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# Female Canadian university sexual assault survivors: why they do not report

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UNIVERSITY SEXUAL ASSAULT REPORTING

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Female Canadian university sexual assault survivors: Why they do not report

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Thesis in partial fulfilment of the program requirements for the Master's Degree in Clinical

Psychology

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# UNIVERSITY SEXUAL ASSAULT REPORTING

## Abstract

Female Canadian university students are at a high risk for sexual victimization and as few as 5% report the assault. Various Canadian provincial governments have put forward legislation to develop and improve university sexual assault policies in order to decrease the number of sexual assault occurrences and to better support survivors. To inform such policies, it is important to understand why female university students do or do not report a sexual assault they have experienced; however there appears to be lacunae in the literature regarding factors that influence whether female university students report a sexual assault. The objective of the present study was to address the gaps in existing literature by examining how contextual, psychological, and reporting/legal factors relate to the reporting practices of female Canadian university sexual assault survivors. The findings from the present study show that the presence of physical injuries from the assault and seeking health services after the assault significantly increase the odds that survivors will report the assault to the authorities. Meanwhile, moderate to high levels of alcohol consumption (3 or more drinks) before the assault and having previously been sexually assaulted significantly decrease the odds that survivors will report the assault to the authorities. Weapon use, alcohol or drug use, psychological outcomes from the assault, fears regarding the legal process, and seeking counselling services did not significantly predict reporting. Such findings highlight that specific contextual factors and health service-seeking behaviours appear to play a significant role in reporting, while psychological factors and fear of being believed appear to be less significant than previous literature suggests.

Keywords: sexual assault, sexual violence, rape, university, post-secondary, reporting

# UNIVERSITY SEXUAL ASSAULT REPORTING

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## Introduction

Sexual assault, often defined as incidents of unwanted sexual activity, including sexual attacks and sexual touching, is one of the most common violent crimes occurring in Canada today (Allen, 2015; Brennan & Taylor-Hutts, 2008). In Canada, it is estimated that one in three women will experience a form of sexual violence in their lifetime and women are 10 times more likely to experience sexual violence than men (Brennan & Taylor-Hutts, 2008; Johnson, 2006). Compared to all other age groups, females aged 18-24 are at the highest risk for sexual victimization (Sinozich & Langton, 2014), with the majority of women in this age group identifying as post-secondary students (McMullen, 2011). Like the general population, female university students are more likely to experience sexual violence than male students, with one in five women experiencing a sexual assault during university versus 1 in 16 men (Krebs, Lindquist, Warner, Fisher, & Martin, 2007). Due to the high prevalence of sexual assaults occurring to female students, the present study aims to focus on female university students specifically; However, it is important to note that this specificity does not minimize the assaults experienced by Canadian male university sexual assault survivors, whose experiences are of equal importance.

Previous studies have suggested that women who attend university are at greater risk for sexual assault than those in the same age group who do not (DeKeseredy & Kelly, 1993; Fisher, Cullen, & Turner, 2000; Koss, Gidycz, & Wisniewski, 1987), although variations in methodology make it difficult to establish direct comparisons (Krebs et al., 2007). Regardless, it is evident that sexual assault is a prevalent problem occurring to female Canadian post-secondary students with findings revealing that 59% of a sample of female Canadian university students have experienced one or more forms of sexual victimization and 35% have experienced at least

one completed or attempted rape (Senn et al., 2014). Research findings on sexual assaults experienced by female university students have also reported that sexual assault is more likely to occur early on in university, whereby first year females are at highest risk of sexual victimization, making the first year, and specifically the first semester, the “red zone” of sexual assaults (Kimble, Neacsiu, Flack, & Horner, 2008).

The prevalence of sexual assaults occurring to university aged females in Canada is alarming as sexual assault puts survivors at risk for poor psychological outcomes, such as post-traumatic stress disorder (PTSD; Clum, Calhoun & Kimerling, 2000), depression (Acierno et al., 2002), suicidal ideation (Petrak, Doyle, Williams, Buchan, & Forster, 1997), and significant fear and generalized anxiety (Siegal, Golding, Stein, Burnam, & Sorenson, 1990; Ullman & Siegal, 1993). Many survivors can also become dependent on alcohol and other illegal drugs post-assault (Ullman, 2007). Negative physical health outcomes that are directly associated with surviving a sexual assault can include physical injuries, chronic pain, gastrointestinal problems, symptoms associated with sexually-transmitted infections, and sexual functioning difficulties (Campbell, 2002; Kelley, Orchowski, & Gidycz, 2016). Sexual assault survivors are also at a heightened risk of experiencing subsequent assaults, with approximately two thirds of survivors experiencing revictimization (Campbell, Dworkin, & Cabral, 2009; Sorenson, Siegal, Golding & Stein, 1991). University students in particular are also at risk of poor academic performance and an increased risk of leaving university prematurely after experiencing a sexual assault (Baker et al., 2016; Duncan, 2000)

While sexual assaults are prevalent in Canada, they are the most underreported of violent offenses relative to the amount of offenses that actually occur (Vaillancourt, 2010). In other words, despite the high rate of sexual assault occurrences, very few of these assaults are reported.

It is estimated that fewer than 10% of sexual assault survivors report their assault to the police (Perreault & Brennan, 2010) and it is therefore difficult to definitively determine how many sexual assaults are occurring in Canada each year, as there are likely many more assaults occurring than those of which authorities are made aware.

It also appears that the number of sexual assaults that get reported to the police in Canada each year is declining. Findings from the General Social Survey (GSS), a national Canadian survey that is carried out approximately every five years, has shown that although the rates of sexual assaults anonymously reported to the GSS have remained consistent over the years, the number of respondents who noted they reported to police have declined. Between 1993 to 2002, the change in the number of GSS respondents who admitted to having been sexually assaulted was statistically insignificant, ranging from 16 to 21 incidents per 1000 population, whereas the percentage of respondents who indicated that they had reported the sexual offences to the police decreased by 36% (Kong, Johnson, Beattie, & Cardillo, 2003; Allen, 2015).

Reporting appears to be low amongst female university students as well, with as few as 5% of female university sexual assault survivors reporting the assault to authorities (Koss et al., 1987). Findings suggest that reporting is actually even lower among university students than the general population, with one study finding that 80% of female student sexual assaults went unreported, compared to 67% of non-student sexual assaults (Sinozich & Langton, 2014). In response to the high prevalence of sexual assaults occurring on Canadian campuses, several provincial governments have introduced legislation to enforce that sexual assault policies are developed at universities in order to address the problem and to support survivors (Ward, 2017). In summary, sexual assault is a prevalent problem in Canada that is associated with detrimental psychological and physical outcomes. University aged females are not only at a higher risk for

sexual assault than other age groups but may also be less likely to report the assault. It is important that research explores the nature of reporting practices in this particular cohort in order to inform the sexual assault policies that have been put in place across the country.

### **Defining Sexual Assault**

Definitions of sexual victimization, including sexual assault, sexual violence, and rape, remain ambiguous and can vary across research investigators and policy makers. On the GSS, Statistics Canada defines sexual assault as “a term used to refer to all incidents of unwanted sexual activity, including sexual attacks and sexual touching” (Brennan & Taylor-Butts, 2008, p. 7). Meanwhile, the recently passed Ontario Government Bill 132 defines sexual violence as “any sexual act or act targeting a person’s sexuality, gender identity, or gender expression, whether the act is physical or psychological in nature, that is committed threatened or attempted against a person without the person’s consent, and includes sexual assault, sexual harassment, stalking, indecent exposure, voyeurism and sexual exploitation” (Bill 132, 2016, p. 6).

Legally, sexual assault is encompassed within Canada’s *Criminal Code* general category of assault, whereby “a person commits assault when a) without the consent of another person, he applies force intentionally to that person, directly or indirectly; b) he attempts or threatens, by an act or a gesture, to apply force to another person, if he has, or causes that other person to believe on reasonable grounds, that he has, present ability to effect his purpose; or c) while openly wearing or carrying a weapon or an imitation thereof, he accost or impedes another person or begs.” (Criminal Code, 1985, p. 327). Under the Code, sexual assault offences are categorized into three levels: Level 1 is sexual assault, Level 2 is sexual assault with a weapon, and Level 3 is aggravated sexual assault, whereby the assailant who is committing the assault either wounds, maims, disfigures or endangers the life of the complainant (Criminal Code, 1985). The *Criminal*

*Code* also defines rules with regards to the definition of consent; however, it does not explicitly state in which situations someone is able or unable to consent.

Differences in definitions of sexual assault and subsequent measures can influence findings and ultimately the interpretation of findings. For instance, how narrowly or broadly one defines sexual assault may influence statistics on the number of sexual assaults that take place, as well as the statistics on the proportion of assaults that get reported. A large portion of academic research involving sexual assault is predominantly conducted using the Sexual Experiences Survey (SES), which was originally published by Koss and Oros in 1982. In the original SES, as well as subsequent versions of the survey, Koss and Oros define varying forms of sexual victimization. Unwanted sexual contact is described as “someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch, or butt) or removed some of my clothes without my consent (but did not attempt sexual penetration)” (p. 456). Meanwhile, rape is defined as three possible situations: “someone had oral sex with me or made me have oral sex with them without my consent”, “a man put his penis into my vagina, or someone inserted fingers or objects without my consent”, and “a man put his penis into my butt, or someone inserted fingers or objects without my consent” (p. 456).

Koss and Oros (1982) created the SES to ask behaviorally specific questions in order to assess women’s experiences with forced sexual contact, verbally coerced sexual intercourse, attempted rape and rape since the age of 14. By asking questions regarding behavior, the SES avoids only identifying survivors who interpret their sexual experience as an assault. In other words, sexual assault survivors who do not know a particular behavior they experienced qualifies as an assault can still be identified by researchers who use the SES as it focuses on questions regarding experienced behavior, rather than needing the survivor to associate a stigmatizing label

with the experience in order to identify it (Testa, VanZile-Tamsen, & Livingston, 2004). The wide use of the SES and subsequent related surveys has created a certain level of consistency in terms of measurement throughout a large portion of the literature on sexual assault.

### **Factors Related to Sexual Assaults Occurring to Female University Students**

A significant amount of research has been conducted to establish the risk factors related to sexual assault occurrences in both university samples and the general population.

Investigations surrounding university samples have highlighted risk factors including the presence of rape culture and belief in rape myths on university campuses, contextual factors (such as survivors knowing the perpetrator prior to the assault and the use of alcohol and/or drugs by the perpetrator and survivor), characteristics relating to the survivor, and characteristics relating to the perpetrator. What follows is an overview of the factors that are thought to be related to sexual assaults occurring specifically to female university students and/or by male university student perpetrators.

### **Rape Culture and Rape Myths**

It has been proposed that university campuses may inadvertently foster rape culture, which can be defined as a culture “that accepts sexual violence and the fear of violence as the norm” (Buchwald, Fletcher, & Roth, 1993, p. 5). Rape culture is described as being reinforced in any culture that supports “the institutionalization of patriarchal values; socialization practices that teach non-overlapping notions of masculinity and femininity with men viewed as tough, competitive, and aggressive and woman as tender, nurturant, and weak; social, familial, political, legal, media, educational, religious, and economic systems that favor men; and criminal justice and legal systems that fail to protect women.” (Roze & Koss, 2001, p. 296).

Rape culture is theorized to be reinforced in certain university settings through the belief and promotion of rape myths, which are defined as common beliefs about rape that actively place the sexual assault survivor at fault and that normalize the assault (Bohner et al., 1998; Sanday, 2007). The acceptance of such rape myths has been found to be a predictor of sexual assault perpetration in male university students (Bohner, Jarvis, Eyssele, & Siebler, 2005; Suarez & Gadalla, 2010), as they are thought to “be used in such a way as to cognitively justify rape and to ignore social prohibitions against hurting others” (Aronowitz, Lambert, & Davidoff, 2012, p. 175).

