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#### **Abstract**

Research into stalking victimization has proliferated over the last two decades, but several research questions related to victimization risk remain unanswered. Accordingly, the present study utilized a lifestyle-routine activity theoretical perspective to identify risk factors for victimization. Gender-based theoretical models also were estimated to assess the possible moderating effects of gender on the relationship between lifestyle-routine activity concepts and victimization risk. Based on an analysis of a representative sample of more than 15,000 residents of Canada from the Canadian General Social Survey (GSS), results suggested conditional support for lifestyle-routine activity theory and for the hypothesis that predictors of stalking victimization may be gender based.

### **Keywords**

stalking, criminal harassment, victimization, routine activity theory, Canada

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### Introduction

Prompted by the increased awareness of the incidence of stalking among high-profile celebrities and a growing number of women, many governments globally have criminalized this behavior. The United States was among the first countries to enact anti-stalking legislation; in the early 1990s, all 50 states, several of its territories (e.g., Puerto Rico), the District of Columbia, and the federal government passed anti-stalking laws. Over the last 25 years, several countries worldwide, including Canada (1993), Australia (1999), Japan (2000), Israel (2001), and many European Union member states (e.g., Poland, Germany), have followed suit and enacted anti-stalking statutes.

The newly minted criminal status of stalking, coupled with the National Violence Against Women Study's publication of the first national-level stalking estimates in the late 1990s (Tjaden & Thoennes, 1998), sparked a flurry of stalking victimization research by social scientists from multiple disciplines. This body of scholarship subsequently developed quickly from its fledgling descriptive stage to reach a level of maturity characterized by theoretically informed hypotheses and empirical models (see Fox, Nobles, & Fisher, 2011; Mustaine & Tewksbury, 1999; Ngo & Paternoster, 2013; Reyns & Englebrecht, 2010). Despite these scholarly advancements in explaining stalking victimization, at least three gaps are evident in this field of research.

First, although a number of countries globally have criminalized stalking behaviors, researchers have focused overwhelmingly on stalking victims who reside in the United States. Scholars have largely overlooked studying stalking victims who reside outside the United States, with only limited exploration of the dynamics of stalking in other countries, such as Australia (Purcell, Pathé, & Mullen, 2002), Japan (Chapman & Spitzberg, 2003), Germany (Dressing, Gass, & Kuehner, 2007), the Netherlands (Van Der Aa & Kunst, 2009), and Finland (Björklund, Häkkänen-Nyholm, Sheridan, & Roberts, 2010). Hence, little is known about the scope and predictors of stalking victimization outside the United States. Given lifestyle and cultural differences across countries, the generalizability of these studies' results may be somewhat questionable.

Second, the lifestyle-routine activity perspective has been utilized to explain different types of personal victimization (e.g., homicide, rape, assault), yet this theoretical approach remains relatively untested as an explanation of stalking. Only a few stalking victimization studies have tested the lifestyle-routine activity approach (e.g., Fisher, Cullen, & Turner, 2002; Mustaine & Tewksbury, 1999), and none have used a probability sample drawn from a population outside of the United States. Therefore, assessing the predictive utility of the perspective in accounting for stalking victimization in countries besides the United States remains an open question, and one deserving of further scrutiny.

Finally, mounting evidence suggests that opportunities for victimization, as outlined by the lifestyle-routine activity perspective, are distinct for men and women. Some theory tests of stalking victimization have been conducted among men and women separately (Fox, Gover, & Kaukinen, 2009; Fox, Nobles, & Fisher, 2014; Nobles & Fox, 2013; Nobles, Fox, Piquero, & Piquero, 2009), but prior research has not yet examined whether the effects of lifestyles and routine activities vary by gender in determining stalking victimization risk.

The present study contributes to the development of the much-needed international perspective on stalking victimization research by taking the next logical steps to fill these three gaps. First, shifting from the dominant focus of studying stalking victims among those who reside in the United States, the present study used a representative national sample of adults who reside in Canada from the General Social Survey (GSS) to examine stalking victimization. Second, it is clear that prior research findings underscore the importance of lifestyle-routine activity theory for understanding victimization, including stalking. Building on prior stalking research, this study expands this body of work by testing the utility of this approach to stalking victimization among adults residing in Canada. Third, and more specifically, drawing from the previous studies that have found support for a "gendered approach" to predicting victimization, it is plausible to hypothesize gender differences in stalking victimization. Hence, we explored a gendered approach by estimating stalking victimization models for males and females separately to determine whether such an approach is supported with the GSS Canadian data.

# Stalking Victimization in Canada

Countries around the world have given different labels to stalking-like behaviors. In Canada, for example, these behaviors are legally referred to as "criminal harassment," but more commonly, such behavior is called "stalking." Regardless of the differences in the term or definitions of the behaviors across countries, when considered in the aggregate, legal and scholarly definitions of stalking include two key features that distinguish stalking from other criminal behaviors (Fox et al., 2011). First, stalking consists of a course of conduct perpetrated by the stalker. This course of conduct involves a variety of repeated pursuit behaviors, such as following, spying on, or otherwise communicating with the victim either in person or electronically (e.g., email, texting). The second—and somewhat controversial feature of stalking victimization—is that the victim experiences feelings of fear or another comparable emotional reaction (e.g., anxiety) as a result of the offender's course of conduct. These two features are included in Canada's Criminal Code for

criminal harassment (Criminal Code, R.S.C., 1985, c. C-46, s.264(1)). These are also the two criteria used to identify stalking victims in the present study.

