship causal? *Journal of Personality & Social Psychology, 37*, 170-179.

DuBow, F., McCabe, E., & Kaplan, G. (1979). *Reactions to crime: A critical review of the literature*. National Institute of Law Enforcement and Criminal Justice, U.S. Government Printing Office: Washington, D.C.

Eitle, D., & Taylor, J. (2008). Are Hispanics the new 'Threat'? Minority group threat and fear of crime in Miami-Dade County. *Social Science Research*, *37*(4), 1102-1115.

Elchardus, M., De Groof, S., & Smits, W. (2008). Rational fear or represented malaise: A crucial test of two paradigms explaining fear of crime. *Sociological Perspective, 51*(3), 453-471.

Elkind, D. (1967). Egocentrism in adolescence. *Child Development, 38*(4), 1025-1034.

Erskine, H. (1974). The polls: Fear of violence and crime. *Public Opinion Quarterly, 38*, 131-145.

Eschholz, S., Chiricos, T., & Gertz, M. (2003). Television and fear of crime: Program types, audience traits and the mediating effect of perceived neighborhood racial composition. *Social Problems, 50*, 395-415.

Farrall, S. (2004). Revisiting crime surveys: Emotional responses without emotions? Or, Look back at anger. *International Journal of Social Research Methodology, 7*, 157-171.

Farrall, S., & Gadd, D. (2004). Evaluating crime fears: A research note on a pilot study to improve the measurement of the 'fear of crime' as a performance indicator. *Evaluation, 10*, 493-502.

Fattah, E. A., & Sacco, V. F. (1989). *Crime and victimization of the elderly.* Springer-Verlag Publishing, NY.

Fetchenhauer, D., & Buunk, B. P. (2005). How to explain gender differences in fear of crime: Towards an evolutionary approach. *Sexualities, Evolution, and Gender, 7*, 95-113.

Fendrich, M., & Vaughn, C. M. (1994). Diminished lifetime substance use over time: An inquiry into differential underreporting. *Public Opinion Quarterly, 58*, 96-123.

Ferraro, K. F. (1996). Women's fear of victimization: Shadow of sexual assault? *Social Forces, 75*, 667-690.

Ferraro, K. F., & LaGrange, R. (1987). The measurement of fear of crime. *Sociological Inquiry, 57*, 70-101.

Figgie, H. E. (1980). *The Figgie Report on fear of crime: America afraid. Part 1: The general public*. A-T-O Inc.; Willoughby, Ohio.

Fisher, B. S., & May, D. (2009). College students' crime-related fears on campus: Are fear-provoking cues gendered? *Journal of Contemporary Criminal Justice, 25*(3), 300-321.

Fisher, B. S., & Sloan, J. J. (2003). Unraveling the fear of victimization among college women: Is the "shadow of sexual assault hypothesis" supported? *Justice Quarterly, 20*, 633-659.

Fitzgerald, R., Wisener, M., & Savoie J. (2004). Neighborhood characteristics and the distribution of crime in Winnipeg. *Crime and Justice Research Paper Series* (Catalogue number 85-561-MIE no. 004) Retrieved June 22, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/85-561-m/85-561-m2004004-eng.pdf

Fox, K., Nobles, R. M., & Piquero, A. R. (2009). Gender, crime victimization and fear of crime. *Security Journal, 22*(1), 24-39.

Francis, L. J., Brown, L. B., & Philipchalk, R. (1992). The development of an abbreviated form of the Revised Eysenck Personality Questionnaire (EPQR-S): its use among students in England, Canada, the USA and Australia. *Personality and Individual Differences, 13*, 443-449.

Franklin, C. A., & Franklin, T. W. (2009). Predicting fear of crime. *Feminist Criminology*, *4*(1), 83 -106.

Franklin, T. W., Franklin, C. A., & Fearn, N. E. (2008). A multilevel analysis of the vulnerability, disorder, and social integration models of fear of crime. *Social Justice Research, 21*, 204-227.

Gannon, M. (2004). General social survey on victimization, cycle 18: An overview of findings. (Catalogue number 85-565-XIE). Retrieved July 3, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/85-565-x/85-565-x2005001-eng.pdf

Gannon, M. (2006). Crime statistics in Canada, 2005. *Juristat* (Catalogue number 85-002-XIE Vol. 26 no. 4). Retrieved June 16, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/85-002-x/85-002-x2006004-eng.pdf

Garofalo, J. (1979). Victimization and fear of crime. *Journal of Research in Crime and Delinquency, 16*, 80-97.

Garofalo, J. (1981). The fear of crime: Causes and consequences. *Journal of Criminal Law and Criminology, 72*, 839-857.

Gates, L. B. (1987). Fear and reactions to crime: A revised model. *Urban Affairs Quarterly, 22*, 425-453.

Gerbner, G. (1970). Cultural indicators: The case of violence in television drama. *Annals of the American Academy of Political and Social Science*, *388*, 69-81.