Rape myths have been found to be expressed by university students (Aronowitz et al., 2012; Struckman-Johnson & Struckman-Johnson, 1992). One study found that 63% of both male and female students believed that “if a woman makes out with a man, it is okay for him to coerce her to have sex” and 41% believed that “if a woman was raped while intoxicated, she was responsible for the assault” (Aronowitz, Lambert, & Davidoff, 2012). Another study found that 35% of male students reported that their friends approved of getting a woman drunk to engage in sexual acts with her (Carr & VanDeusen, 2004). Such beliefs have been linked to the perpetration of sexual assaults whereby exposure to peer norms that convey or promote using coercion to obtain sexual experiences increases the likelihood university males will overestimate the sexual intent of women with whom they interact and will increase the likelihood they will commit a sexual assault (Edwards & Vogel, 2015; Swartout, 2013).

In the past five years, the media has increasingly begun to cover situations where rape culture has been propagated on Canadian university campuses. For instance, in 2013, a video of a large group of St. Mary’s University students chanting they preferred non-consensual sex with underage girls received national coverage (CBC News, 2013) and in 2014, a group of Dalhousie



University dentistry students partook in comments on Facebook that degraded women, sparking widespread controversy (Callanan, 2015).

Members of certain university subgroups, such as fraternities and male intercollegiate athletics, have been found to score higher on rape myth acceptance scales and are more likely to engage in sexually aggressive behaviour than other students (Bleecker & Murnen, 2005; Boeringer 1996; Murnen & Kohlman, 2007; Sawyer, Thompson, & Chicorelli, 2002; Stotzer & MacCartney, 2016). For example, a study conducted at an American university found that student athletes represented 23% of perpetrators of sexual assaults, while representing solely 2% of a university's overall male student body (Frintner & Rubinson, 1993). Members of these subgroups have been shown to commit acts of sexual assault as an outcome of high levels of peer pressure and in attempt to prove their "masculinity" to other male group members (Franklin, Bouffard, & Pratt; 2012), where group loyalty and conformity overpower individual beliefs (Flood & Dyson, 2007; as cited in Harway & Steel, 2015). However, it is also important to note that collegiate sports appear to be more institutionalized and to have a more powerful presence in the United States than in Canada, and therefore it is possible that the role of varsity athletics in sexual assault occurrences in Canada may not be as significant as in the United States.

### **Contextual Factors**

**Knowing the perpetrator.** Approximately 70% of sexual assaults are committed by someone the survivor knew prior to the assault (Koss, Dinero, & Seibel, & Cox, 1988; Renninson, 1999). This statistic has been shown to be even higher in the university setting than in the general population, where as many as 90% of sexual assaults involve an acquaintance and are most commonly perpetrated by a classmate, friend, boyfriend, or ex-boyfriend (Fisher et al., 2000). University campuses provide a community where students have the opportunity to meet

and socialize in class settings, at parties, and at other school related events on and off campus which ultimately provides close proximity to other students. This proximity may lead individuals to develop interpersonal relationships with perpetrators, as more than 80% of sexual assaults carried out against female university students are perpetrated by other students (Siegel & Raymond, 1992).

Most sexual assaults that occur between acquaintances in the university setting do not occur on dates, but rather occur when two people are in other social situations like at a party or in a dorm room studying together (Sampson, 2003). Sexual victimization is more likely to occur off-campus, with one study finding that 66.3% of completed rape and 65.4% of other forms of sexual assault occurred off campus (Fisher et al., 2000). Of the sexual assaults that do occur on campus, findings have revealed that approximately 60% are carried out in university residences (Sampson, 2003).

**Alcohol use.** In the university context, excessive drinking, or “binge” drinking, is a very common behaviour, where many engage in such behaviours to be sociable, to enhance experiences, as a coping mechanism, and in order to conform to social norms (Martens, Rocha, Martin, & Serrao, 2008). Alcohol consumption in university has been found to be positively correlated with sexual assault perpetration (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004; Wechsler & Wuethrich, 2002), and specifically, assaults often take place when university students consume large amounts of alcohol together (Sampson, 2003).

Approximately half of perpetrators who commit sexual assaults in university have been shown to have consumed alcohol before the assault (Abbey et al., 1998). Research findings show that male and female college students often communicate sexual consent in different ways (Jozkowski, Peterson, Sanders, Dennis, & Reece, 2014). Research suggests that some male

students may misperceive women's level of sexual intent, whereby they perceive women as having greater sexual intent than they do in reality (Lindgren, Parkhill, George, & Hendershot, 2008). This misperception appears to be amplified with the use of alcohol (Abbey et al., 1996).

Researchers have also found that university females' refusal of sexual advances are more likely to be ignored by men who have consumed alcohol (Lannutti & Monahan, 2002). The alcohol myopia theory (AMT) suggests that when an individual consumes alcohol, his/her cognitive abilities to process and discriminate between stimuli and cues regarding other people's behaviour will decrease, leading him/her to only interpret some cues and not others, and ultimately becoming "nearsighted" (Steele & Josephs, 1990). Steele and Josephs (1990) identify that in the face of a decision, individuals interpret both "impelling cues" that appeal to one's impulses and desires as well as "inhibiting cues" which help identify cues that deny those desires. AMT suggests that when there is a conflict between impelling and inhibiting cues, alcohol leads individuals to focus on impelling cues and to disregard inhibiting cues (Lannutti & Monahan, 2002). Ultimately, this could lead university men to focus on salient cues that they think mean a female student is interested in sexual activity, while actively ignoring the cues that project that she is not interested.

Sexual objectification theory posits that when individuals sexually objectify women, they separate women's sexual function from their entirety as a person, reducing them to an object for sexual use (Gervais, DiLillio, & McChargue, 2014). Alcohol consumption in university men has been shown to be linked to the sexual objectification of female students as alcohol increases the extent to which men engage in body evaluation of women and unwanted sexual advances toward women, both of which in turn are associated with an increased likelihood of sexual assault perpetration (Gervais, DiLillo, McChargue, 2014). Gervais and colleagues (2014) hypothesize

there is a link between sexual objectification and AMT, whereby alcohol consumption leads men to focus on impelling cues given off by female students, which includes focussing on their salient sexual attributes rather than their thoughts or feelings.

Research has also shown that alcohol increases the likelihood individuals will behave aggressively (Taylor & Chermack, 1993). Alcohol disrupts executive cognitive functioning in the prefrontal cortex (Hoaken, Giancola, & Pihl, 1998) which causes a reduction in inhibitory control, and researchers theorize this leads to the expression of aggression when consumed by certain individuals (Giancola, 2000; Pihl, Peterson, & Lau, 1993). In the case of sexual assault perpetration, findings reveal male students' alcohol consumption combined with the possession of specific negative hyper masculine beliefs (such as having power over women) can lead to sexually aggressive behaviour against university females (Locke & Mahalik, 2005).

About half of female university sexual assault survivors also report they drank alcohol before the assault (Stermac, Du Mont, & Dunn, 1998; Tyler, Hoyt, & Whitbeck, 1998). Studies have shown some men believe women who have consumed alcohol may be more welcoming to sexual advances (Abbey et al., 1999; George, Cue, Lopez, Crowe, & Norris, 1995), and therefore Abbey (2002) suggests female university students who have consumed alcohol may be more likely targets of sexual assault than sober female students. Alcohol also affects a number of cognitive functions in individuals, such as planning, verbal fluency, and complex motor control (Peterson, Rothfleisch, Zelazo, & Pihl, 1990), that may compromise female students' ability to provide consent or remove themselves from dangerous situations (Jozkowski & Wiersma, 2015).

### **Characteristics of Survivors**

Having experienced a prior sexual victimization puts female university students at risk for future sexual victimizations, with studies finding anywhere between 23% to 47% of sexual

assault survivors having experienced a previous assault since being in university (Daigle, Fisher, & Cullen, 2008; Gidycz, Hanson, & Layman, 1995; Gross, Winslett, Roberts, & Gohm, 2006). Studies have found that individuals who had experienced a sexual assault prior to university experienced higher levels of self-blame and decreased levels of sexual refusal assertiveness (the extent to which an individual verbally refuses to participate in unwanted sexual experiences) than those who had not, which were both linked to an increased likelihood of later revictimization during university than those who had not previously experienced an assault (Katz, May, Sorensen, and DelTosta, 2010; Miller, Markman, & Handley, 2007)

Female university students are at the highest risk of being sexually assaulted during the first year, with the first few weeks of the school year being the most dangerous (Gross, Winslett, Roberts, & Gohm, 2006; Humphrey & White, 2000; Krebs, Lindquist, Warner, Fisher, & Martin, 2007). Sweeney (2011) argues peer-driven concerns about drinking, partying, and obtaining sexual experiences influence men to capitalize on first year women, who may be particularly vulnerable, or more likely to be drinking and partying, due to the new experiences and autonomy associated with university life. Indeed, increased involvement in social activities like partying and dates has been found to be a risk factor for experiencing sexual assault in female university students (Combs-Lane & Smith, 2002). Finally, it is important to note that while survivor characteristics are related to sexual assault victimization, these relationships should never be equated to blaming the survivor for the assault.

### **Characteristics of Perpetrators**

Male university sexual assault perpetrators have been found to have lower levels of tender-mindedness, excitement-seeking, warmth, positive emotions, feelings, altruism, competence, dutifulness, as well as higher levels of vulnerability, impulsivity, aggressiveness,

manipulativeness, irresponsibility, and narcissism than non-perpetrators (Hersh & Gray-Little, 1998; Kosson, Kelly, & White, 1997; Lisak & Roth, 1988; Petty & Dawson, 1989; Rapaport & Burkhart, 1984; Voller & Long, 2010; Wheeler, George & Dahl, 2002). Male university perpetrators of sexual assault have also been shown to possess certain masculine ideologies that assert men are sexually dominant and aggressive while women are passive, and sexual aggression can be justified in certain circumstances (Murnen, Wring, & Kaluzny, 2002). Masculine ideologies that have been found in male university student perpetrators include adversarial sexual beliefs (belief that interpersonal relationships are exploitative and manipulative), negative attitudes toward women, rape myth acceptance, acceptance of interpersonal violence, hostility towards women, and dominance and power over women (Burt, 1980; Malamuth, 1986; Murnen et al., 2002).

While the above-mentioned characteristics are often also seen in community samples of perpetrators, studies have considered differences in perpetrators of sexual assault between university and community samples and have found hostility toward women was a significant predictor of sexual assault perpetration in university samples but was not a significant factor in community samples (Abbey, Parkhill, Clinton-Sherrod, & Zawacki, 2007; Gallagher & Parrott, 2011; Senn et al., 2000). Abbey and colleagues (2007) hypothesize hostility toward women is more commonly seen in university students than in community samples due to the increased access to social groups that support hostility toward women within universities, as well as the importance and influence of peer relationships in university-aged individuals overall. Research shows that peer pressure plays a significant role in decision making in university students (Borsari & Carey, 2001; Knee & Neighbors, 2002). Male university students often experience pressure from other male peers to engage in sexual relationships (Garcia, Reiber, Massey, &

Merriwether, 2013), and the degree to which an individual demonstrates social conformity or succumbs to such peer pressure has been linked to sexual assault perpetration (DeKeseredy & Kelly, 1995; Schwartz & DeKeseredy, 1997).