The most up-to-date information on stalking in Canada is published by the Canadian Centre for Justice Statistics. The Centre's most recent report on stalking highlights its extent as well as patterns in its occurrence and annual trends (Milligan, 2011). The source of this information is Canada's Uniform Crime Reporting (UCR) Survey, which includes reported cases of stalking to law enforcement. Like all official sources of crime data, there is likely a substantial dark figure of stalking; that is, like other crimes, it can be reasonably assumed that not all stalking victimizations are reported to the police for a variety of reasons. Hence, these counts underestimate the actual number of stalking cases. It is prudent, then, to proceed cautiously when drawing any conclusions from the UCR data. Furthermore, the UCR data used to generate the estimates are not nationally representative, describing only 57% of the population of Canada (Milligan, 2011). With these caveats in mind, stalking in Canada appears to have been increasing over the last several years, with a victimization rate in 2000 of approximately 42 per 100,000 persons to 59 per 100,000 persons in 2009 (Milligan, 2011). This apparent growth underscores the need for a better understanding of stalking victimization in Canada, with a particular focus on identifying its predictors.

Gendered patterns in stalking victimization in Canada also are evident. For example, 76% of the stalking victims in 2009 were females (Milligan, 2011). An overrepresentation of female stalking victims compared with males is consistent with findings reported in other countries, including the United States and Australia (e.g., Breiding et al., 2014; Catalano, 2012; Purcell et al., 2002). There also appears to be a gender difference in stalking victimization related to the victim-offender relationship. In 2009, females in Canada were more likely to have been stalked by former (45%) or current (6%) intimate partners, whereas male victims were predominantly stalked by casual acquaintances (37%). Again, these victim-offender patterns are largely in agreement with what has been reported in prior research related to the victim-offender relationship in stalking (e.g., Breiding et al., 2014).

Some additional information about stalking can be gleaned from Canada's UCR, such as injury to victims, weapon use during the incident, and rates of offending across provinces. Yet, these types of information are somewhat atheoretical and of limited use in explaining why individuals are victimized, or in identifying what factors increase or decrease the likelihood of being stalked. However, one data source that can address this void is the Canadian GSS, which contains questions reflecting several potential opportunity-based risk factors for victimization derived from lifestyle-routine activities theory. While such a void exists in the empirical research related to stalking

victimization in Canada, there are several theoretically informed studies of stalking victimization from other countries that reinforce the importance of studying stalking through a theoretical lens. Select pieces of research from this literature also emphasize the theoretical roles of lifestyles, routine activities, and their interactions with gender in conditioning victimization risk.

# **Theoretical Approach**

Prior research suggests that the lifestyle-routine activities perspective is especially well-suited to the task of explaining victimization, including studies that have used Canadian victimization data and found support for the theoretical framework (e.g., Corrado, Roesch, Glackman, Evans, & Leger, 1980; Kennedy & Forde, 1990). The lifestyle-exposure and routine activities perspectives were separately developed but are often jointly tested because of their common underlying theoretical assumptions (Garofalo, 1987). Together, the combined lifestyle-routine activities perspective views criminal victimization as a function of opportunity.

Theoretically, victimization opportunities arise from lifestyles that expose individuals to victimization risk in conjunction with daily routine activities that facilitate the confluence of motivated offenders and suitable targets in environments lacking sufficient guardianship (Cohen & Felson, 1979; Hindelang, Gottfredson, & Garofalo, 1978). Over the years, this theoretical perspective has been rigorously tested and strongly supported as an explanation for various types of criminal victimization (e.g., Bunch, Clay-Warner, & Lei, 2012; Messner, Lu, Zhang, & Liu, 2007; Pyrooz, Decker, & Moule, 2013; Reyns, 2013; Van Wilsem, 2011).

Despite its usefulness as a victimization theory, only three studies have utilized the theory to identify risk factors for stalking victimization (Fisher et al., 2002; Mustaine & Tewksbury, 1999; Reyns, Henson, & Fisher, 2011). Taken together, these three studies identified certain victim behaviors as facilitating opportunities for stalking victimization. For instance, Mustaine and Tewksbury (1999) reported that alcohol and drug use as well as certain protective measures (e.g., owning a gun, carrying a pocketknife) were positively related to victimization, whereas public behaviors, such as shopping at the mall, going for walks, and participating in organized sports were negatively related to stalking victimization. Fisher and colleagues (2002) similarly concluded that individuals' routines were related to stalking victimization, particularly a propensity to be at places with alcohol, being in some kind of romantic relationship (i.e., committed, some dating), and living alone. Finally, Reyns and colleagues (2011) reported that online routines affected cyberstalking victimization risks, with online activities such as number of

social networks, adding strangers as friends to social networks, presence of deviant peers online, and female gender being positively and significantly related to victimization.

# Gendered Opportunities for Victimization

In the course of refining lifestyle-routine activity theory, research has also explored the possibility that opportunities for victimization are gendered. Within this context, gender has been hypothesized to have mediating and moderating effects on victimization through opportunity. In brief, the mediation hypothesis states that gender conditions lifestyles and routines, which, in turn, affect one's likelihood of victimization (see Wilcox, Fisher, & Lasky, 2015 for a critical discussion of mediation effects in lifestyle-routine activities theory). The moderation hypothesis, which is the focus of the present study, suggests that gender interacts with particular behaviors to expose males and females to differing levels of risk. In other words, the effects of lifestyles and routine activities are not gender neutral. They are different for males and females—or conditional based on gender. For example, Tillyer, Wilcox, and Gialopsos (2010) reported that in a sample of adolescents, tobacco, alcohol, and drug use increased risks for victimization, but only for females. Another study of adolescents by Popp and Peguero (2011) also reported gendered effects of routine activities, with participation in intramural sports increasing violent and property victimization risks for female students, but not male students. Similarly, females, in contrast to males, were less likely to be violently victimized if they participated in school clubs. Likewise, Navarro and Jasinski (2013) reported that blogging was related to males becoming victims of cyberbullying, while instant messaging heightened risks for females to be victimized.