Gilchrist, E., Bannister, J., Ditton, J., & Farrall, S. (1998). Women and the "fear of crime": Challenging the accepted stereotype. *British Journal of Criminology, 38*, 283-298.

Giles-Sims, J. (1984). A multivariate analysis of perceived likelihood of victimisation and degree of worry about crime among older people. *Victimology, 9*, 222-267.

Gomme, I. M. (1988). The role of experience in the production of fear of crime: A test of a causal model. *Canadian Journal of Criminology, 30*, 67-76.

Goodey, J. (1995). Boys don't cry: Masculinity, fear of crime and fearlessness. *British Journal of Criminology, 37*, 401-418.

Gordon, M. T., Riger, S., LeBailly, R. K., & Heath, L. (1980). Crime, women and the quality of urban life. *Signs, 5*, 144-160.

Hale, C. (1996). Fear of crime: A review of the literature. *International Journal of Victimology, 4*, 79-150.

Hathaway, S. R., & McKinley, J. C. (1940). *The MMPI manual.* New York: Psychological Corporation.

Heath, L., & Gilbert, K. (1996). Mass media and fear of crime. *American Behavioural Scientist, 39*(4), 379-386.

Herold, E., & Way, L. (1988). Sexual self-disclosure among university women. *Journal of Sex Research, 24*, 1-14.

Hough, M. (1985). The impact of victimization: Findings from the BCS. *Victimology, 10*, 488-497.

Kail, B. L., & Kleinman, P. H. (1985). Fear, crime, community organization, and limitations on daily routines. *Urban Affairs Quarterly, 20*, 400-408.

Killias, M. & Clerici, C. (2000). Different measures of vulnerability in their relation to different dimensions of fear of crime. *British Journal of Criminology, 40*, 437-450.

King, R. D., & Wheelock, D. (2007). Group threat and social control: Race, Perceptions of minorities and the desire to punish. *Social Forces*, *85*(3), 1255-1280.

Kline, R. B. (1998). *Principles and practice of structural equation modeling.* New York: The Guilford Press.

Kohm, S. A. (2009). Spacial dimensions of fear in a high-crime community: Fear of crime or fear of disorder. *Canadian Journal of Criminology and Criminal Justice, 51*(1), 1-30.

Kohm, S. A., Waid-Lindberg, C. A., Weinrath, M., Shelly, T. O., & Dobbs, R. (2012). The impact of media on fear of crime among university students: A cross-national comparison. *Canadian Journal of Criminology and Criminal Justice, 54*(1), 67-100.

Kort-Butler, L. A. & Hartshorn, K. J. S. (2011). Watching the detectives: Crime programming, fear of crime, and attitudes about the criminal justice system. *The Sociological Quarterly, 52*, 36-55.

Lai, Y., Zhao, J. H. & Longmire, D. H. (2012). Specific crime-fear linkage: The effect of actual burglary incidents reported to the police on resident's fear of burglary. *Journal of Crime and Justice, 35*(1), 13-34.

LaGrange, R. L., & Ferraro, K. F. (1987). The elderly's fear of crime: A critical examination of the research. *Research on Aging, 9*, 372-391.

LaGrange, R. L., & Ferraro, K. F. (1989). Assessing age and gender differences in perceived risk and fear of crime. *Criminology, 27*, 697-719.

LaGrange, R. L., Ferraro, K. F., & Supancic, M. (1992). Perceived risk and fear of crime. Role of social and physical incivilities. *Journal of Research in Crime and Delinquency, 29*, 311-344.

Langworthy, R. M., & Whithead, J. T. (1986). Liberalism and fear as explanations for punitiveness. *Criminology, 24*, 575-591.

Lauritsen, J. L., & Heimer, K. (2008). The gender gap in violent victimization, 1973–2004. *Journal of Quantitative Criminology*, *24*(2), 125-147.

Lavrakas, P. J. (1982). Fear of crime and behavioral restrictions in urban and suburban neighborhoods. *Population and Environment, 5*, 242-264.

Lavrakas, P. J., & Lewis, D. A. (1980). The conceptualization and measurement of citizens' crime prevention behaviors. *Journal of Research in Crime and Delinquency, 17*, 254-272.

Liska, A. E., Sanchirico, A., & Reed, M. D. (1988). Fear of crime and constrained behaviour: Specifying and estimating a reciprocal effects model. *Social Forces, 66*, 827-837.

Logan, R. (2001). Crime statistics in Canada, 2000. *Juristat* (Catalogue number 85-002-XIE Vol. 21 no.8). Retrieved June 16, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/85-002-x/85-002-x2001008-eng.pdf

Mahony, T. H. (2011). Women and the criminal justice system. *Women in Canada: A Gender-Based Statistical Report.* (Catalogue number 89-503-X) Retrieved June 22, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/89-503-x/2010001/article/11416-eng.pdf

Maxfield, M. (1987). Explaining fear of crime: Evidence from the 1984 British Crime Survey. *Home Office Research and planning Unit Paper 41.* HMSO; London.