### **The Response of Provincial Governments and Canadian Universities**

Several Canadian provincial governments have introduced legislation to enforce sexual assault policies at universities within each province (Ward, 2017). In March 2016, the Ontario government passed Bill 132, *Sexual Violence and Harassment Action Plan Act (Supporting Survivors and Challenging Sexual Violence and Harassment)*, which was part of 13 commitments to which the government agreed on behalf of the “It’s Never Okay” action plan to stop sexual violence and sexual harassment, and to make campuses and communities safer and more responsive to the needs of survivors (Johnson & Sylvis, 2016). Commitments included developing tools to improve law enforcement responses to sexual assault reports in order to decrease sexual assault rates, as well as to create legislation requiring colleges and universities to work with students to develop campus-wide sexual violence policies that include complain procedures and response protocols (Naidoo-Harris, 2016).

Bill 132 requires every Ontario college or university to have a sexual violence policy which describes how the institution will respond and address incidents of sexual violence. Student input is considered in the development of the policy which must be reviewed every three years. The Bill also stipulates each college and university must report to the Ontario minister responsible for women’s issues the number of incidents and complaints of sexual violence reported by students, the number of times support and services were sought related to sexual violence, and the implementation and effectiveness of the policy.

Following the steps of the Ontario government, the provincial governments of British Columbia, Manitoba and Nova Scotia have also since put forth similar bills. In the wake of such provincial legislation, individual universities without formal provincial legislative regulations have also developed sexual assault policies on their own, such as the University of Regina, the University of Saskatchewan, and Memorial University (Westwood, 2016).

Critics argue that, while these new laws and regulations are a step in the right direction, they do not give any specific guidelines for what university sexual assault policies should include and therefore leave room for discrepancy between individual universities in terms of how sexual assault policies will be developed and implemented (Westwood, 2016). Moreover, none of the provincial acts dictate a centralized responsibility for establishing that the sexual assault policies are evidence-based or effective (Westwood, 2016). In other words, there are no safeguards to make sure the services that are offered are effectively helping survivors or are using recent research findings to inform the ways in which services are offered and carried out (DeMatteo, Galloway, Arnold, & Patel, 2015). Further research on Canadian university sexual assaults, including reporting practices of female university sexual assault survivors, is needed to provide evidence-based findings in order to inform current policies and services provided at individual post-secondary institutions across the country.

### **Options for Reporting**

University students who have survived sexual assault have the opportunity to report to the university, as well as to the police like the rest of the general population. One key difference in the adjudicatory process between the university administrative system and the criminal justice system is that the latter offers survivors the choice of allowing the Provincial Crown Prosecutor to press charges against the perpetrator (DeMatteo et al., 2015; Toronto Police Service, 2016). In



such situations, the survivor may have to take the stand to testify regarding the events of the assault (Toronto Police Service, 2016) and the prosecution must prove beyond a reasonable doubt that the offense occurred (Criminal Code, 1985). In contrast, if survivors report the assault to the university, administrators will implement their own informal or formal processes as defined by the particular university's sexual assault policies (Gunraj et al., 2014; Quinlan et al., 2016; Westwood, 2016). Often the threshold for proof in university processes is much lower than in criminal proceedings (DeMatteo et al., 2015).

If a sexual assault is reported to university authorities, the university has the option to take immediate action to ensure the safety of the campus environment, which may include contacting the police (Gunraj et al., 2014). If the alleged perpetrator is a student or staff member of the university, the administration will conduct investigations of the complaint, and a hearing or a mediation might be held and the consequences for the perpetrator will be determined (Gunraj et al., 2014). If a sexual assault report is made to law enforcement, the police may commence an investigation that could lead to possible charges placed against an alleged perpetrator which might or might not lead to a conviction (Toronto Police Service, 2016).

In order for sexual assault reporting policies to be carried out effectively, sexual assault survivors must be willing to report the assault in the first place. As such, it is important to consider the factors that influence sexual assault reporting among female university students as reporting can help to reduce the number of sexual assault incidents if perpetrators are charged and convicted, especially considering that the majority of sexual assault perpetrators reoffend (Lisak & Miller, 2002).

## **Factors Associated with the Reporting of Sexual Assault**

### **Contextual Factors of the Assault**

Evidence suggests reporting is less likely in situations where alcohol use by the survivor is involved (Fisher et al., 2003) or if the survivor knew the perpetrator prior to the assault (Gartner & Macmillan, 1995). Sexual assault survivors who knew the perpetrator previously or who consumed alcohol are also more likely to experience self-blame, guilt, shame, and embarrassment, which have been proposed to deter survivors from reporting the assault (Sable, Danis, Mauzy, & Gallagher, 2006). However, very few studies have examined these factors as they relate to reporting amongst female university students, where alcohol consumption and prior survivor-perpetrator relationships are particularly high (Fisher et al., 2000). Both Sable and colleagues (2006) and Fisher and colleagues (2003) did consider the above-mentioned factors amongst female university students; however, their findings lack generalizability to Canadian universities as they consist of American samples, where fraternities play a much larger role in campus life than in Canada (Kuo et al., 2002), and where different laws govern sexual assault policies, report procedures, and legal processes. Moreover, no known studies have examined the possible difference between the constructs self-blame and shame on reporting practices, whereby self-blame can be defined as an assessment of one's own role in the occurrence of a particular outcome, attributing the responsibility to oneself based on one's behaviours or personality traits (Janoff-Bulman, 1979; 1992). Meanwhile, shame may include the presence of self-blame, but it also includes humiliation and fear of public scrutiny (Weiss, 2010) and thus may play a different role in the reporting practices of sexual assault survivors than self-blame.

Johnson (2012) theorized that sexual assaults where the survivor has physical injuries and where the perpetrator had a weapon are more representative of a stereotypical and accepted

understanding of how most sexual assaults occur and are therefore more believable to others. Indeed, sexual assault reporting has been shown to be higher in cases where the perpetrator used a weapon or the survivor sustained physical injuries (Du Mont, Miller, & Myhr, 2003; Fisher et al., 2003; Fisher et al., 2009; Wolitzky-Taylor et al., 2011). It is also possible physical injuries or the presence of a weapon associated with an assault contribute to the survivor's interpretation that what occurred was truly an assault. Factors that help survivors conceptualize the event as an assault may be associated with reporting as those who interpret the event as an assault may recognize the incident should be reported (Koss & Gidycz, 1985). However, no recent studies have examined whether conceptualizing an unwanted sexual experience as an assault is associated with reporting by female university students.

As noted previously, sexual assault survivors are at a higher risk of future revictimization than those who have not experienced a sexual assault (Campbell, Dworkin, & Cabral, 2009; Sorenson, Siegal, Golding & Stein, 1991). It is possible the experience of a prior assault may influence whether or not the survivor reports the subsequent assault. For instance, a sexual assault survivor may have reported an assault previously, and had a bad experience with the reporting process, thus making her less likely to report in the future. Alternatively, a survivor may not have reported the previous assault, which may influence her decision to report subsequent assaults. Few studies have analyzed the relationship between revictimization and reporting; however due to the prevalence of survivors who experience multiple assaults and the associated psychological distress, it is essential we have a better understanding of this relationship.

### **Negative Cognitions Occurring After the Assault**

Janoff-Bulman (1989) postulated that, in the wake of interpersonal trauma (such as sexual assault), one's core beliefs about the world as well as the self can be disrupted in attempt to reconcile what has happened to them. To process a traumatic event, trauma survivors often develop specific cognitions to answer the question "why did this trauma happen to me?" (Draucker, 1989). Some sexual assault survivors may develop negative cognitions when answering this question, including blaming the world for being unsafe or by blaming enduring characteristics in themselves for the assault (Foa, Ehlers, Clark, Tolin & Orsillo, 1999; Koss, Figueredo, Prince, 2002), both of which have been associated with enduring psychological distress (Brewin & Holmes, 2003). Thompson and Kingree (2010) found significant sexual victimization experienced by university females predicted high levels of negative views of the self and of the world.

If some survivors of sexual assault develop negative views of the self after the assault, it is possible they may be less likely to report the assault as they may feel they are not worthy of justice. If some survivors develop negative views of the world after the assault, it is possible they may be less likely to report the assault as they may lack trust in the authorities. However, no known research has considered how negative views of the self or of the world may influence reporting.

### **Fear of the Reporting and Legal Process**

It is possible female university sexual assault survivors refrain from reporting due to fear of the reporting and legal process, which have been found to be extremely distressing for sexual assault survivors as they run the risk of being revictimized through the process. For example, court proceedings (such as retelling the events of the assault, being cross-examined, and facing

the perpetrator) have been found to be more traumatic than the event itself (Brownmiller, 1993; Gregory & Lees, 1999; Sable et al., 2006; Wheatcroft, Wagstaff, & Moran, 2009).

Highly publicized sexual assault cases often portray the stress and scrutiny survivors could undergo should they report. For example, the highly controversial case of previous CBC host Jian Ghomeshi was given international headlines when he was acquitted of all charges due to inconsistencies and questionable behaviour from the multiple survivors who testified (Hasham & Donovan, 2016). The judge involved in the trial expressed that the verdict does not mean that “these events never happened” but rather the court did not receive “reliability or sincerity of these complainants” (Hasham & Donovan, 2016). In this case, and in many publicized cases, the survivors who testified were heavily scrutinized for their behaviours surrounding the assault that contradict commonly believed rape myths. This has the potential to deter sexual assault survivors from reporting as it provokes fear they will not be believed, and they will be blamed through the process (Charles, 2016; Donovan, 2016). However, no known research has considered how fear of reporting and the legal process influence reporting amongst female university students.

Lastly, as discussed previously, there are major differences in the reporting procedures between police and university authorities. As such, it is possible survivors’ fear of reporting may differ between the two authorities; however, no known research has considered differences in reporting practices between the two.

### **Summary**

Female Canadian university students are at a high risk for sexual victimization. Investigations have found the propagation of rape culture and rape myths, contextual factors (such as alcohol use and knowing the perpetrator), and certain perpetrator and survivor

characteristics are all associated with the perpetration of sexual assaults on female university students.

Various Canadian provincial governments have put forward legislation to develop and improve university sexual assault policies in order to decrease the number of sexual assault occurrences and to better support survivors. In order to inform such policies, it is important to understand why female university students do or do not report a sexual assault they have experienced. The existent literature suggests self-blame, shame, fear of not being believed, survivor alcohol use, and knowing the perpetrator all act to prevent survivors from reporting, while the presence of physical injuries and the presence of a weapon during the assault are more indicative of those who do report.

There appears to be lacunae in the literature regarding factors that are linked to whether female university students report a sexual assault as the limited existent literature on university samples has only ever considered American university students. Moreover, no known studies have explored negative views of the world, of the self, fear of the legal process, or the role of revictimization as variables which could also be significantly linked to whether or not female university sexual assault survivors report their assaults. Lastly, no known research has considered differences in reporting to the police versus to university authorities, which could significantly inform future university strategies as well as legal and judicial processes.

### **Present Study**

The objective of the present study is to address the gaps in the existing literature regarding our understanding of the factors associated with whether or not female university students report a sexual assault. To do so, the present study examined how contextual factors (i.e. survivor's use of alcohol or drugs before the assault, whether the survivor knew the perpetrator

before the assault, the presence of a weapon, and the survivor's physical injuries), psychological factors (i.e. self-blame, shame, negative views of the self, negative world-views) and reporting/legal factors (i.e. fear of the reporting process, fear of the legal process, and fear of not being believed by the authorities) relate to the reporting practices of female university sexual assault survivors. By understanding what factors are linked to whether or not female university sexual assault survivors report or do not report a sexual assault, sexual assault policies on Canadian campuses can be better informed to support survivors.