This gendered perspective on lifestyle-routine activity theory is still developing. While the moderation hypothesis has been empirically tested in the general victimization literature with some studies suggesting gender-based effects of lifestyles and routine activities (e.g., Felson & Burchfield, 2004; Fineran & Bolen, 2006; Mustaine & Tewksbury, 1998; Wilcox, Tillyer, & Fisher, 2009), it has not been tested within a lifestyle-routine activities framework as it applies to stalking victimization. Research has, however, examined other predictors of stalking victimization across gender, highlighting the differences in risk factors for males and females. In conjunction with findings from the general victimization literature, this suggests that a gendered perspective using lifestyles and routine activities to explain stalking victimization may also be a fruitful approach. For example, using a college student sample Fox and colleagues (2014) tested a gendered and multi-theoretical

framework including self-control and social learning theory to explain stalking victimization. The results suggested that the effects of the theoretical variables differed according to gender. For instance, low self-control was significantly correlated with victimization among men, but not among women (see also Fox et al., 2009 for similar findings). Conversely, variables related to social learning theory, such as differential reinforcement, distinguished victims from non-victims, but only among women. Gendered effects of theoretical variables on stalking victimization have also been examined within control balance (Nobles & Fox, 2013) and life-course theoretical frameworks (Nobles et al., 2009). While the results of these studies speak to the potential usefulness of a gendered theoretical approach for explaining stalking victimization, none have explored this possibility using routine activity theory.

# The Present Study

Considered collectively, the previously reviewed research has made important contributions to understanding risk factors for stalking victimization. Yet, there are nevertheless a few gaps that have yet to be addressed in the stalking literature, especially as it relates to routine activity theory. First, previous studies of stalking victimization have largely been focused on populations within certain countries, especially the United States. An international perspective will therefore provide an expanded understanding of risk factors for victimization and possibly allow for future comparisons across countries. Second, relative to the vast number of stalking studies that have been published, few are theoretically informed. Furthermore, while the lifestyle-routine activity approach has been supported as it applies to other offenses, there have only been three applications of the theory to stalking victimization. Again, these three studies were all U.S.-based. Therefore, a goal of the present study is to identify risk factors for victimization based on routine activity theory. Third, researchers have begun to explore the utility of a gendered routine activity theory, with encouraging results. As yet, though, the relative influence of lifestyles and routine activities on stalking victimization for males and females (i.e., the moderation hypothesis) has not been assessed in the extant research. The present study addresses each of these issues by analyzing a large nationally representative sample of inhabitants of Canada to advance understanding of stalking victimization.

#### Data

Data for the present study were collected by Statistics Canada as part of the 18th cycle of the Canadian GSS, which was administered from January to

December of 2004. Random digit dialing procedures were utilized to generate a nationally representative sample of Canadian residents aged 15 and above, living in private residences, and within the 10 provinces. Computerassisted telephone interviewing was used to collect the data, ultimately resulting in a response rate for this cycle of the GSS of 74.5% (see Statistics Canada, 2014 for more information on the methodology of the GSS). The GSS on victimization is administered every 5 years.

The Canadian GSS is divided into several sections relevant to social life in Canada, including routine activities and criminal victimization experiences. Data used in the present study were drawn primarily from Section 8, which focused on stalking victimization, and Section 11, which asked respondents about their activities. This particular cycle of the GSS was selected for the present analyses because stalking victimization is not regularly included in the survey and these are the most recent data available that measure this type of victimization. After excluding cases with missing data on the variables of interest, an analytic sample of 15,029 cases was produced. Of these, complete data were available for 8,076 females and 6,953 males.

### Measures

Dependent variable: Stalking victimization. Respondents were identified as victims of stalking if they indicated that they had experienced unwanted and repeated pursuit behaviors by someone who caused them to fear for their safety or the safety of someone else. Along these lines, the GSS asked respondents about a series of stalking indicators that occurred within the past 5 years. More specifically, the questionnaire asked respondents if someone had ever repeatedly: phoned them; followed or spied on them; waited outside their home; waited outside their place of work or school with no reason to do so; sent unwanted emails; sent unwanted gifts, cards, or letters; persistently asked for a date, refusing to take no for an answer; tried to communicate with them against their will in any other way; or attempted to intimidate or threaten them. To measure stalking victimization, a dichotomous variable was created (coded as 0 = non-victim, 1 = victim) based on survey items reflecting different types of pursuit behaviors and subsequent fear. Consistent with the stalking literature in the United States (e.g., Fox et al., 2011) and the Canadian legal definition, individuals were identified as victims if they experienced any or all these behaviors 2 or more times and were fearful as a result. As Table 1 indicates, the combined stalking victimization measure based on the above criteria revealed that 7% of the sample had experienced stalking victimization in the last 5 years.

Table I. Descriptive Statistics.