May, D. C., Rader, N. E., & Goodrum, S. (2010). A gendered assessment of the "Threat to Victimization": Examining gender differences in fear of crime, perceived risk, avoidance, and defensive behaviours. *Criminal Justice Review, 35*(2), 159-182.

McConnell, E. H. (1997). Fear of crime on campus: A study of a southern university. *Journal of Security Administration, 20*(2), 22-46.

McCoy, H. G., Wooldredge, J. D., Cullen, F. T., Dubeck, P. J., & Browning, S. L. (1996). Lifestyles of the old and not so fearful: Life situation and older persons' fear of crime. *Journal of Criminal Justice*, *24 (3)*, 191-205.

Mesch, G. S. (2000). Perceptions of risk, lifestyle activities, and fear of crime. *Deviant Behaviour: An Interdisciplinary Journal, 21*, 47-62.

Miethe, T., & Lee, G. R. (1984). Fear of crime among older people: A reassessment of the predictive power of crime related factors. *Sociological Quarterly, 25*, 397-415.

Moeller, G. L. (1989). Fear of criminal victimization: The Effect of Neighborhood Racial Composition. *Sociological Inquiry*, *59*(2), 208-221.

Moore, S., & Shepherd, J. (2007). The elements and prevalence of fear. *British Journal of Criminology, 47*, 154-162

Morgan, P. (1978). *Delinquent Fantasies.* Temple Smith; London.

Mosher, D. L., & Sirkin, M. (1984). Measuring a macho personality constellation. *Journal of Research in Personality, 18*, 150-163.

Nellis, A. M. (2009). Gender differences in fear of terrorism. *Journal of Contemporary Criminal Justice, 25*(3), 322-340.

Normoyle, J., & Lavrakas, P. J. (1984). Fear of crime in elderly women : Perceptions of control, predictability, and territoriality. *Personality and Social Psychology Bulletin, 10*, 191-202.

Norris, A. (1996). *Self-reported affective responding of hypermasculine men.* Unpublished master's thesis, Auburn University.

O'Keefe, G. J., & Reid-Nash, K. (1987). Crime News and Real-World Blues. *Communication Research*, *14*(2), 147 -163.

Ortega, S. T., & Myles, J. L. (1987). Race and gender effect on fear of crime: An interactive model with age. *Criminology, 25*, 133-152.

Ouimet, M., & Coyle, J. E. (1991). Fear of crime and sentencing punitiveness: Comparing the general public and court practitioners. *Canadian Journal of Criminology, 33*, 149-162.

Patrick, D. L., Cheadle, A., Thompson, D. C., Diehr, P., Koepsell, T., & Kinne, S. (1994). The validity of self-reported smoking: A review and meta-analysis. *American Journal of Public Health, 84*, 1086-1093.

Perkins, D. D., Meeks, J. W., & Taylor, R. B. (1992). The physical environment of street blocks and resident perceptions of crime and disorder: Implications for theory and measurement. *Journal of Environmental Psychology, 12*, 21-34.

Perrault, S., & Brennan, S. (2010). Criminal victimization in Canada 2009. *Juristat* (Catalogue number 85-002-X, Vol 30 no 6) Retrieved June 9, 2012 from Statistics Canada: http://www.statcan.gc.ca/pub/85-002-x/2010002/article/11340-eng.pdf

Presser, S. (1990). Can changes in context reduce vote overreporting in surveys? *Public Opinion Quarterly, 54*, 586-593.

Presser, S., & Stinnson, L. (1998). Data collection mode and social desirability bias in self-reported religious attendance. *American Sociological Review, 63*, 137-145.

Rader, N. E. (2004). The threat of victimization: A theoretical reconceptualization of fear of crime. *Sociological Spectrum, 24*, 689-704.

Rader, N. E. (2009). Considering the gendered nature of constrained behavior practices among male and female college students. *Journal of Contemporary Criminal Justice, 25*(3), 282-299.

Rader, N. E., Cossman, J. S., & Allison, M. (2009). Considering the gendered nature of constrained behavior practices among male and female college students. *Journal of Contemporary Criminal Justice, 25*(3), 282-299.

Rader, N. E., Cossman, J. S., & Porter, J. R. (2012). Fear of crime and vulnerability: Using a national sample of Americans to examine two competing paradigms. *Journal of Criminal Justice, 40*, 134-141.

Rader, N. E., May, D. C. & Goodrum, S. (2007) An empirical assessment of the "Threat to Victimization:" considering fear of crime, perceived risk, avoidance, and defensive behaviours. *Sociological Spectrum, 27*, 475-505.

Rennison, C. M. (2000). *Criminal victimization 1999: Changes 1998-1999 with trends 1993-1999.* Washington, DC: U.S. Department of Justice.

Ringel, C. (1997). *Criminal victimization 1996 changes 1997-96 with trends 1993-96.* Washington, D.C.: Bureau of Justice Statistics National Criminal Victimzation Survey.

Rohe, W. M., & Burby, R. J. (1988). Fear of crime in public housing. *Environment and Behavior, 20*, 700-720.