### **Hypotheses**

The current study presents three hypotheses regarding the relationship between psychological, contextual, and reporting/legal factors and the reporting practices of current and past female university students' most recent sexual assault that occurred during university. First, we hypothesized certain contextual variables (survivor's use of alcohol or drugs before the assault and knowing the perpetrator before the assault) would be associated with a lower likelihood of reporting, while other contextual factors (perpetrator presented with a weapon during the assault and the survivor possessed physical injuries after the assault) would be associated with a higher likelihood of reporting. Second, we hypothesized certain psychological variables experienced by the survivor (self-blame, shame, negative views of the self, and negative world-views) would be associated with a lower likelihood of reporting. Third, we hypothesized factors related to reporting and legal processes (survivor's fear of the reporting process, fear of the legal process, and fear of not being believed by the authorities) would be associated with a lower likelihood of reporting.

## Method

### Participants

The sample size was decided a priori based on suggested sample size calculations for logistic regression analyses (Vittinghoff & McCulloch, 2006). Potential participants were recruited to fill out an online questionnaire and specifics regarding the recruitment process are discussed further in the Procedure section.

Participant criteria include the following:

- a. Participants must be current or former female university students aged 18 years or older.
- b. Participants must have had at least one unwanted sexual experience during the time they were in university.

Participants were recruited through social media across Canada (see Procedure section for further recruitment details). The study was originally open to anyone in North America; however, due to the high number of Canadian participants, we decided to include only Canadian participants in analyses in order to provide results that are specific to Canadian university sexual assault survivors.

**Demographic statistics.** One hundred and eighty-one participants met the qualifying criteria for the study. From there, 71 cases were removed due to missing data related to the main analyses, and 2 cases were removed as they were multivariate outliers. As a result, the sample included 108 participants. The mean age of the sample was 22.94 years ( $SD= 3.51$ ). In the sample, 87 (81%) identified their ethnicity as Caucasian, 5 (5%) identified as east Asian, 3 (3%) identified as Aboriginal, 3 (2%) identified as mixed, and 10 (9%) identified as other ethnicities. Thirty-three (31%) participants had a household income less than \$20,000 and 30 (28%) had a



household income over \$100,000. Eighty-two (76%) participants identified that their sexual orientation was heterosexual, 18 (17%) identified as bisexual and 8 (7%) identified as other sexual minorities. Ninety-one (84%) were single and 17 (16%) were married or in a domestic relationship. In the present study, 79 (73%) participants were current students and 29 (27%) were past students. A full summary of demographic statistics can be found in Table 1.

**Sexual assault and reporting history.** In order to participate in the study, all participants had to indicate they had experienced an unwanted sexual incident while in university. Among qualifying participants, 68 (63%) participants had experienced three or more unwanted sexual incidents in their lifetime, and 65 (60%) participants had experienced at least one unwanted sexual incident before university. Table 2 provides a descriptive summary of the sexual assault history of the sample. Among the 108 participants, 22 (20%) had reported an incident to the authorities in their lifetime. When asked about their most recent unwanted sexual incident in university, 15 participants (14%) had reported to the authorities. Of those who reported to the authorities, 10 had reported to the university authorities only, four had reported to police authorities only, and one had reported to both the university and police authorities. The most common age of participants when they experienced a university sexual assault was 18, with 31 (29%) participants experiencing a sexual assault at this age. Fifty (46%) participants experienced a sexual assault in their first year of undergraduate studies, 25 (23%) participants experienced a sexual assault in their second year, 19 (18%) participants experienced a sexual assault in their third year, and 10 (9%) participants experienced a sexual assault in their fourth year of undergraduate studies or in graduate studies. Table 3 provides a summary of various variables related to the most recent unwanted sexual incident that occurred in university. A subset of

participants ( $n = 98$ ) opted to provide detailed information regarding the type of sexual assault(s) they had experienced in university and these results are outlined in Table 4.

### **Measures**

The questionnaire administered first consisted of questions that addressed whether potential participants met the qualifying participant criteria (see Appendix A). If they met the qualifying criteria to participate, they were then asked to complete the Background Information Questionnaire (Appendix B), the Post-Traumatic Cognitions Inventory (Appendix C), the Trauma Related Shame Questionnaire (Appendix D), the Fear of the Reporting and Legal Process Questionnaire (Appendix E), and the Sexual Experiences Survey – Short Form Victimization (Appendix H).

**Background Information Questionnaire (BIQ; see Appendix B).** The section on background information consisted of 41 questions to collect information on participant demographics, history of unwanted sexual experiences, contextual factors of the most recent unwanted sexual experience that occurred during university, including perpetrator characteristics and other important factors related to participants' reporting practices. Specifically, questions #1-12 addressed participant demographics including biological sex, gender, sexual orientation, ethnicity, household income, marital status, and country of residence. Questions #13 - 17 involved questions related to lifetime history of unwanted sexual experiences. Next, questions #18 – 22 were questions involving the most recent unwanted sexual experience the participant experienced during university. These questions pertained to the participant's age and year of university when the unwanted sexual experience occurred, whether she suffered any injuries, and whether she sought health services for any injuries. Next, questions #23 - 34 included whether the participant reported the incident to the police or university authorities. The participant was

also given the opportunity to describe why she felt she did or did not report the unwanted sexual experience to the university or police authorities and if there is anything that would have made her more likely to report it. The participant was then asked if there is anyone else to whom she disclosed the incident, how she defines sexual assault, and if she feels the most recent unwanted sexual experience falls under her definition of sexual assault. Questions #35 - 37 pertained to whether the participant had consumed alcohol or used drugs before the unwanted experience. Questions #38-45 included the characteristics of the perpetrator involved in the most recent unwanted sexual experience experienced by the participant in university, including the sex of the perpetrator, his/her alcohol and drug use before perpetrating the unwanted sexual experience, whether the survivor had met the perpetrator previously as well as the nature of that relationship (should one exist), and if the perpetrator had presented with a weapon.

**Post-Traumatic Cognitions Inventory (PTCI; Foa et al., 1999; see Appendix C).** The PTCI assesses cognitions and beliefs related to the experience of a trauma, including negative cognitions about the self, negative cognitions about the world, and self-blame. It consists of 33 questions each with a 7-point Likert response scale that ranges from 1 (*totally disagree*) to 7 (*totally agree*). Responses are summed across the 33 items to yield a total PTCI score with higher scores indicating greater severity of post-traumatic cognitions. The inventory also yields three subscales, whereby 21 questions determine negative cognitions about the self (items 2-6, 9, 12, 14, 16, 17, 20-21, 24-26, 28-30, and 33) 7 questions determine negative cognitions about the world (items 7, 8, 10, 11, 18, 23, and 27), and 5 questions determine self-blame (items 1, 15, 19, 22, and 31).

The PTCI was originally administered to 392 survivors of traumatic events and yielded the three major factors through principal-components analysis (Foa et al., 1999). The PTCI has

since been shown to have an overall high internal consistency ( $\alpha = .97$ ), and high internal consistency for each individual factor (negative cognitions about the self,  $\alpha = .97$ ; negative cognitions about the world,  $\alpha = .88$ ; self-blame,  $\alpha = .86$ ; Foa et al., 1999). Moreover, it demonstrates strong construct validity with moderate to high correlations with the Personal Beliefs Reactions Scale and predicts PTSD severity, depression, and general anxiety in individuals who have experienced trauma (Foa et al., 1999). In the present study, the PTCI had a Cronbach's  $\alpha$  of .94, and the subscales Cronbach's  $\alpha$ 's were as follows: negative cognitions about the self,  $\alpha = .89$ ; negative cognitions about the world,  $\alpha = .74$ ; self-blame,  $\alpha = .69$ . (see Table 5).

**Trauma Related Shame Questionnaire (TRS; see Appendix D).** Oktedalen, Hagtvet, Hoffart, Langkaas and Smucker (2014) developed the Trauma-Related Shame Inventory (TRSI) to measure “negative evaluation of the self in the context of trauma with a painful affective experience, and a behavioral tendency to hide and withdraw from others to conceal one’s own perceived deficiencies” (p. 604). In 2015, Oktedalen, Hoffart and Langkaas selected five items from the TRSI that represented the severity of shame related to experienced trauma and are administered using an 11-point Likert response scale that ranges from 1 (*totally disagree*) to 11 (*totally agree*). This short form version was used to assess trauma-related shame in this study.

The five items Oktedalen and colleagues (2015) selected from the TRSI were based on content validity of shame and correlated highest with the item-total score in Oktedalen and colleagues’ (2014) previous study. The five items were found to have a Cronbach's  $\alpha$  of .77. In the present study, The TRSI was also found to have a Cronbach's  $\alpha$  of .77 (see Table 5). One of the five items was an item that Oktedalen and colleagues (2015) selected from the PTCI in constructing the TRSI, and therefore this item appears on both measures. Specifically, #30 of the

PTCI, “there is something about me that made the event happen” is the same as item #5 on the TRSI.

**Fear of the Reporting and Legal Process Questionnaire (FRLP; see Appendix E).**

Seven questions were developed for the present study to assess participants’ fears surrounding the reporting and legal process as no known measures currently exist to assess such factors. The items were chosen as a reflection of common fears regarding reporting and legal processes noted by participants in previous studies (Fisher et al., 2003; Sable et al., 2006). Participants were asked to answer questions related to their most recent unwanted sexual experience that occurred during university on a 7-point Likert scale ranging from 1 (*totally disagree*) to 7 (*totally agree*). To assess whether participants feared the reporting process, question #1 (*I was terrified of discussing my unwanted sexual experience with authorities*) and question #3 (*I was worried the process involved in reporting would be traumatic*) are summed, with a higher score indicating a stronger fear of the reporting process. Meanwhile, to assess whether participants feared the legal process, question #1 and question #4 [*I was worried the legal process (e.g. a possible trial, testifying, seeing the perpetrator in court) would be traumatic*] were summed, with a higher score indicating a stronger fear of the legal process. Question #2 (*I was scared the authorities wouldn’t believe me*) was developed to assess whether the participant feared they would not be believed, with a higher score indicating a stronger fear.

Meanwhile, questions #5-7 were developed for supplementary analyses. Specifically, question #5 (*I didn’t think reporting my unwanted sexual experience would do anything*) was used to assess whether beliefs in positive outcomes regarding reporting are linked to reporting practices. Questions #6 (*I felt comfortable going to the university to report the unwanted sexual experience*) and #7 (*I felt comfortable going to the police to report the unwanted sexual*

*experience*) were developed to address how comfortable the participant is reporting the assault to the university and to the police. Individual scores of items #6 and #7 were used to compare comfort levels regarding reporting between police and university authorities along with establishing those who are not comfortable reporting to either authority as well as those equally comfortable reporting to both.

**Sexual Experiences Survey – Short Form Victimization (SES-SFV; Koss et al., 2007; see Appendix F).** In order to gather information on the unwanted sexual experience that occurred, the Sexual Experiences Survey – Short Form Victimization was used. The Sexual Experiences Survey (SES) was originally developed to assess relative victimization and perpetration of unwanted sexual experiences that used simple, non-legal language for users. The creators of the SES purposely avoided using vague terminology often misunderstood by sexual assault survivors, like rape, and strategically used behavioural descriptions of unwanted sexual experiences and tactics used by perpetrators to gain a comprehensive and accurate understanding of the unwanted experience (Koss et al., 2007). These features have since become standard aspects of victimization measures. In the short version, noncontact misdemeanor sex crimes, which are generally of interest to criminologists working with sex offenders, were excluded, as were questions pertaining to the perpetrator's alcohol use, which are of use to alcohol prevention programs.