		Full Sample	Females	Males	
Variable	Min - Max	M (SD)	M (SD)	M (SD)	
Gender	0-1	0.54 (0.50)	_	_	
Dependent variable					
Stalking victimization	0- I	0.07 (0.26)	0.10 (0.31)	0.04 (0.20)	
Exposure variables					
Main activity	0- I	0.82 (0.39)	0.75 (0.43)	0.90 (0.30)	
Work or school	0-31	6.73 (7.39)	6.08 (6.94)	7.50 (7.81)	
Restaurants, movies, theater	0-31	3.74 (0.40)	3.50 (3.78)	4.01 (4.30)	
Bars and pubs	0-31	1.25 (2.75)	0.92 (2.32)	1.64 (3.12)	
Exercise, sports, recreation	0-31	5.44 (7.16)	5.03 (7.01)	5.91 (7.31)	
Shopping	0-31	3.32 (4.24)	3.35 (4.27)	3.30 (4.21)	
Visiting friends	0-31	4.74 (5.24)	4.72 (5.19)	4.77 (5.29)	
Guardianship variables					
Avoid certain areas	0- I	0.39 (0.49)	0.45 (0.50)	0.32 (0.47)	
Self-defense class	0- I	0.13 (0.34)	0.14 (0.35)	0.12 (0.33)	
Change phone number	0- I	0.06 (0.24)	0.08 (0.28)	0.03 (0.18)	
Move residences	0- I	0.05 (0.21)	0.06 (0.24)	0.03 (0.17)	
Stay home	0- I	0.08 (0.28)	0.14 (0.34)	0.02 (0.14)	
Target suitability variables		, ,	, ,		
Household income	1-12	8.71 (2.62)	8.38 (2.56)	9.09 (2.41)	
Relationship status	0- I	0.62 (0.49)	0.60 (0.49)	0.63 (0.48)	
Drinking frequency	0-2	1.07 (0.68)	0.97 (0.65)	1.20 (0.70)	
Control variables		, ,	` ,	, ,	
Age	2-11	6.92 (2.45)	6.89 (2.43)	6.95 (2.47)	
Visible minority	0-1	0.08 (0.28)	0.08 (0.27)	0.09 (0.29)	
Total victimization	0-3	0.47 (0.84)	0.46 (0.84)	0.48 (0.84)	
N		15,029	8,076	6,953	

Exposure to motivated offenders. To assess the effects of exposure to motivated offenders on stalking victimization risks, seven variables similar to those used by Mustaine and Tewksbury (1999) were created from items included in the GSS. The first six variables measured the average number of times per month that respondents participated in the following activities at night: (a) work or school; (b) restaurants, movies, or the theater; (c) bars or pubs; (d) go out for sports, exercise, or recreational activities; (e) shop; and (f) visit relatives or friends in their homes. Table 1 suggests that the average respondent participated in each of these nighttime activities at least once a month.

A final exposure variable was created to assess the effects of the respondent's main activity on stalking victimization risk. This variable designates the main activity of respondent in the last 12 months as either public (coded as 1) or non-public (coded as 0). Individuals who indicated their main activity in the last 12 months involved working at a paid job or business, looking for paid work, going to school, or volunteer work were categorized as having mainly public activities, and respondents who designated their main activity as caring for children, household work, retired, maternity/paternity leave, or long-term illness were categorized as engaging primarily in non-public activities. As Table 1 shows, the majority of respondents were categorized as participating in public-based main activities.

Guardianship. Five variables measuring the concept of guardianship were included in the present study. Each of these dichotomous variables (coded as 0 = no, 1 = yes) was created using separate survey questions which asked respondents about methods they used to protect themselves from crime. These variables include routinely (a) avoiding certain areas, (b) learning self-defense, (c) changing their phone number, (d) moving residences, and (e) staying home at night due to fear of going out alone. Table 1 indicates that adoption of guardianship routines varied by type, with a large portion of respondents avoiding certain areas but only small percentage learning self-defense, changing phone numbers, moving, or staying home due to fear of crime.

Target suitability. The theoretical concept of target suitability was measured with three variables, including (a) household income, (b) relationship status, and (c) drinking behaviors. Household income was measured with a 12-category variable detailing a range of incomes (1 = no income; 2 = less than CAD\$5,000; 3 = CAD\$5,000-US\$9,999; 4 = CAD\$10,000-CAD\$14,999; 5 = CAD\$15,000-CAD\$19,999; 6 = CAD\$20,000-CAD\$29,999; 7 = CAD\$30,000-CAD\$39,999; 8 = CAD\$40,000-CAD\$49,999; 9 = CAD\$50,000-CAD\$59,999; 10 = CAD\$60,000-CAD\$79,999; 11 = CAD\$80,000-US\$99,999; and 12 = CAD\$100,000 or more). The relationship status variable was measured dichotomously as either single¹ (coded as 0) or non-single (coded as 1). Drinking behaviors were assessed with a question asking the respondent how often they drank alcohol in the last month. The responses were then recoded into a three-category ordinal measure (0 = none = 0, 1 = light drinker, 2 = heavy drinker).²

Control variables. Three known correlates of victimization were also included in the present study as control variables: (a) age, (b) race, and (c) total other

victimization experiences. Age was measured with a nine-category ordinal variable in 2- to 4-year segments (1 = 15-17, 2 = 18-19, 3 = 20-24, 4 = 25-29, 5 = 30-34, 6 = 35-39, 7 = 40-44, 8 = 45-49, 9 = 50-54, 10 = 55-59, 11 = 60-64, and 12 = 65 and above).<sup>3</sup> Race was measured dichotomously as an indicator of apparent visible minority status (coded as 0 = White; 1 = non-White). The total victimization variable measures the respondent's criminal victimization frequency in the last 12 months for several other types of victimization (i.e., not stalking) included in the GSS (e.g., sexual assault, robbery, motor vehicle theft). This variable has four categories indicating no other victimization (coded as 0), victimized 1 time (coded as 1), 2 times (coded as 2), or 3 or more times (coded as 3).