Romer, D., Jamieson, K. H., & Aday, S. (2003). Television news and the cultivation of fear of crime. *Journal of Communication, 53*, 88-104.

Ross, C. E., & Jang, S. J. (2000). Neighborhood disorder, fear, and mistrust : The buffering role of social ties with neighbors. *American Journal of Community Psychology, 28*, 401-420.

Rossi, P. H., Simpson, J. E., & Miller, J. L. (1985). Beyond crime seriousness: Fitting the punishment to the crime. *Journal of Quantitative Criminology, 1*, 59-90.

Rountree, P. W. (1998). A reexamination of the crime-fear linkage. *Journal of Research in Crime and Delinquency, 35*, 341-372.

Rudman, L. A., & Fairchild, K. (2004). Reactions to counterstereotypic behavior: The role of backlash in cultural stereotype maintenance. *Journal of Personality and Social Psychology*, *87*(2), 157-176.

Saad, L. (2010). *Nearly 4 in 10 Americans still fear still fear walking alone at night.* Gallup. Retrieved June 9, 2012 from http://www.gallup.com/poll/144272/Nearly-Americans-Fear-Walking-Alone-Night.aspx

Sacco, V. F. (1990). Gender, fear of victimization: A preliminary application of power-control theory. *Sociological Spectrum, 1*, 485-506.

Sacco, V. F., & Glackman, W. (1987). Vulnerability, locus of control and worry about crime. *Canadian Journal of Community Mental Health, 6*, 99-111.

Sauvé J. (2005). Crime statistics in Canada, 2004. *Juristat* (Catalogue number 85-002-XIE Vol. 25 no. 5). Retrieved June 16, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/85-002-x/85-002-x2005005-eng.pdf

Savoie, J. (2002). Crime statistics in Canada, 2001. *Juristat* (Catalogue number 85-002-XIE Vol. 22 no. 6). Retrieved June 16, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/85-002-x/85-002-x2002006-eng.pdf

Silver, W. (2007). Crime statistics in Canada, 2006. *Juristat* (Catalogue number 85-002-XIE Vol. 27 no. 5). Retrieved June 16, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/85-002-x/85-002-x2007005-eng.pdf

Skelton, C. A., & Burkhart, B. R. (1980). Sexual assault: Determinants of victim disclosure. *Criminal Justice and Behaviour, 7*(2), 229-236.

Skogan, W. G. (1977). Dimensions of the dark figure of unreported crime. *Crime and Delinquency, 23*, 41-50.

Skogan, W. G. (1987). The impact of victimization on fear. *Crime and Delinquency, 33*, 135-154.

Skogan, W. G. (1995). Crime and the racial fears of white Americans. *Annals of the American Academy of Political and Social Science*, *539*, 59-71.

Smith, L. N., & Hill, G. D. (1991). Victimization and fear of crime. *Criminal Justice and Behavior, 18*, 217-239.

Smith, B. L. & Huff, C. R. (1982). Crime in the country: The vulnerability and victimization of rural citizens. *Journal of Criminal Justice, 10*, 271-282.

Smith, W. R. & Torstensson, M. (1997). Gender differences in risk perception and neutralizing fear of crime. *British Journal of Criminology, 37*, 608-634.

Snedker, K. A. (2012). Explaining the gender gap in fear of crime: Assessment of risk and vulnerability among New York city residents. *Feminist Criminology, 7*(2), 75-111.

Stafford, M. C., & Galle, O. R. (1984). Victimization rates, exposure to risk, and fear of crime. *Criminology, 22*, 173-185

Stanko, E., & Hobdell, K. (1993). Assaults on men: Masculinity and male violence. *British Journal of Criminology, 33*, 400-451.

Statistics Canada. (2006a). *Census trends, 2006 census: Selected trend data for Manitoba, 1996, 2001 and 2006 censuses.* (Catalogue number 92-596-XWE). Retrieved June 20, 2011 from Statistics Canada: http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/92-596/P1-2.cfm?Lang=eng&T=PR&PRCODE=46&GEOCODE=46&GEOLVL=PR&TID=0

Statistics Canada. (2006b). *City of Winnipeg neighbourhood profiles: Fort Richmond.* Retrieved June 20, 2011 from the City of Winnipeg website: http://www.winnipeg.ca/census/2001/Community%20Areas/Fort%20Garry%20Neighbourhood%20Cluster/Neighbourhoods/Fort%20Garry%20South/Fort%20Garry%20South%20Neighbourhoods/Fort%20Richmond/Fort%20Richmond.pdf

Statistics Canada. (2006c). *City of Winnipeg neighbourhood profiles: St. James Industrial.* Retrieved June 20, 2011 from the City of Winnipeg website: http://www.winnipeg.ca/census/2001/Community%20Areas/St.%20James%20-%20Assiniboia%20Neighbourhood%20Cluster/Neighbourhoods/St.%20James%20-%20Assiniboia%20East/default.asp