While there are not any accessible psychometric properties of the SES-SFV, the SES has been shown to have a high test-retest reliability ( $\alpha = .93$ ; Koss & Gidycz, 1985; Krahe, Reimer, Scheinberger-Olwig, & Fritsche, 1999) and construct validity with interview reported victimization findings among female college students ( $r = .73$ ; Koss et al., 1982). We made minor modifications to the survey to be specific to our research goals. Specifically, participants

were asked to speak to the unwanted sexual experience they have had since being in university, instead of in the last 12 months, as well as in their whole life, instead of since they were 14. These modifications follow a similar method as Kimble and colleagues (2008), who also changed the time frame when studying sexual assault victimization in female college students in their first and second years of studies. In the present study, the SES had a Cronbach's  $\alpha$  of .93 (see Table 5).

According to standard procedures by Koss and colleagues (2007), the outcomes of SES-SFV are categorized based on whether the assault that occurred involved sexual contact, attempted rape, or completed rape and based on methods used to by the perpetrator (verbal coercion, physical force, and intoxication). As a result, the two forms of verbal coercion tactics on the survey were recoded into one overall verbal coercion category. Threats of physical force and actual use of physical force were recoded into one overall physical force category. Further, all different forms of attempted rape were combined into an overall category of attempted rape, and all different forms of completed rape were combined into an overall category of completed rape. For the purposes of the present study, we analyzed the scores by either having experienced a particular type of sexual assault in university (scored as '1') or did not experience a particular type of sexual assault in university (scored as '0').

## **Procedure**

### **Recruitment**

Recruitment took place through the online social media platforms Facebook and Twitter (see Appendix G). The survey was shared on university Facebook pages across Canada. All participants were given the opportunity to enter into a random draw for a cash prize of \$100 as a token of appreciation for their participation.

### **Procedure for Online Questionnaire**

Potential participants accessed a link to the online questionnaire hosted by the online survey development platform SurveyMonkey. Upon accessing the link, potential participants were first provided with a cover letter which gave them more information about the study (see Appendix H). After reading the cover letter, potential participants were taken to the consent form page (see Appendix I) that provided them with more information on the study, particularly highlighting that the study is completely confidential and anonymous, participation is voluntary and they can withdraw from the study at any time, and will be provided counselling and crisis resources once they leave the survey. Moreover, the consent page made potential participants aware certain questions in the questionnaire are highly personal and sensitive and might cause psychological distress, and they are able to skip any questions they wish. Potential participants had to provide their consent in order to start completing the questionnaire. No names of participants were collected; however, if participants wished to receive a summary of the findings in aggregate fashion, or to be entered into the prize draw, they provided their email at the end of the survey. After providing their consent, participants proceeded to the questionnaire.

The questionnaire began with qualifying questions (see Appendix A). If participants did not meet qualifying criteria, the webpage took them to the designated debriefing page for non-qualifying participants (see Appendix J). If participants did meet qualifying criteria, they continued on to the complete five questionnaires in the following order: Background Information Questionnaire (Appendix B), the Post-Traumatic Cognitions Inventory (Appendix C), the Trauma Related Shame Questionnaire (Appendix D), Fear of the Reporting and Legal Process Questionnaire (Appendix E), and the Sexual Experiences Survey – Short Form Victimization (Appendix F). Following completion or early voluntary termination of the questionnaire, each



participant was taken to a debriefing page that included information on relevant local and national support resources (see Appendix K).

## Results

### Study Design and Statistical Analytic Strategy

Consistent with previous work (Fisher et al., 2003; Wolitzky-Taylor et al., 2011), three logistic multivariable regression analyses were conducted using the following predictor sets: contextual factors, psychological factors, and factors related to reporting/legal processes, along with the categorical criterion variable of whether or not the assault was reported to the authorities for each regression. These three logistic regression analyses were categorized as follows:

- a. Contextual predictor variables: whether the survivor consumed alcohol before the assault (categorical); whether the survivor knew the perpetrator before the assault (categorical); the presence of a weapon during the assault (categorical); and presence of physical injuries from the assault (categorical).
- b. Psychological predictor variables: self-blame (continuous); shame (continuous); negative views of the self (continuous); and negative world-views (continuous).
- c. Reporting/legal predictor variables: fear of reporting (continuous); fear of the legal process (continuous); and fear of not being believed (continuous).

Supplemental analyses were carried out to further understand important characteristics of the participants as they pertain to reporting practices. These analyses included univariate logistic regression analyses with the following predictor variables: demographic variables (sexual orientation, ethnicity, and household income), whether participants sought health services or counselling services, the amount of alcohol participants consumed, the location of the assault (on or off campus), knowledge of accessible resources, and whether the participants had a history of

sexual victimization. A univariate logistic regression analysis was also conducted to examine the relationship between physical injuries and whether participants sought health services.

Multivariate linear regression analyses were conducted to consider the relationship between the contextual predictor variables (alcohol use, knowing the perpetrator previously, perpetrator had weapon, and presence of physical injuries) and psychological outcomes (negative views of the world, self-blame, and shame). A paired sample *t*-test was utilized to examine whether there was a significant mean difference between the comfort levels participants felt about reporting to university authorities versus reporting to police authorities.

### **Software Used for Statistical Analyses**

The computer software program Statistical Package for the Social Sciences – Version 25 (SPSS- 25) was used for all preliminary and main analyses.

### **Pre-Analysis Issues**

**Missing values.** In the present study, 181 participants met qualifying criteria. Of these 181 cases, 111 were missing values on one or more items used for the main analyses. Missing values in the dataset were analyzed for each case based on the variables that were incomplete. Certain variables needed for the main analyses were determined by the score of a single item, and therefore missing values for these items were removed. For example, whether participants reported the sexual assault to authorities is the dichotomous dependent variable for the main analyses. Cases were removed if participants had not answered whether they reported the assault to the police or university authorities, resulting in the removal of 45 cases. Similarly, alcohol or drug use is a single item that represents a predictor variable in the main analyses, and therefore cases missing a value for this item were removed. According to Tabachnick and Fidell (2007), a dataset should contain only 5% of missing data or less. Variables that were determined by the

sum of multiple item values were evaluated for the percentage of missing data. Cases that were missing more than 5% of values for a given subscale were removed. For example, the PTCI consists of 33 items that contribute to 3 subscales, and so cases that were missing more than 5% of the items making up the subscales were removed. For the remaining missing values for the subscales, values were given based on the mean group score for that item. In total, 71 cases were removed.

**Multicollinearity.** To assess multicollinearity of the predictors variables, a variance inflation factor (VIF) was calculated for each variable. The variance inflation factor is the ratio of variance in a model with multiple predictors, divided by the variance of a model with one predictor alone. Calculating the VIF provides a number for the severity of multicollinearity associated with each predictor by quantifying how much the variance of each predictor in the regression is inflated. A VIF between 5 and 10 indicates high collinearity (Montgomery, Peck, & Vining, 2012). Three predictors had high VIFs: *fear of reporting process* (8.15), *fear of legal process* (7.34) and *negative self-views* (5.16). To determine what predictors were involved in the detected collinearity of the abovementioned variables, Pearson correlations were run between all predictor variables. The predictors *fear of reporting process* and *fear of legal process* were highly correlated ( $r = .93, p < .01$ ). The predictor *negative self-views* was significantly correlated with *self-blame* ( $r = .83, p < .01$ ). To address the found collinearity, *fear of reporting process* and *fear of legal process* were amalgamated into one predictor variable, *fear of reporting and legal process*. This was accomplished by calculating a sum of items #1, #3, and #4 of the FRLP. The variable *negative self-views* was removed as a predictor due to its high collinearity with the variable *self-blame*. VIFs were then calculated once more and all predictor VIF values were below 2.60.

**Outliers.** In logistic regression analyses, it is not possible to have dependent variable univariate outliers because the dependent variable is dichotomous. However, it is possible to have multivariate outliers whereby unusual combinations of independent variable responses separate a particular case from a normal cluster of cases. In order to consider multivariate outliers in a logistic regression analysis, we considered the residuals calculated when running the regressions. A regression analysis was run while including all predictor variables to calculate the residuals. A casewise list of residual outliers outside of more than three standard-deviations was produced and two cases were removed because they had the lowest levels of prediction toward the regression model.

**Ratio of cases to variables.** When conducting logistic regression analyses, the number of cases to variables is important to avoid large parameter estimates and standard errors (Tabachnick & Fidell, 2001). Vittinghoff and McCulloch (2006) suggest when conducting logistic regression analyses, the number of cases can be determined by achieving 5 to 9 events per variable in the analysis. This assumption was met for most analyses, as most analyses included 3 or fewer variables. We also followed the protocol of previous American studies that included fewer than 10 events per variable in their analyses due to the nature of the phenomenon being study (Wolitzky et al., 2011).

**Linearity in the logit.** Logistic regression analyses assume linearity in the logit of the regression. In other words, linearity is expected between the continuous predictors variables and the log odds of the dependent variable. This assumption can be tested by looking at interactions between the continuous variables and their logs through a Box-Tidwell Test. To do this, the logs of each continuous predictor were created. The logs of each these variables were then used as interaction terms with the original variable and included in a regression analysis. If any of the

interactions had been significant, the assumption of linearity would have been violated. No interactions were found to be significant.

### **Overview of Main Analyses.**

**Logistic regression analysis #1.** In the first binary multivariate logistic regression analysis, the following contextual predictor variables were included: survivor alcohol/drug use before the assault; whether the survivor knew the perpetrator before the assault; whether the survivor suffered any injuries from the assault; and whether the perpetrator had a weapon that the survivor knew of. Table 6 displays the outcomes of the logistic regression analysis. Not knowing the perpetrator previously significantly predicted reporting ( $X^2(4) = 6.57, p < 0.05$ ). The odds of reporting by survivors who did not know the perpetrator previously were 6.94 times greater than those who knew the perpetrator previously (95% CI = 1.58-30.55). Suffering injuries from the sexual assault also significantly predicted reporting ( $X^2(4) = 5.70, p < 0.05$ ). The odds of reporting by survivors who had suffered injuries from the sexual assault were 7.25 times greater than those who did not suffer injuries (95% CI = 1.42-37.03). The presence of weapons as well as survivor alcohol or drug consumption did not significantly predict reporting.

**Logistic regression analysis #2.** In the second binary multivariate logistic regression analysis, the following psychological predictor variables were included: self-blame, negative views of the world, and shame. Table 6 displays the outcomes of the logistic regression analysis. Self-blame, negative views of the world, and shame, did not significantly predict reporting.

**Logistic regression analysis #3.** In the third binary multivariate logistic regression analysis, the following two reporting/legal process predictor variables were included: fear of reporting and legal process and fear of not being believed by the authorities. Table 6 displays the

outcomes of the logistic regression analysis. Fear of reporting and legal process and fear of not being believed did not significantly predict reporting.

### **Supplemental Analyses**

**Supplemental logistic regression analyses.** Other variables were also considered to examine whether they significantly predicted the likelihood of reporting to the authorities. This included a multivariate logistic regression analysis involving demographic predictor variables (sexual orientation, ethnicity, and household income), along with individual univariate logistic regression analyses involving the following predictor variables: whether participants sought health services, counselling services, the amount of alcohol participants consumed, the location of the assault (on or off campus), knowledge of accessible resources, and revictimization. Sexual orientation was dichotomized into heterosexual participants and sexual minorities. Ethnicity was dichotomized into Caucasian and ethnic minorities. In order to consider the role of low household income on reporting, household income was dichotomized into household incomes that were \$34,999 a year and under, and household incomes that were \$35,000 a year and over, as per Canadian low-income cut-offs determined by the Canadian government (Statistics Canada, 2016). Amount of alcohol consumption was dichotomized into no/low risk alcohol consumption (0 to 2 drinks) and moderate/high risk alcohol consumption (3 or more drinks) as per national guidelines (Butt, Gliksman, Paradis, & Stockwell, 2011).