# **Hypotheses and Analytic Strategy**

Given the previously reviewed research and theory on stalking victimization, four primary hypotheses are tested in the present analyses. First, all else equal, exposure to motivated offenders is hypothesized to increase risks for stalking victimization. Second, all else equal, guardianship is hypothesized to act as a protection against victimization, decreasing victimization risks. Third, all else equal, target suitability is hypothesized to equate with higher risks for stalking victimization. Fourth, it is hypothesized that predictors of stalking victimization will differ by gender of the respondents. That is, it is hypothesized that opportunities for stalking victimization are gendered.

The dichotomous nature of the dependent variable makes binary logistic regression the appropriate statistical technique to test the above hypotheses. To do so, three models were estimated—one for the full sample including males and females, one for females only, and one for males only. However, prior to modeling these relationships, tolerance and variance inflation factor statistics were calculated as a check for multicollinearity among the independent variables. The results suggested that multicollinearity would not be a threat to the interpretation of results from the binary logistic regression models.

### Results

Descriptive statistics for all study variables are presented in Table 1. Most salient to the present analyses are the findings related to the prevalence of stalking victimization. Collectively, 7% of respondents were identified as victims of stalking. This is consistent with findings from other research that has investigated the extent of stalking victimization (e.g., Catalano, 2012; Tjaden & Thoennes, 1998). Results also suggest that 10% of female

respondents were stalked in the 5-year period preceding the GSS, whereas 4% of males were stalked during this time. This differential victimization by gender also highlights the potential for gender differences in predictors of stalking victimization.

# Full Sample

The results of the binary logistic regression analyses for the full sample are presented in Table 2. Of particular interest is the significant effect of gender, which indicates that females are 2 times more likely to be stalked than males, Exp(B) = 2.07. However, support for the other hypotheses is somewhat tenuous, with only two exposure variables affecting victimization risk. That is, greater participation in work or school and going to restaurants, movies, or the theater positively and significantly increased the likelihood of becoming a stalking victim. However, the magnitude of the effect was small, Exp(B) = 1.01 and 1.02, respectively. The guardianship variables, while significant indicators of stalking victimization, produced effects contrary to expectations. Avoiding certain areas, Exp(B) = 2.28, taking a self-defense class, Exp(B) = 1.31, changing phone numbers, Exp(B) = 2.69, moving, Exp(B) = 2.14, and staying home for safety reasons, Exp(B) = 1.67, positively affected victimization risk rather than acting as a protective factor. These findings are discussed in more detail in the "Discussion and Conclusion" section.

Analysis of the full sample produced moderate support for the influence of target suitability on stalking victimization. Household income, Exp(B) = 0.97, and relationship status, Exp(B) = 0.54, both affected victimization likelihood, with individuals reporting lower household incomes having increased likelihood of victimization and single persons being more likely to be stalked. The control variables of age and total criminal victimization were also linked to victimization, with younger persons, Exp(B) = 0.91, and victims of other crimes, Exp(B) = 1.35, experiencing increased stalking risk. The possibility of gender differences in stalking predictors are explored in Table 3 and discussed directly.

### Females

Several of the routine activity and control variables were significantly related to the likelihood of experiencing stalking victimization among females. For the concept of exposure to motivated offenders, only the frequency of going to work or school positively affected victimization risk, Exp(B) = 1.01, although the effects were modest in magnitude. This effect mirrors that found in the full sample and is consistent with the routine activity hypothesis that nighttime activities increase victimization risk. The present study is the first

Table 2. Binary Logistic Regression Model for Stalking Victimization Full Sample.

	Coefficient	SE	Exp(B)
Exposure variables			
Main activities	-0.10	0.10	0.91
Work or school	0.01**	0.01	1.01
Restaurants, movies, theater	0.02*	0.01	1.02
Bars and pubs	-0.01	0.01	0.99
Exercise, sports, recreation	0.00	0.01	1.00
Shopping	0.01	0.01	1.01
Visiting friends	0.00	0.01	1.00
Guardianship variables			
Avoid certain areas	0.82***	0.08	2.28
Self-defense class	0.27***	0.08	1.31
Change phone number	0.99***	0.10	2.69
Move residences	0.76***	0.11	2.14
Stay home	0.51***	0.10	1.67
Target suitability variables			
Household income	-0.04*	0.02	0.97
Relationship status	-0.63***	0.08	0.54
Drinking frequency	-0.02	0.06	0.99
Control variables			
Gender	0.73***	0.08	2.07
Age	-0.10***	0.02	0.91
Visible minority	-0.22	0.13	0.80
Total victimization	0.30***	0.03	1.35
Constant	-2.77***	0.20	0.06
−2 Log-likelihood		6,577.26	
Model $\chi^2$	I	,358.3I***	
Nagelkerke R <sup>2</sup>		.21	
N		15,029	

 $b \le 0.05$ . \*\* $b \le 0.01$ . \*\*\* $b \le 0.001$ .

to support and test this hypothesis for stalking victimization. As was observed in the full model, all five of the guardianship measures were significant predictors of stalking. That is, those who indicated that they regularly avoid certain areas, Exp(B) = 2.24, take self-defense classes, Exp(B) = 1.25, change their phone number, Exp(B) = 2.61, move, Exp(B) = 2.35, or stay home for safety reasons, Exp(B) = 1.71, were at increased risks for stalking victimization. Only one of the target suitability variables—relationship status—was a

 Table 3. Binary Logistic Regression Models for Stalking Victimization by Gender.