Statistics Canada. (2006d). *City of Winnipeg neighbourhood profiles: Wilkes South.* Retrieved June 20, 2011 from the City of Winnipeg website: http://www.winnipeg.ca/census/2001/Community%20Areas/Assiniboine%20Sout

h%20Neighbourhood%20Cluster/Assiniboine%20South%20Neighbourhoods/Wilkes%20South/Wilkes%20South.pdf

Statistics Canada. (2006e). *Legal marital status (6), common-law status (3), age groups (17), and sex (3) for the population 15 years and over of Canada, provinces, territories, census divisions and census subdivisions, 2006 Census – 100% data*. (Catalogue number 97-552-XCB2006009) Retrieved July 20, 2011 from: http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/tbt/Lp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=1&PID=0&PRID=0&PTYPE=88971,97154&S=0&SHOWALL=0&SUB=0&Temporal=2006&THEME=67&VID=0&VNAMEE=&VNAMEF=

Statistics Canada. (2006f). *Population 15 years of age and over by highest degree, certificate or diploma, by province and territory.* Retrieved July 20, 2011 from Statistics Canada: http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/educ41b-eng.htm

Statistics Canada. (2006g). *Winnipeg CMA. Percentage of the population in low income after tax in 2005 by 2006 Census Tracts (CTs).* (Catalogue number 97-563-XIE2006001) Retrieved June 21, 2011 from Statistics Canada: http://www12.statcan.gc.ca/census-recensement/2006/as-sa/97-563/maps-cartes/cma-ct/WinnipegIncome_AfterTax_ec.pdf

Statistics Canada (2012). Winnipeg, Manitoba (Code 4611040) and Manitoba (Code 46) (table). Census Profile. 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Released May 29, 2012 and retrieved June 9, 2012 from:

http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E

Stiles, S. L., Halim, S., & Kaplan (2003). Fear of crime among individuals with physical limitations. *Criminal Justice Review, 28*(2), 232-253.

Stöber, J. (2001). The social desirability scale-17 (SDS-17): Convergent validity, discriminant validity and relationship with age. *European Journal of Psychological Assessment, 17*(3), 222-232.

Sutton, R. B., & Farrall, S. (2005). Gender, socially desirable responding and the fear of crime. *British Journal of Criminology, 45*, 212-224.

Sutton, R. B., Robinson, B., & Farrall, S. (2011). Gender, fear of crime, and self presentation: an experimental investigation. *Psychology, Crime & Law, 17*(5), 421-433.

Taylor, R. B., & Hale, M. (1986). Crimonology: Testing alternate models of fear of crime. *The Journal of Criminal Law & Criminology, 77*(1), 151-189.

Toseland, R. (1982). Fear of crime: Who is most vulnerable. *Journal of Criminal Justice, 10*, 199-209.

Tourangeau, R., Rips, L. J., & Rasinski, K. (2000). *The psychology of survey response*. Cambridge University Press.

Tourangeau, R., & Smith, T. W. (1996). Asking sensitive questions: The impact of data collection mode, question format, and question context. *Public Opinion Quarterly, 60*, 275-303.

Tseloni, A., & Zarafonitou, C. (2008). Fear of crime and victimization: A multivariate multilevel analysis of competing measurements. *European Journal of Criminology, 5*, 387-409.

Wallace, M. (2003). Crime statistics in Canada, 2002. *Juristat* (Catalogue number 85-002-XIE Vol. 23 no. 5). Retrieved June 16, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/85-002-x/85-002-x2003005-eng.pdf

Wallace, M. (2004). Crime statistics in Canada, 2003. *Juristat* (Catalogue number 85-002-XIE Vol. 24 no. 6). Retrieved June 16, 2011 from Statistics Canada: http://www.statcan.gc.ca/pub/85-002-x/85-002-x2004006-eng.pdf

Warr, M. (1984). Fear of victimisation: Why are women and the elderly more afraid? *Social Science Quarterly, 65*, 681-702.

Warr, M. (1985). Fear of rape among urban women. *Social Problems, 32*, 238-250.

Warr, M. (1995). Poll trends: Public opinion on crime and punishment. *Public Opinion Quarterly, 59*, 296-310.

Weaver, J., & Wakshlag, J. (1986). Perceived vulnerability to crime, criminal experience and television viewing. *Journal of Broadcasting and Electronic Media, 30*, 141-158.

Weinrath, M. (1999). Violent victimization and fear of crime among Canadian Aboriginals. *Journal of Offender Rehabilitation, 30*(1), 107-120.

Weinrath, M., Clarke, & Forde (2007). Trends in fear of crime in a western Canadian city: 1984, 1994, and 2004. *Canadian Journal of Criminology and Criminal Justice, 49*(5), 617-647.

Weinrath, M., & Gartrell, J. (1996). Victimization and fear of crime. *Violence and Victims, 11*(3), 187-197.

Weis, K. & Borges, S. S. (1973). Victimology and rape: The case of the legitimate victim. *Issues in Criminology, 8*, 71-115.