The results of these analyses are included in Table 7. No demographic variables predicted the likelihood of reporting. Seeking health services was found to significantly predict reporting ( $X^2(1) = 6.24, p < 0.05$ ). The odds of reporting for participants who sought health services were 6.40 times greater than those who did not seek health services (95% CI = 1.49-27.77). Seeking counselling services was not found to predict reporting outcomes. Amount of

alcohol consumption was also found to significantly predict reporting ( $X^2(1) = 4.78, p < 0.05$ ). The odds of reporting by participants who had consumed two drinks or less were 5.59 times greater than those who had consumed three or more drinks (95% CI = 1.19-26.31). Location of assault (on or off campus) did not predict reporting, though it was approaching significance ( $p = .07$ ), whereby participants who experienced the assault on campus had greater odds of reporting than those for whom assaults occurred off campus. Awareness of available resources did not predict reporting. Having experienced a previous sexual assault significantly predicted reporting ( $X^2(1) = -1.50, p < 0.05$ ). The odds of reporting for those who had experienced previous sexual victimization were 4.50 lower than those who had not experienced previous victimization (95% CI = 1.36-14.9).

**Injuries from SA as a predictor for seeking health services.** A univariate binary logistic regression analysis was conducted to examine whether injuries from the SA predicted seeking health services. Injuries were found to significantly predict seeking health services after a sexual assault ( $X^2(1) = 12.02, p < .01$ ). The odds of seeking health services were 14.49 times greater for those who had an injury from the assault than those who did not (95% CI = 3.20-66.67).

**Contextual predictors and PTCI and shame outcomes.** Multivariate linear regression analyses were conducted to examine whether amount of alcohol consumption, knowing the perpetrator previously, perpetrators possession of a weapon, and survivors injuries would predict the outcome variables self-blame, negative-views of the self, negative views of the world, and shame. Knowing the perpetrator previously was found to significantly predict the outcome shame ( $X^2(4) = 2.46, p < .05$ ). No other significant predictive relationships were found.

**Comfort levels reporting to university and police authorities.** A paired sample *t*-test was conducted to examine whether the mean levels of comfort survivors felt in reporting varied between the university and police authorities. We found there was not a significant mean difference between comfort reporting to the university and police authorities ( $t(107) = 1.04, p = .30$ ).

### **Discussion**

The objective of the present study was to address the gaps in the existing literature regarding our understanding of the factors that predict whether Canadian female university students will report a sexual assault. To accomplish this objective, a variety of contextual, psychological, and fear-oriented factors were analyzed to see whether they significantly predicted reporting to the university and police authorities. Consistent with national reports and other previous sample findings (Koss et al., 1987; Perreault & Brennan, 2010; Sinozich & Langton, 2014), the present study's sample had few sexual assault survivors (14%) who reported the assault to the university or police authorities. In the present study, sexual contact was most commonly perpetrated through verbal coercion (62%) or intoxication (58%). Moreover, we found within the sample sexual assaults were more likely to occur off campus than on campus, more than half of survivors had consumed alcohol before the assault, 79% of survivors knew the perpetrator before the assault, and 94% had disclosed the assault to someone, whether it be a friend, family member, counselor, or the authorities.

### **Contextual Factors and Reporting**

The first hypothesis stated that certain contextual factors (survivor's use of alcohol or drugs before the assault and knowing the perpetrator before the assault) would be significantly predicative of lower odds of reporting, while other contextual factors (perpetrator presented with



a weapon during the assault and the survivor possessed physical injuries after the assault) would be significantly predicative of higher odds of reporting. Results showed that two of the four predictor variables included in this regression analysis, *knowing the perpetrator previously* and *having physical injuries from the assault*, were significantly predictive of reporting. Meanwhile, the variables *survivor's alcohol or drug use* and *the presence of a weapon during the assault* were not predictive of reporting.

**Knowing the perpetrator previously.** If the perpetrator was a stranger, the survivor's odds of reporting were 6.94 times higher than if they had known perpetrator previously. This is consistent with some previous findings (Fisher et al., 2003; Johnson, 2017; Jones, Alexander, Wynn, Rossman, & Dunnuck, 2009); however, other studies have found the nature of the relationship with the perpetrator was not significantly predicative of reporting (Du Mont et al., 2003; Wolitzky-Taylor et al., 2011). The differences in significance between the current and previous studies may be in part due to how the variable, *knowing the perpetrator previously*, is defined. In the current study, participants were considered having known the perpetrator previously if they reported they had known the perpetrator before the assault in any capacity (whether it be as an acquaintance, friend, classmate, romantic partner, etc.). However, other researchers have chosen to define this variable in other ways. For instance, Wolitzky-Taylor and colleagues (2011) defined a stranger as someone the survivor had not ever seen before or did not know *well*.

There are a number of proposed pathways that may explain the found relationship between knowing the perpetrator previously and lower odds of reporting. Not wanting a friend to be prosecuted has been expressed as a top barrier to reporting (Jones et al., 2009; Sable et al., 2006). Such findings reflect the notion of Black's (1976) theory of the behaviour of law,

whereby Black proposes that offenses committed by family and friends are seen as private and to be dealt with within the relationship, rather than by involving the law. Black's theory also includes that offenses occurring within family or friend relationships are less likely to be viewed as serious. Indeed, in one study, sexual assault survivors stated they were less likely to report an assault when they knew the perpetrator previously because they did not perceive the incident as serious enough to report (Felson & Paré, 2005). Two other factors, financial dependence on a perpetrator, as well as the perpetrator preventing the survivor from seeking help to report, have also both been highlighted as significant barriers to reporting by college students (Sable et al., 2006). However, in the present study, only 7% of participants were sexually assaulted by their romantic partner, meanwhile 29% were assaulted by an acquaintance and 27% were assaulted by a classmate or friend. As such, the role romantic relationships played on survivors' reporting in the present study would only describe a small percentage of participants.

Fisher and colleagues (2013) theorize having known the perpetrator previously may make survivors feel as though they will not be believed, compared to if the perpetrator had been a stranger. It is also possible that in disclosing to friends or family, survivors who knew the perpetrator previously may have received social reactions that make them feel that they are not believed or that they are at fault for the assault. In a vignette study conducted on university students, participants were found to put significantly more blame on the hypothetical survivor in the vignette if she had known the perpetrator previously compared to if the perpetrator had been a stranger (Franklin & Garza, 2018). As well, the researchers also found the participants were significantly less likely to refer the hypothetical survivor to sexual assault resources if she had known the perpetrator before the assault compared to if the perpetrator had been a stranger. In the present study, 94% of participants disclosed the assault to someone, and it is possible this

disclosure influenced how the survivor felt about the assault and whether they would be believed if they report. Indeed, Ahrens, Cabral, and Abeling (2009) found that 75% of women in their study received a negative response when disclosing their sexual assault to someone. Negative responses commonly include blaming and stigmatizing the survivor, alongside leaving her feeling as though she was not believed (Ullman, 2010).

**Injuries from the assault.** In the present study, participants who had suffered physical injuries from the assault had greater odds of reporting than those who did not have any physical injuries. This finding is expressed consistently across previous studies as well (Du Mont et al., 2003; Fisher et al., 2003; Rosemary et al., 1995; Wolitzky-Taylor et al., 2011). Physical injuries are believed to increase the likelihood of reporting as it is proposed survivors may feel they will be believed if they have proof in the form of physical injuries (Du Mont et al., 2003; Fisher et al., 2003; Wolitzky-Taylor et al., 2011). Such beliefs are supported in research on the judicial process, whereby perceived credibility of complaints is improved when a significant physical injury is present (Brown, Hamilton, & O'Neill, 2007). One would expect more significant physical injuries would make survivors feel they would be believed compared to smaller, less significant, physical injuries. However, in a study conducted on sexual assault survivors who sought help at a health clinic and emergency department for physical injuries, no significant relationship existed between severity of physical injuries and likelihood of reporting (Jones et al., 2007), thus showing that a higher likelihood of being believed may not fully explain the relationship between physical injuries and reporting.

Findings from the present study revealed another possible theory that may in part explain the relationship between physical injuries and reporting. In supplemental analyses, we found suffering from injuries significantly predicted seeking health services, and those who sought

health services had significantly greater odds of reporting the assault. Similar findings were also reported by Wolitzky-Taylor and colleagues (2011). It is perhaps not the physical injuries that influence whether survivors decide to report, but rather that the presence of physical injuries increases the likelihood that survivors will seek health services. While seeking health services, it is likely healthcare providers tell the survivor about possible reporting options, which may in turn increase the likelihood the survivors report. Indeed, Jones and colleagues (2007) found that, in a sample of sexual assault survivors who sought health services for physical injuries, 75% also reported the assault, which is considerably higher than the approximate average reporting rate of 10% of survivors or fewer (Perreault & Brennan, 2010). Interestingly, we found seeking counselling services did not predict reporting to the authorities. Moreover, we also found that 24% of the sample specifically sought counselling services as an alternative to reporting to the authorities. Such findings suggest that generally, seeking services after an assault does not necessarily predict reporting, but seeking health services for physical injuries may uniquely predict reporting. Koss and Gidycz (1985) suggest factors that help survivors conceptualize the event as an assault may be associated with reporting as survivors who process the event as an assault may recognize the incident is deserving of justice and is more than simply a miscommunication. It is possible that both possessing physical injuries, and/or seeking health services for the assault help survivors conceptualize the incident as an assault and potentially report it. Ultimately, further research is needed to understand this phenomenon.

**Survivor's alcohol or drug use before assault.** In the current study, the survivor's alcohol or drug use before the assault was not found to be significantly predictive of reporting. This is consistent with some previous studies (Du Mont et al., 2003; Wolitzky-Taylor et al., 2011); however, is somewhat at odds with findings from Fisher and colleagues (2003), who

found when both perpetrator and survivor had consumed alcohol, the survivor was less likely to report. In supplemental analyses, we chose to consider the relationship between the amount of alcohol consumption and reporting, rather than alcohol use as studied in the extant literature. We found moderate to high risk alcohol consumption (three drinks or more) significantly decreased the odds of reporting. This is the first known study to consider the role of the amount of alcohol consumption, rather than consumption itself, as predictive of reporting. Fisher and colleagues (2003) proposed that survivors may feel they will not be believed by authorities if they consumed alcohol before the assault, and therefore may be less likely to report. It is possible Fisher's theory may explain the current finding, whereby survivors may feel that their high levels of intoxication would decrease the likelihood they will be believed. Untied, Orchowski, Mastroleo, and Gidycz (2012) found, in providing a sexual assault vignette to university students, participants attributed more responsibility to the survivor for the assault and less responsibility to the perpetrator when the survivor had consumed alcohol before the assault. Alcohol use is also related to self-blame in the survivor (Breitenbecher, 2006), and perhaps survivors who consume moderate to high levels of alcohol are more likely to feel at fault for the assault. It is also possible survivors who have consumed high levels of alcohol may feel unsure of whether the perpetrator had intended to sexually assault them (Fisher et al., 2003).

**Perpetrator's possession of a weapon.** In contrast to other studies (Du Mont et al., 2003; Felson & Paré, 2005; Fisher et al., 2003) we did not find the perpetrator's possession of a weapon predicted reporting. It is asserted the presence of a weapon, much like the presence of physical injuries, makes the assault appear to be more believable, thus making survivors more willing to report (Fisher et al., 2003). In our sample, only 7% reported the perpetrator possessed a weapon. As such, it is possible we did not have enough statistical power to establish whether or

not the presence of a weapon predicted reporting. It is also important to consider that extant studies on reporting have only been conducted in the United States. Gun laws are much different between the two countries, whereby the laws in the United States allow increased accessibility to guns compared to Canada. As a result, it is very possible weapon possession plays a more significant role in reporting in the United States than in Canada. In an American study conducted by Felson and Paré (2005), the perpetrator's possession of a gun was associated with higher odds of reporting than the possession of other weapons.