	Female			Ma			
-	Coefficient	SE Exp(B)		Coefficient	SE	Exp(B)	Z score
Exposure variables							
Public activities	-0.14	0.11	0.87	-0.12	0.24	0.89	-0.08
Work or school	0.01*	0.01	1.01	0.01	0.01	1.01	0.00
Restaurants, movies, theater	0.02	0.01	1.02	0.02	0.01	1.02	0.00
Bars and pubs	0.01	0.02	1.01	-0.03	0.02	0.97	1.41
Exercise, sports, recreation	0.00	0.01	1.00	0.00	0.01	1.00	0.00
Shopping	0.00	0.01	1.00	0.02	0.01	1.02	-1.41
Visiting friends	0.01	0.01	1.01	-0.01	0.01	0.99	1.41
Guardianship variables							
Avoid certain areas	%**I8.0	0.09	2.24	0.81***	0.14	2.24	0.00
Self-defense class	0.23*	0.10	1.25	0.36*	0.16	1.43	-0.69
Change phone number	0.96***	0.11	2.61	1.13***	0.20	3.10	-0.74
Move residences	0.85***	0.12	2.35	0.44	0.24	1.56	1.53
Stay home	0.54***	0.10	1.71	0.66*	0.30	1.93	-0.38
Target suitability variables	s						
Household income	-0.02	0.02	0.98	-0.05	0.03	0.96	0.83
Relationship status	-0.75****	0.10	0.47	-0.40**	0.14	0.67	-2.03*
Drinking frequency	0.04	0.07	1.04	-0.14	0.10	0.87	1.47
Control variables							
Age	-0.12***	0.02	0.89	-0.06	0.03	0.95	-1.66*
Visible minority	-0.15	0.15	0.86	-0.41	0.24	0.66	0.92
Total victimization	0.30***	0.04	1.34	0.33***	0.06	1.39	-0.42
Constant	-2.02***	0.21	0.13	-2.78***	0.40	0.06	1.68*
−2 Log-likelihood	4,457.81			2,086.27			
Model $\chi^2$	920	).95***		235.67***			
Nagelkerke R <sup>2</sup>		.22		.12			
N	8,076 6,953						

 $p \le .05. p \le .01. p \le .001.$ 

significant predictor of stalking victimization for females. Specifically, those women who reported being single, Exp(B) = 0.47, were at increased risk for victimization whereas non-single women were significantly less likely to be stalked. Finally, the control variables of age and total victimization were among the strongest indicators of victimization for females. Age, Exp(B) = 0.89, negatively affected victimization, indicating that older persons were at decreased risk for experiencing stalking. This effect is similar to findings

reported in other studies of stalking that find younger persons are more likely to be stalking victims. Finally, total victimization, Exp(B) = 1.34, was positively linked to stalking victimization, which suggests that stalking overlaps with other forms of criminal victimization.

### Males

Analysis of the male sample revealed significant relationships between routine activities and stalking victimization, some of which differed from those uncovered in the female sample. First, none of the exposure variables were significant predictors of stalking victimization. However, four guardianship activities affected victimization risk for males. Specifically, avoiding certain areas, Exp(B) = 2.24, taking self-defense classes, Exp(B) = 1.43, changing phone numbers, Exp(B) = 3.10, and staying home for the sake of safety, Exp(B) = 1.93, were positively related to victimization. These effects are essentially the same as those observed among the full and female samples. Furthermore, as with females, one measure of target suitability—relationship status—was also a significant predictor of stalking victimization among males, with single males being more likely to experience stalking, Exp(B) = 0.67. Finally, total victimization, Exp(B) = 1.39, was also positively and significantly linked to stalking victimization.

# Gender Differences

A primary purpose of the present study was to determine whether predictors of stalking victimization varied by gender. The analyses suggest weak support for gender differences in correlates of stalking. Notably, there were only three variables that performed differently in the female and male models. In terms of exposure, attending work or school was positively related to female but not male victimization. For guardianship, females who moved residences were significantly more likely to be stalked while men who moved were not. Finally, younger females were significantly more likely to experience stalking, while age was not a significant factor for males. To further explore potential gender differences, an equality of coefficients test was also performed (see Paternoster, Brame, Mazerolle, & Piquero, 1998). This test allows for the comparison of the regression coefficients of two models, in an effort to determine whether the models are significantly different. The resulting *z* scores obtained from this test are provided in the right column of Table 3.

As seen in the table, there is a significant difference between the two models for two of the measures. First, as noted previously, the relationship status measure is a significant predictor of stalking victimization for both males and females when the two populations were examined independently. However, while the measure is a statistically significant predictor for each group, there is also a significant difference between the two populations for the measure, indicating that while the predictors are important for both males and females, they have a different impact on each. Second, not only is age a significant predictor of stalking victimization among women independently, it also proves to be significantly different among males and females. Finally, there are also several predictors that are significantly related to stalking victimization among males and females independently, but there are no significant differences between the two populations for each measure (i.e., going to work or school, moving residences).

## **Discussion and Conclusion**

## Summary and Discussion of Findings

The purpose of this study was to utilize the lifestyle-routine activity theory framework to examine the predictors of stalking victimization among residents of Canada, and more specifically, the potentially gendered effect of those predictors. While such an examination may not seem revolutionary, given the current state of the stalking literature, it is undoubtedly evolutionary. To date, the overwhelming majority of stalking studies have focused almost exclusively on individuals within the United States. Although these studies have produced a number of key findings that have helped advance our understanding of stalking victimization, they are still limited in their generalizability. To help the stalking victimization literature continue to evolve, the present study identified and addressed three gaps in the stalking victimization literature.