Weitzer, R., & Kubrin, C. E. (2004). Breaking news: How local TV news and real-world conditions affect fear of crime. *Justice Quarterly 21*(3), 497-520.

Welch, M., Price, E. A., & Yankey, N. (2002). Moral panic over youth violence: Wilding and the manufacture of menace in the media. *Youth and Society, 34(1)*, 3-30.

Wilcox, P., Ozer, M. M., Gunbeyi, & Gundogdu, T. (2009). Gender and fear of terrorism in Turkey. *Journal of Contemporary Criminal Justice, 25*(3), 341-357.

Williams, F. P., McShane, M. D., & Akers, R. L. (2000). Worry about victimization: An alternative and reliable measure for fear of crime. *Western Criminology Review, 2*. Retrieved June 9, 2012, from http://wcr.sonoma.edu/v2n2/williams.html

Wilson, J. Q. & Kelling, G. L. (1982). Broken windows. *Atlantic Monthly, 249*, 29-38.

Whitely, R., & Prince, M. (2005). Fear of crime, mobility and mental health in inner-city London, UK. *Social Science & Medicine, 61*, 1678-1688.

Young, J. (2004). "Becoming different": Accessing university from a low socioeconomic community – barriers and motivators. *Systematic Practice and Action Research, 17*, 425-469.

Zhang, L., Messner, S. F., Liu, J., & Zhuo, Y. A. (2009). Guanxi and Fear of Crime in Contemporary Urban China. *British Journal of Criminology*, *49*(4), 472 -490.

Zhong, L. Y. (2010). Bystander intervention and fear of crime: Evidence from two Chinese communities. *International Journal of Offender Therapy and Comparative Criminology, 54*(2), 250-263.

Appendix A

Instructions for Completing Questionnaire

Step 1: Consent Form

Before participating, please read over the consent form that will be presented and decide whether you are willing to participate in the research. If you decide to continue, you must (*describe the action that must be performed to demonstrate understanding of the consent form and willingness to participate in the research*). If you decide not to participate in the research, feel free to exit the system. You must be 18 years of age or older to participate in this study.

Step 2: Questionnaire

Fill in all of the questionnaire. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence.

(Step 3 will only be included for the community residents)

Step 3: Contact Information

At the end of the questionnaire, you will be asked to provide contact information. This information is being collected for the purpose of contacting you if you win one of the prize draws (one prize of $100 and five prizes of $50) once all of the surveys are collected. This information will not be used for any other purpose. To ensure your confidentiality, you will be directed to a second survey where you will be asked to provide some form of contact information. By entering your contact information in this second survey, there will be no way to link your contact information with your first

survey's responses. Please do not enter your contact information if you do not wish to be entered into the draw.

Appendix B

(University Participants' Consent Form)

Consent Form

Research Project Title: Winnipeg Fear of Crime

Researchers: Mr. Syras Derksen and Dr. Bruce Tefft

This consent form, a copy of which you may print for your records, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

This research explores Winnipeg residents' fear of crime and how this fear of crime relates to other factors (e.g., where people live in the city). It is hoped that the findings from this research will contribute to a general understanding of fear of crime, help guide future efforts to reduce fear of crime, and build community ties. In this research, you will be asked to complete a questionnaire that consists of questions on your demographics, personality, past criminal victimization, and fear of crime. The questionnaire takes approximately 25 minutes to complete and there is no risk in participating. Your responses will be available only to the researchers listed below and any research assistants. Your responses will remain confidential and your identity will not be discernable in any published materials. Once results from the study are completed, a summary of the findings will be made available to you on the website www.winnipegcrimeresearch.com. Once you have participated in the research, your allotted number of research credits will be credited to your Introduction to Psychology class.

Your [insert action performed] on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence (e.g., you will still receive your research credits). Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

This research has been approved by the Fort Garry Campus Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122, or e-mail margaret_bowman@umanitoba.ca. Again, you may print a copy of this consent form for your records.

(there will be a part here for the person to agree that they have read and understood the consent form and agree to participate)

(Community Participants' Consent Form)

Consent Form

Research Project Title: Winnipeg Fear of Crime

Researchers: Mr. Syras Derksen and Dr. Bruce Tefft

This consent form, a copy of which you may print for your records, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

This research explores Winnipeg residents' fear of crime and how this fear of crime relates to other factors (e.g., where people live in the city). It is hoped that the findings from this research will contribute to a general understanding of fear of crime, help guide future efforts to reduce fear of crime, and build community ties. In this research, you will be asked to complete a questionnaire that consists of questions on your demographics, personality, past criminal victimization, and fear of crime. The questionnaire takes approximately 25 minutes to complete and there is no risk in participating. Your responses will be available only to the researchers listed below and any research assistants. Your responses will remain confidential and your identity will not be discernable in any published materials. Once results from the study are completed, a summary of the findings will be made available to you on the website www.winnipegcrimeresearch.com. You will be entered into a draw to win one of six cash prizes (one prize of $100 or one of five $50 prizes).