**Location of assault.** Some past research suggests assaults that occur on campus are more likely to be reported than those that occur off campus (Fisher et al., 2003). However, in the present study, there was no difference in reporting between those that occurred on versus off campus. With that being said, the outcome was approaching significance, and therefore a significant difference might be visible in a larger sample size. In the present study, 44% of sexual assaults had occurred on campus, while 56% had occurred off campus. This appears to be in relatively consistent with percentages of assaults occurring to female university students on and off campus in the United States (Krebs et al., 2007). In the present study, we also found more women reported to university authorities ( $n = 11$ ) than police authorities ( $n = 5$ ). It is possible assaults that occur on campus are more likely to be reported as survivors have easier access to university authorities than off campus. It is also possible survivors who were assaulted off campus do not think they can report to university authorities. We did not find a difference in comfort level in reporting between the university versus police authorities. However, this does not mean there are no differences in the likelihood of reporting between university and policy authorities, especially when the assault has taken place on campus.

### **Survivor Characteristics and Reporting**

**Self-blame, shame, and negative world-views.** The second hypothesis of the present study stated certain psychological variables experienced by the survivor (self-blame, shame, negative views of the self, and negative world-views) would be significantly associated with a lower likelihood of reporting. Due to collinearity, the variable *negative self-views* was removed from the analysis. This was the first known study to examine the aforementioned psychological factors and we found no psychological factors were significantly predictive of reporting. In surveying college students (who had not experienced a sexual assault), Sable and colleagues (2006) found self-blame and shame were rated as two of the most important perceived barriers to reporting. However, the current findings suggest they do not play a significant role in whether or not survivors will report. With that being said, it is important to interpret these findings with caution. It is possible we did not have enough power to establish a significant relationship. This outcome should also be considered with caution due to the retrospective nature of this study. The reporting process has been shown to be traumatizing, with the possibility certain aspects of the process (not being believed by the authorities, accusatory line of questioning from the perpetrators defense, among others) may induce self-blame, shame, and negative world-views in the survivor (Charles, 2016; Donovan, 2016). As such, it is certainly possible the survivors who did report to authorities did not have high levels of self-blame, shame, or negative world-views before they reported, yet developed these psychological outcomes as a result of reporting. If this is the case, the current study would not be able to discern whether these psychological outcomes were initially experienced before or after reporting. However, the present findings also highlight it is possible the contextual factors (amount of alcohol consumption and relationship with perpetrator) may be more indicative of reporting than whether or not survivors experience

negative psychological outcomes. It is possible certain contextual factors may make some sexual assault survivors less likely to view the incident as an assault and therefore they do not report it, regardless of the levels of blame or negative affect they may or may not feel regarding the incident.

**Relationship between contextual and psychological outcomes.** As a supplementary analysis, we explored whether various contextual factors (amount of alcohol consumption, knowing the perpetrator previously, perpetrators possession of a weapon, and survivor's injuries) were predictive of the psychological outcomes self-blame, shame, and negative views of the world. Knowing the perpetrator previously significantly predicted higher levels of shame than had the perpetrator been a stranger. No other significant relationships were found. Vidal and Petrak (2007) also found having a previous relationship with the perpetrator significantly influenced levels of shame experienced in an American college sample. As previously mentioned, sexual assaults involving a stranger are often considered more believable (Fisher et al., 2003; Vidal & Petrak, 2007), and as such survivors who knew the perpetrator before the assault may experience higher levels of shame regarding the assault as they may be concerned they will not be believed and others will think negatively of them.

**Revictimization.** We found survivors who had experienced one or more previous sexual assaults were less likely to report than those who had not. This is at odds with some previous studies, where no significant relationship between previous sexual assaults and reporting was found (Du Mont et al., 2003; Wolitzky-Taylor et al., 2011). There are various possible explanations for a significant relationship between previous experiences of assault and reporting. It is possible survivors who have experienced an assault previously may have reported a previous assault and had a bad experience, and therefore did not feel inclined to report again. Past findings



also suggest survivors who have experienced a previous assault are more likely to experience negative social reactions (such as blame and stigma) when disclosing the assaults to others than those who had only experienced one assault (Ullman & Peter-Hagene, 2017). These negative social reactions may make survivors who have experienced multiple victimizations less inclined to disclose a subsequent assault to others, including to the authorities in the reporting process. Conversely, a study by Miller, Canales, Amacker, Backstrom, and Gidycz (2011) found that survivors who did not disclose to anyone were at a higher risk of revictimization than those who did disclose to others. Survivors who do not disclose have a higher likelihood of experiencing an overall maladaptive recovery (Ahrens, 2006; Gibson & Leitenberg, 2001), and may be more likely to be involved in situations of high alcohol use where there is a heightened risk for sexual victimization (Miller et al., 2011).

### **Fear of Reporting/Legal Process and Reporting**

The third hypothesis stated that factors related to reporting and legal processes (survivor's fear of the reporting process, fear of the legal process, and fear of not being believed by the authorities) would be associated with a lower likelihood of reporting. Due to collinearity found between the predictor variables *fear of reporting process* and *fear of the legal process*, we combined these variables to create the variable *fear of the reporting and legal process*. None of the variables were found to be statistically significant predictors of reporting. We are not aware of any research that has considered these variables previously. These findings are somewhat surprising based on the current theories in the literature on reporting and the legal process. For one, it is often asserted survivors do not report the assault because they are fearful of the traumatizing nature of reporting and the legal process (Johnson, 2017). Indeed, sexual assault

survivors have been shown to experience disbelief, skepticism, and ineffective responses from police through the reporting process (Alderden & Ullman, 2006; Chen & Ullman, 2001).

It is also often hypothesized various contextual factors (perpetrator being a stranger, perpetrator having a weapon, and physical injuries) predict reporting as survivors are more likely to think they will be believed should they have been assaulted by a stranger, the perpetrator had a weapon, and they had physical injuries (Fisher et al., 2003). Based on these hypotheses, we would expect survivors who did report to be significantly less fearful they would not be believed than those who did not report. It is certainly possible we did not have enough statistical power in this study to establish a significant relationship. However, the retrospective nature of the study may also explain these findings. Survivors were asked to report on the fear they had of the reporting/legal process and on the fear they would not be believed if they did report. It is possible survivors who did report the assault were treated with significant disbelief and skepticism by the authorities when they reported, and thus may have responded to the questions on the questionnaire with their current negative view of the reporting process in mind, rather than how they felt before they reported. A qualitative study of young female sexual assault survivors found that before reporting, the majority of the participants had positive expectations about reporting to the police: they thought they would be believed, their case would be taken seriously, and the police would be caring and cooperative (Vopni, 2006). However, in actually reporting, most survivors felt police minimized their experiences of assault, seemed rude, insensitive, and condescending, and did not believe them.

### **Strengths and Limitations**

It is worth interpreting the findings of the present study in relation to its strengths and limitations. A strength of the present study is that it is the first known study to consider the

factors that predict reporting specifically on Canadian university campuses. To date, previous research has only been conducted on American university samples, where various cultural, academic, demographic, and legal differences exist compared to Canadian universities. These differences confounded the ability to generalize previous American findings to the Canadian population. Moreover, the current study was advertised across the country and possibly provides some generalizability to campuses across Canada. Another strength of the present study includes the number of predictor variables that were considered. Previous research has considered some predictor variables, while in the present study we attempted to be as comprehensive as possible, based on the predictors found to be significant in extant literature and existing theories surrounding significant predictors. This allowed us to understand the relationships among various predictors, and ultimately find that certain contextual factors and help-seeking factors are significantly predictive of reporting.

The present study is not without its limitations. An important limitation regarding this area of research includes the inability to recruit participants who do not wish to disclose their assault, even with the anonymity of the present study's online questionnaire. This possibility may influence the results of the present study as survivors who did not want to disclose through participation represent a demographic who may be less likely to report to the authorities as well. Another limitation in this study, and certainly common in the area of sexual assault research, is the role of retrospective data. As highlighted throughout the discussion section, it is possible psychological predictors (self-blame, shame, negative affect) and factors around the legal system (fear of reporting and fear of being believed) associated with the survivor have changed overtime. As a result, it is impossible to decipher the role of such variables with certainty in a cross-sectional design. Furthermore, findings from the present study were based on self-report

measures, whereby the results are limited due to subjectivity and recall bias. It is also important to note limitations surrounding the measure PTCI. The PTCI is one of the few extant measures that assesses post-trauma cognitions, however it is not without its limitations. The PTCI lacks items that are reverse scored, and therefore each item describes negative affect. This may influence how respondents answered the items. Another limitation involves sample size. Due to the low levels of sexual assault reporting, in order to possess a large amount of power in logistic regression analyses, a very large sample is needed. A national-size study was beyond the scope of this project, and therefore the strength of the present findings largely lies in presenting the predictors of reporting that are significant even among a moderate sample size.

### **Implications for Future Research**

In analyzing the outcomes of the present study, various avenues for future research emerge. First, further research surrounding the role of alcohol and reporting would be useful. In the present study, we found the amount of alcohol, rather than alcohol use itself, decreased the odds of reporting. More information, perhaps through qualitative analysis, is needed to understand why survivors who have consumed large amounts of alcohol are less likely to report. Further research is also needed on the relationship between knowing the perpetrator previously and reporting. In the current study we found survivors who knew the perpetrator previously were less likely to report. Future research may consider: Are survivors who knew the perpetrator previously less likely to interpret the incident as an assault and therefore not report? Are survivors who knew the perpetrator previously avoiding reporting to protect the perpetrator? Do survivors who knew the perpetrator previously avoid reporting as they fear they will not be believed due to this previous relationship?

An important finding in the present study was that physical injuries and seeking health services both increased the odds of reporting, and physical injuries significantly predicted seeking health services. It appears health services play an important role in whether or not survivors report an assault. Future research could further explore this relationship, including analyzing what aspects of seeking health services may increase reporting. Furthermore, our findings found seeking counselling services was not predictive of reporting. Future research might include considering what differences exist between health services and counselling services in terms of the resources and supports provided pertaining to the reporting process. It may also be worth considering what resources offered within the health services context increase reporting in order to offer these resources to university students outside of health services. In the present study, we focused solely on female university sexual assault survivors. Future research is needed to better understand the factors that influence whether male university sexual assault survivors, as well as marginalized groups, report a sexual assault, perhaps taking into account the role of stigma in reporting.

### **Summary and Conclusion**

In the present study, we aimed to address the gaps in the existing literature by studying the factors that may predict whether Canadian female university students will report a sexual assault. The findings from the present study show the presence of physical injuries from the assault and seeking health services after the assault significantly increase the odds survivors will report the assault to the authorities. Meanwhile, moderate to high levels of alcohol consumption before the assault and having previously been sexually assaulted significantly decrease the odds survivors will report the assault to the authorities. Weapon use, alcohol or drug use, psychological outcomes from the assault, fears regarding the legal process, and seeking

counselling services did not significantly predict reporting. Such findings highlight that specific contextual factors and health service-seeking behaviours appear to play a significant role in reporting, while psychological factors and fear of being believed appear to be less significant than previous literature suggests. The results of the present study hold implications for university sexual assault policies as well as the training provided for those who support sexual assault survivors on Canadian campuses. Specifically, the findings contribute to our understanding of the types of concerns sexual assault survivors may have prior to reporting; and therefore, can be used to educate workers in the field and friends and family alike regarding the ways to support survivors of sexual assault across Canadian university campuses.