First, as stated previously, little is known about stalking victimization in Canada, outside of a few estimates of its prevalence (e.g., Milligan, 2011). The present study, therefore, utilized a representative sample of residents of Canada to identify risk factors for stalking victimization among this population. Second, to date, there have been no theoretical studies attempting to identify risk factors for stalking victimization in Canada. To address this gap in the literature, the present study focused on operationalizing three components of lifestyle-routine activity theory—exposure to motivated offenders, target suitability, and capable guardianship—and assessing their ability to predict stalking victimization among Canadian residents. With that in mind, it was hypothesized that (a) exposure to motivated offenders would increase the risk for stalking victimization, (b) the presence of guardianship actions would decrease stalking victimization risks, and (c) higher target suitability would increase the risks for stalking victimization. Third, it has been suggested that gender may have a moderating influence on opportunities for victimization. While previously

untested in the stalking literature, the present study explored this possibility and hypothesized that gender would interact with these theoretical variables and produce differential risk factors for stalking victimization.

Overall, the present analysis found weak but supportive evidence for the ability of the lifestyle-routine activities theory framework to predict stalking victimization. First, expected relationships were found with regard to the exposure and target suitability measures. In terms of exposure to motivated offenders (Hypothesis 1), two of the measures examined—going to work or school and going to restaurants, movies, or the theater—were significant predictors of stalking victimization, though the effect of these variables was relatively minor. Specifically, findings suggested that individuals who were more likely to participate in those activities were slightly more likely to experience stalking. Furthermore, two measures of target suitability (Hypothesis 2)—household income and relationship status—were significant predictors of stalking, meaning that individuals who had lower incomes and who were single experienced stalking victimization more often. Again, though, the strength of these effects was relatively minor.

With regard to the guardianship, an unexpected finding emerged. While all five measures of guardianship (Hypothesis 3)—avoid certain areas, take self-defense classes, change phone number, move residences, and stay home—were significantly related to stalking victimization, the relationships were in the opposite direction as was hypothesized. That is, individuals who reported that they performed such protective measures were more likely to experience stalking victimization. Although such a finding seems counterintuitive, it is not completely surprising, as similar findings related to guardianship have been reported in previous studies (see, for example, Mustaine & Tewksbury, 1999; Stahura & Sloan, 1988; Tseloni, Wittebrood, Farrell, & Pease, 2004). Most likely, it is the result of a measurement issue affecting temporal ordering of variables. Rather than guardianship leading to an increased risk of stalking victimization, as the data seem to imply, previous stalking victimization experiences probably resulted in increased guardianship behaviors. To evaluate this possibility, some additional measures were examined. In addition to the general guardianship measures discussed earlier, the GSS also asked respondents who had experienced stalking victimization whether they had taken any protective measures as a direct result of being stalked. These measures included avoiding certain places, going out less, not going out alone, getting an unlisted number, moving, or taking some other protective action. Of the individuals who had experienced stalking victimization, 80% claimed to have taken at least one of these protective measures after being stalked. Thus, there is supplementary evidence from the GSS to support the assertion that the various guardianship activities reported by

stalking victims occurred post-victimization, driving the counterintuitive relationships observed in Table 3.

In addition to examining the relationship between the components of lifestyle-routine activity theory and stalking victimization, the present study also sought to determine whether said relationships were influenced by the gender of the respondents. As such, it was also hypothesized that the predictors of stalking victimization would differ between males and females (Hypothesis 4). Again, weak support was found for this hypothesis. When examining male and female respondents separately, several measures appeared to be significantly related to stalking victimization for one particular gender. For example, going to work or school, moving, and age were all significant predictors of stalking victimization for females only. While these findings seem to indicate gender differences, we went one step further with the analysis and performed a test of equality of coefficients for males and females. This test is used to determine whether there is a statistically significant difference between the model coefficients for two independent populations. With this test, it was determined that there was a significant difference between males and females for relationship status and age measures, indicating that some predictors of stalking victimization are, in fact, gendered.

#### Limitations

Although every effort was made to perform a sound study, unfortunately, not every limitation could be fully addressed. With this study, there were at least two apparent limitations. First, as mentioned previously, the data for this study were cross-sectional. This is common in stalking victimization research (e.g., Bjerregaard, 2000; Fisher et al., 2002; Mustaine & Tewksbury, 1999; Nobles, Reyns, Fox, & Fisher, 2014), but it does introduce complications related to the time ordering of variables. This may account for the previously discussed issue related to the effects of guardianship on victimization. Second, as is often the case when utilizing secondary data, ideal measures of theoretical concepts are not always available. Thus, while the GSS represents an excellent source of national data, the measures of lifestyle-routine activity concepts were somewhat limited with respect to stalking victimization. For example, it may be that public activities do not differentiate stalking victims from non-victims because of the relationship between the victim and the offender. In instances of stalking between intimates, opportunities would be conditioned by that relationship, in which case concepts such as exposure, target suitability, and guardianship take on different meanings (see Finkelhor & Asdigian, 1996). These potential limitations also point toward ways in which future research can improve upon the present study.

## Recommendations for Future Research

The purpose and findings of the present study indicate that continued research is warranted. First, researchers should continue to examine stalking victimization in Canada, as well as other non-U.S. countries, in an effort to determine whether stalking victimization and resulting behaviors are similar or somehow different from those found in U.S.-based studies. This could allow for improved education and prevention policies in those countries. Second, as reported above, the present study found some support for the hypothesis that the effects of lifestyles and routine activities on victimization risk may be influenced by the gender of the victim. Continued research is needed with respect to this potential gendered effect, as it could directly influence the effectiveness of stalking educational programs and victimization prevention initiatives.