Your [insert action performed] on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence (e.g., you will still be entered into the cash prize draw). Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

This research has been approved by the Fort Garry Campus Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122, or e-mail margaret_bowman@umanitoba.ca. Again, you may print a copy of this consent form for your records.

(there will be a part here for the person to agree that they have read and understood the consent form and agree to participate)

Appendix C

Social-demographics

INSTRUCTIONS:

Please provide some information about your personal characteristics. *(circle one)*

1) What is your gender? a. male b. female

2) Age: _____

3) Marital Status: 1. Single/Never married

(circle one) 2. Common-law/Cohabiting with partner

3. Married

4. Divorced/Separated/Widowed

4) Highest education level completed: *(circle highest)*

Elementary school: grade 1- 6

Junior high school: grade 7- 9

Senior high school: grade 10-12

Post-secondary diploma/certificate

Undergraduate university education: Bachelor's degree

Graduate university education: Master's degree

Graduate university education: Doctoral degree

5) How many years have you lived in Winnipeg? _____

6) Do you consider yourself fluent in English? YES NO

7) What is your postal code? _____

Appendix D

Criminal Trauma History

INSTRUCTIONS:

Please answer the following list of questions by circling the appropriate response.

Have you ever…

1) Been cheated, conned, or swindled out of your money (e.g., credit card fraud, theft by an estate planner)? YES NO

*****If you answered 'NO,' please skip ahead to Question 2*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

2) Been a victim of identity theft? YES NO

*****If you answered 'NO,' please skip ahead to Question 3*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

3) Had your computer hacked into or attacked by a virus? YES NO

*****If you answered 'NO,' please skip ahead to Question 4*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

4) Have your electronic communication intercepted (e.g., stealing cable, someone using your wireless internet)? YES NO

*****If you answered 'NO,' please skip ahead to Question 5*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

5) Had a stranger break into your home while you were away? YES NO

*****If you answered 'NO,' please skip ahead to Question 6*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

6) Had someone you know break into your home while you were away? YES NO

*****If you answered 'NO,' please skip ahead to Question 7*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

7) Had someone break into your home while you were there? YES NO

*****If you answered 'NO,' please skip ahead to Question 8*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

8) Been raped or sexually assaulted by a stranger? YES NO

*****If you answered 'NO,' please skip ahead to Question 9*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

9) Been raped or sexually assaulted by someone you know? YES NO

*****If you answered 'NO,' please skip ahead to Question 10*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

10) Been attacked by a stranger? YES NO

*****If you answered 'NO,' please skip ahead to Question 11*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

11) Been attacked by someone you know? YES NO

*****If you answered 'NO,' please skip ahead to Question 12*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

12) Had your car stolen? YES NO

*****If you answered 'NO,' please skip ahead to Question 13*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

13) Been robbed or mugged on the street? YES NO

*****If you answered 'NO,' please skip ahead to Question 14*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

---

14) Had your property damaged by vandals? YES NO

*****If you answered 'NO,' please skip ahead to Question 15*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

15) Had a friend/family member who was murdered? YES NO

*****If you answered 'NO,' please skip ahead to the next part*****

How frequently has this happened to you?

A. Once

B. A couple of times

C. A number of times

D. Many times

Appendix E

Social Desirability

Revised Eysenck Personality Questionnaire – Short Scale Version (EPQR-S)

Not displayed due to lack of copyright permission.

Measure can be found in Francis et al., 1992.

Marlow-Crowne Social Desirability Scale (M-C SDS)

Not displayed due to lack of copyright permission.

Measure can be found in Crowne & Marlowe, 1960.

Appendix F

Fear of Crime

Sutton and Farrall Fear of Crime Inventory (S-F FCI) (Reproduced from Farrall, 2004)

1) In your everyday life are you AFRAID of someone breaking into your home?

1	2	3	4	5
Not at All	Hardly Ever	Don't Know	Some of the Time	All of the Time

2) In your everyday life are you AFRAID of someone assaulting you?

1	2	3	4	5
Not at All	Hardly Ever	Don't Know	Some of the Time	All of the Time

3) In your everyday life are you AFRAID of someone vandalizing your property?

1	2	3	4	5
Not at All	Hardly Ever	Don't Know	Some of the Time	All of the Time

4) In your everyday life do you THINK about someone breaking into your home?

1	2	3	4	5
Not at All	Hardly Ever	Don't Know	Some of the Time	All of the Time

5) In your everyday life do you THINK about someone assaulting you?

1	2	3	4	5
Not at All	Hardly Ever	Don't Know	Some of the Time	All of the Time

6) In your everyday life do you THINK about someone vandalizing your property?

1	2	3	4	5
Not at All	Hardly Ever	Don't Know	Some of the Time	All of the Time

Farrall and Gadd Fear of Crime Inventory (F-G FCI)

Not displayed due to lack of copyright permission.

Measure is described in Farrall & Gadd, 2004 and Ferraro, 1996.

Appendix G

Crime Precautions

Crime Precautions (Adapted from Williams et al., 2000)

PART I: Do you take any of these measures for SAFETY against crime? (Part I is answered on the scale: most of the time, sometimes, almost never, never)

1) Get someone to go with you when you go out after dark?
2) Plan your route to avoid certain dangerous places?
3) Take something with you at night that could be used from protection; like a dog, whistle, knife, or gun?
4) When riding or sitting in a car, do you keep the doors locked?
5) Telephone back to a friend or relative to say that you've arrived safe at home?
6) Get someone to go with you during the day?
7) Carry a gun in the car?
8) Carry a weapon with you?
9) Carry Mace or spray with you to repel attackers?
10) Avoid carrying much cash with you?
11) Avoid public transit at night?

PART II: Have you done any of these things around your home?

12) Keep a gun in your home? YES NO
13) Installed a burglar alarm? YES NO
14) Always keep doors and windows locked? YES NO

15) Check who is at the door before opening? YES NO

16) Formed or joined a crime watch group with your neighbours? YES NO

17) Installed better or extra door locks? YES NO

18) Installed a door security chain? YES NO

19) Put burglar bars on your windows? YES NO

20) Installed a security fence? YES NO

21) Put in an outside security light? YES NO

22) Got a guard dog? YES NO

23) Put identification numbers on your property? YES NO

24) Put warning stickers on your windows/doors? YES NO

25) Changed the landscaping around your home? YES NO

Part III: Now think of the last time you went away for a weekend or more. Did you:

26) Stop delivery of newspapers or have someone bring them in? YES NO

27) Stop delivery of mail or have someone bring it in? YES NO

28) Have someone watch your home? YES NO

29) Set an automatic time to switch lights on and off? YES NO

Appendix H

Risk of Victimization

Risk of Victimization Scale (RVS)

Not displayed due to lack of copyright permission.

Measure was adapted from LaGrange et al., 1992.

Appendix I

Concern about Crime

Concern About Crime (Adapted from Williams et al., 2000)

We would like to know how worried you may be about CRIME. Please answer the following with ONLY CRIME IN MIND. On a scale of 1-10 how concerned are you that you will…

(1 = not worried at all, 10 = very worried)

1) Be cheated, conned, or swindled out of your money(e.g., credit card fraud, theft by an estate planner)?
2) Be a victim of identity theft?
3) Have your computer hacked into or attacked by a virus?
4) Have your electronic communication intercepted (e.g., stealing cable, someone using your wireless internet)?
5) Have a stranger break into your home while you are away?
6) Have someone you know break into your home while you are away?
7) Have someone break into your home while you are there?
8) Be raped or sexually assaulted by a stranger?
9) Be raped or sexually assaulted by someone you know?
10) Be murdered?
11) Be attacked by a stranger?
12) Be attacked by someone you know?
13) Have your car stolen?
14) Be robbed or mugged on the street?

15) Have your property damaged by vandals?

---

16) Overall, how concerned are you that YOU will be the victim of crime during the NEXT YEAR?

17) On a scale of 1-10, how concerned are you about crime in general?

Appendix J

Hyper-masculinity

Auburn Differential Masculinity Inventory (ADMI)

Not displayed due to lack of copyright permission.

Measure can be found in Burk et al., 2004.

Descriptive Statistics for Psychological Measures

Scale/Subscale	University Sample (N=1009)					Community Sample (N=508)				
	Skewness		Kurtosis		α	Skewness		Kurtosis		α
	Stat.	*SE*	Stat.	*SE*		Stat.	*SE*	Stat.	*SE*	
Social Desirability										
EPQR-S	0.55	0.08	0.06	0.15	0.64	0.17	0.11	-0.55	0.22	0.69
M-C SDS	0.16	0.08	0.31	0.15	0.72	-0.05	0.11	-0.27	0.22	0.78
Fear of Crime										
S-F FCI	0.49	0.08	-0.49	0.15	0.89	0.39	0.11	-0.71	0.22	0.89
Total Threat	0.78	0.08	0.39	0.15	0.94	0.90	0.11	1.18	0.22	0.96
Non-Sex Threat	0.91	0.08	0.70	0.15	0.95	1.22	0.11	1.99	0.22	0.96
Sex Threat	1.50	0.08	2.33	0.15	0.84	2.66	0.11	8.71	0.22	0.80
Threat to Victimization Subscales										
F-G FCI	1.81	0.08	4.60	0.15	0.92	1.68	0.11	5.11	0.22	0.95
Crime Precautions	0.26	0.08	0.06	0.15	0.79	-0.10	0.11	-0.32	0.22	0.79
RVS	0.95	0.08	1.13	0.15	0.93	1.09	0.11	1.07	0.22	0.92
Concern about Crime	0.96	0.08	0.38	0.15	0.96	1.54	0.11	2.89	0.22	0.95
HyperMasculinity (ADMI)	-0.23	0.08	4.59	0.15	0.93	-	-	-	-	-
History of Victimization (HV)	2.25	0.08	10.90	0.15	0.66	1.17	0.11	1.84	0.22	0.50