Third, the cross-sectional nature of the data utilized in the present study created some potential issues with the analysis. It would behoove future researchers to examine longitudinal data, as time-order issues would most likely be less prevalent. Fourth, as stated previously, there have been very few stalking victimization studies that have examined nationally representative samples. While there is nothing inherently wrong with examining smaller or specific populations, continued focus on nationally representative samples could help provide more generalizable findings. Fifth, qualitative research into the nature of stalking victimization would be useful both to shed light on some of the relationships uncovered in the present analyses and to generate theoretical development beyond the prevailing theories of victimization.<sup>4</sup>

Finally, it could also be beneficial to the continued evolution of the stalking literature if future researchers included an examination of how well lifestyle-routine activity theory, or any victimization theory for that matter, explains stalking victimization across different types of victim—offender relationships. As different types of relationships would ultimately produce different levels of opportunity for offenders, it stands to reason that the ability of the theory to predict stalking victimization would vary across relationship types. In a preliminary attempt to address this issue, some exploratory results using the current data set have been included in the appendix. Interestingly, lifestyle-routine activities exhibited significant associations for several exposure and guardianship variables among intimate partner and relative/acquaintance stalking victims, while victims stalked by strangers experienced none of these associations. These results suggest considerable complexity for processes that influence stalking risk and vulnerability, including some that may be conditional on the victim—offender relationship.

Notwithstanding the previously discussed limitations and areas of further inquiry, the present study nonetheless contributes to the stalking victimization research literature. By exploring the determinants of stalking victimization among residents of Canada, testing a lifestyle-routine activity theoretical framework, and identifying gender-specific correlates of victimization, the present work represents a first and necessary next step in the evolution of the stalking victimization knowledge base.

**Appendix**Binary Logistic Regression Models for Stalking Victimization Perpetrated by Intimate Partners, Relatives/Acquaintances, and Strangers.

	Intimate Partners		Relatives/Acquaintances			Strangers			
	Coefficient	SE	Exp(B)	Coefficient	SE	Exp(B)	Coefficient	SE	Exp(B)
Exposure variables									
Public activities	-1.219*	0.48	0.30	0.29	0.22	1.34	-0.13	0.43	0.88
Work or school	0.01	0.02	1.01	0.00	0.01	1.00	0.03	0.02	1.03
Restaurants,	0.03	0.04	1.03	0.03	0.02	1.03	0.04	0.04	1.04
movies, theater									
Bars and pubs	-0.03	0.05	0.97	-0.05	0.02	0.96	-0.01	0.05	0.99
Exercise, sports, recreation	0.05*	0.02	1.05	0.00	0.01	1.00	0.02	0.02	1.02
Shopping	0.06	0.03	1.06	0.01	0.02	1.01	0.02	0.03	1.02
Visiting friends	-0.02	0.03	0.98	-0.01	0.01	0.99	-0.03	0.03	0.97
Guardianship variables									
Avoid certain areas	0.80*	0.33	2.24	0.50**	0.16	1.65	-0.53	0.30	0.59
Self-defense class	-0.14	0.35	0.87	0.01	0.18	1.01	0.03	0.38	1.03
Change phone #	0.34	0.37	1.41	0.61**	0.23	1.83	1.14	0.60	3.12
Move residences	-0.20	0.35	0.82	0.02	0.23	1.02	-0.23	0.55	0.79
Stay home	-0.29	0.40	0.75	0.34	0.23	1.40	0.91	0.54	2.49
Target suitability varial	oles								
Household income	0.08	0.06	1.09	-0.04	0.03	0.96	0.05	0.07	1.05
Relationship status	-0.18	0.36	0.84	-0.22	0.17	0.80	-0.17	0.32	0.84
Drinking frequency	-0.16	0.25	0.85	-0.12	0.12	0.89	-0.14	0.24	0.87
Control variables									
Gender	0.73*	0.33	2.08	0.74***	0.16	2.10	1.82***	0.31	6.15
Age	-0.12	0.07	0.89	-0.02	0.03	0.98	-0.01	0.07	0.99
Visible minority	0.27	0.72	1.31	-0.02	0.32	0.98	0.11	0.49	1.11
Total Victimization	-0.24	0.13	0.79	-0.04	0.07	0.96	0.01	0.14	1.01
Constant	1.16	0.92	3.18	0.05	0.43	1.05	-0.29	0.87	0.75
−2 Log-likelihood	319	319.43		1,081.97			318.78		
Model χ <sup>2</sup>	36	5.99**		93.04***			64.96**		
Nagelkerke R <sup>2</sup>		.16		.14			.26		
N	3	326		887		335			

 $p \le .05. p \le .01. p \le .001.$ 

### **Authors' Note**

This analysis is based on the Statistics Canada *General Social Survey*, Cycle 18, Victimization, 2004. All computations, use, and interpretation of these data are entirely those of the authors.

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#### **Notes**

- 1. Includes those who are separated, widowed, divorced, or single.
- None includes those individuals who stated they never drink or have not drunk in the last month. Light drinker includes those individuals who drank once or twice in the last month or once a week. Heavy drinker includes those individuals who drink multiple times a week.
- 3. Categories 1 and 12 were excluded from the analyses because of the small number of respondents in each of these categories. The sample, therefore, includes persons aged 18 to 64 years.
- 4. We thank an anonymous reviewer for suggesting the use of qualitative data to inform the study of stalking victimization.

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