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Table 1

*Sample Demographics*

Variable	<i>n</i> (%)
Age	22.94
Gender identity	
Female	107 (99)
Unsure	1 (1)
Ethnicity	
Caucasian	87 (81)
East Asian	5 (5)
Aboriginal	3 (3)
Mixed	3 (3)
African	2 (2)
Latino/Hispanic	2 (2)
Middle Eastern	2 (2)
South Asian	2 (2)
Caribbean	1 (1)
Other	1 (1)
Household income	
Less than \$20,000	33 (31)
\$20,000 to \$34,999	11 (10)
\$35,000 to 49,999	10 (9)
\$50,000 to \$74,999	12 (11)
\$75,000 to \$99,999	11 (10)
Over \$100,000	30 (28)

*Sample Demographics (continued)*

Variable	<i>n</i> (%)
<b>Marital status</b>	
Single (never married)	91 (84)
Married or in a domestic partnership	17 (16)
<b>Education status</b>	
<b>Current student</b>	
Current student	79 (73)
First year of university	8 (7)
Second year of university	13 (12)
Third year of university	19 (18)
Fourth year of university	16 (15)
Fifth year of university	9 (8)
Masters studies	12 (11)
Doctoral studies	1 (1)
Other	1 (1)
<b>Past student</b>	
Past student	29 (27)
First year of university completed	2 (2)
Fourth year of university completed	11 (11)
Fifth year of university completed	6 (6)
Master studies completed	7 (7)
Doctoral studies completed	2 (2)
Other	1 (1)

Table 2

*Sexual Assault History*

Number of sexual assault incidents	<i>n</i> (%)
Lifetime history	
1	18 (17)
2	22 (20)
3+	68 (63)
Sexual assault before university	
0	43 (40)
1	28 (26)
2	10 (9)
3+	26 (24)
Sexual assault during university	
1	40 (37)
2	30 (28)
3+	35 (32)

Table 3

*Characteristics of Most Recent Unwanted Sexual Incident in University*

Variable	<i>n</i> (%)
Location	
On campus	48 (44)
Off campus	60 (56)
Age	
17	4 (4)
18	31 (29)
19	24 (22)
20	15 (14)
21	11 (10)
22	5 (5)
23	8 (7)
24	4 (4)
25	1 (1)
26	2 (2)
Year of studies the SA occurred	
First year	50 (46)
Second year	25 (23)
Third year	19 (18)
Fourth year	3 (3)
Fifth year	2 (2)
Masters studies	4 (4)
Doctoral studies	1 (1)
Relationship to perpetrator	
Acquaintance	37 (34)
Classmate	10 (9)
Friend	19 (18)
Friend with benefits	10 (9)
Romantic partner	7 (7)
Authority figure	2 (2)



*Characteristics of Most Recent Unwanted Sexual Incident in University (continued)*

Variable	<i>n</i> (%)
Reported to authorities	15 (14)
Police	5 (5)
University	11 (10)
Sought health services	8 (7)
Suffered injuries	18 (17)
Disclosure	102 (94)
Friends	93 (86)
Family	25 (23)
Counselor	28 (26)
Other	14 (13)
Counselling as an alternative to reporting	26 (24)
Knew of available resources	47 (44)
Worried perpetrator would reoffend	76 (70)
Perpetrator had weapon	7 (7)
Survivor substance use	
Alcohol use	57 (53)
1- 4 drinks	25 (23)
5+ drinks	29 (27)
Drug use	7 (7)

*Note:* SA = Sexual assault

Table 4

*Types of Sexual Assaults that Participants Experienced While in University*

Type of sexual assault	<i>n</i> (%)
Sexual contact by	
Verbal coercion	61 (62)
Intoxication	57 (58)
Physical force	44 (45)
Attempted rape by	
Verbal coercion	49 (50)
Intoxication	38 (39)
Physical force	17 (17)
Completed rape by	
Verbal coercion	52 (53)
Intoxication	51 (52)
Physical force	42 (43)

*Note.* *n* = 98.

Table 5

*Descriptive Statistics of Measures Used*

Measure	Mean	<i>SD</i>	Cronbach's $\alpha$
PTCI	104.97	33.18	.94
NC about the self	53.01	18.42	.89
NC about the world	29.57	7.59	.74
Self-blame	14.22	5.94	.69
TRSI	22.23	10.64	.77
SES-SFV	2.99	6.10	.93

*Note:* *SD* = Standard deviation. PTCI = Post-Traumatic Cognition Inventory. NC= Negative cognitions. TRSI = Trauma Related Shame Inventory. SES = Sexual Experiences Survey – Short Form Victimization.

Table 6

*Predictors in Logistic Regression Analyses Predicting the Odds of Reporting a Sexual Assault to the Authorities*

Predictors	B	S.E.	Wald $X^2$	<i>p</i>	OR	95% CI
Contextual predictors						
No alcohol or drug use	-.34	.65	.28	.60	.71	.20 - 2.52
Perpetrator is a stranger*	1.94	.76	6.57	.01	6.94	1.58 - 30.55
No injuries from SA*	-.97	.98	5.70	.02	.14	.03 - .70
Perpetrator did not have weapon	-1.98	.30	.98	.32	.38	.06 - 2.57
Psychological predictors						
Shame	-.06	.04	2.36	.13	.94	.87 - 1.02
Self-blame	.08	.08	.98	.32	1.08	.93 - 1.25
Negative world-views	.01	.05	.09	.76	1.01	.93 - 1.11
Reporting/legal predictors						
Fear of reporting/legal process	-.02	.09	0.63	.80	.98	.83 - 1.16
Fear of not being believed	.25	.23	1.14	.29	1.28	.81 - 2.03

*Note:* OR= odds ratio. CI=confidence interval

\*  $p < .05$

Table 7

*Supplemental Analysis of Predictors in Logistic Regression Analyses Predicting the Odds of Reporting a Sexual Assault to the Authorities*

Predictors	B	S.E.	Wald $X^2$	<i>p</i>	OR	95% CI
Demographic variables						
Age	0.95	.07	1.92	.17	1.10	.96 - 1.26
Sexual orientation	-.43	.71	.38	.54	.65	.16 - 2.59
Household income	.93	.58	2.61	.11	2.54	.82 - 7.89
Ethnicity	.36	.82	.20	.66	.08	.29 - 7.10
Amount of alcohol consumption*	-1.72	.79	4.78	.03	.18	.04 - .84
Health services*	-.19	.74	6.24	.01	.16	.04 - .67
Counselling services	.044	.63	.01	.94	1.05	.30 - 3.60
Location of SA	-1.06	.59	3.28	.07	.35	.11 - 1.09
Aware of resources	.76	.57	.18	.18	2.13	.70 - 6.49
Revictimization*	-1.50	.61	6.06	.01	.22	.07 - .74

*Note:* OR= odds ratio. CI=confidence interval

\*  $p < .05$

Appendix A  
Qualifying Questions

## Qualifying Questions

Please answer the following questions to the best of your ability.

**1. Are you a current or former university student?**

- Yes
- No

**2. What was your biological or physical sex determined at birth?**

- Male
- Female
- Intersex
- Other (please specify): \_\_\_\_\_

**3. What is your gender identity (i.e. your own personal experience of gender)?**

- Male
- Female
- Transgender woman
- Transgender man
- Gender queer or nonbinary
- Unsure
- Other (please specify): \_\_\_\_\_

**4. Have you ever experienced an unwanted sexual experience while in university?**

- Yes
- No
- Unsure

**5. What is your age?**

- Under 18
- Aged 18 or over, please specify age \_\_\_\_

Appendix B  
Background Information Questionnaire



## Background Information Questionnaire

**INSTRUCTIONS:**

The following section involves demographic questions about you. Please answer the following questions to the best of your ability.

**1. Are you currently a university student?**

- Yes
- No

**2. If yes to question #1, what year of studies are you in?**

- First year of undergraduate studies
- Second year of undergraduate studies
- Third year of undergraduate studies
- Fourth year of undergraduate studies
- Fifth year or beyond of undergraduate studies
- Masters studies
- Doctoral studies
- Other (please specify): \_\_\_\_\_

**3. If no to question #1, are you a former university student?**

- Yes
- No

**4. If yes to question #3, when were you enrolled in university? Please specify the years.**  
\_\_\_\_\_ to \_\_\_\_\_**5. If yes to question #3, what is your highest level of education?**

- First year of undergraduate studies
- Second year of undergraduate studies
- Third year of undergraduate studies
- Fourth year of undergraduate studies
- Fifth year or beyond of undergraduate studies
- Masters studies
- Doctoral studies
- Other (please specify): \_\_\_\_\_

**6. What is your sexual orientation, as defined by sexual attraction to others?**

- Heterosexual (attraction to members of opposite biological sex)
- Gay/lesbian (attraction to members of same biological sex)
- Bisexual (attraction to members of both biological sex)

- Pansexual (attraction to individuals regardless of their biological sex or sexual orientation)
- Asexual (little to no sexual attraction to others)
- Unsure
- Other (please specify): \_\_\_\_\_

**7. What is your ethnicity?**

- Caucasian
- Aboriginal
- Latino/Hispanic
- Middle Eastern
- African
- Caribbean
- South Asian
- East Asian
- Mixed
- Other (please specify): \_\_\_\_\_

**8. What is your household income?**

- Less than \$20,000
- \$20,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- Over \$100,000

**9. What is your marital status?**

- Single (never married)
- Married, or in a domestic partnership
- Widowed
- Divorced
- Separated
- Other (please specify): \_\_\_\_\_

**10. What country do you currently reside in?**

\_\_\_\_\_

**11. In what country did you pursue your postsecondary education?**

\_\_\_\_\_

**INSTRUCTIONS:**

The following section involves questions related to the number of sexual assaults you have experienced in your lifetime and in university. Please answer the following questions to the best of your ability.

**11. How many unwanted sexual experiences have you experienced in your lifetime?**

- 0
- 1
- 2
- 3+

**12. How many unwanted sexual experiences have you had before entering university?**

- 0
- 1
- 2
- 3+

**15. How many unwanted sexual experiences have you had during university?**

- 0
- 1
- 2
- 3+

**16. Have you ever reported an unwanted sexual experience?**

- Yes
- No

**17. If yes, to whom?**

\_\_\_\_\_

**INSTRUCTIONS:**

The following questions pertain to **the most recent unwanted sexual experience you experienced while in university**. Please answer the following questions to the best of your ability. There are no right or wrong answers to these questions. *Please do not include any names or identifying information about yourself, the perpetrator, or other persons.*

**18. How old were you when you experienced the unwanted sexual experience?**

\_\_\_\_\_

**19. What year of studies were you in when you experienced the unwanted sexual experience?**

- First year of undergraduate studies
- Second year of undergraduate studies
- Third year of undergraduate studies
- Fourth year of undergraduate studies
- Fifth year or beyond of undergraduate studies
- Masters studies
- Doctoral studies
- Other (please specify): \_\_\_\_\_

**20. Where did the unwanted sexual experience occur?**

- On campus
- Off campus

**21. Did you suffer any physical injuries from the unwanted sexual experience?**

- Yes
- No

**22. Did you seek any health services for the injuries?**

- Yes
- No

**INSTRUCTIONS:**

The following questions ask about whether or not you reported or disclosed to anyone **the most recent unwanted sexual incident you experienced during university**. There are no right or wrong answers to these questions. Please do not include any names or qualifying information about yourself or the perpetrator.

**23. Did you report the unwanted experience to the university authorities?**

- Yes
- No

**27. If yes, how long after the incident did you make the report to the university authorities?**

\_\_\_\_\_

**24. Please describe why you did or did not report the unwanted sexual experience to the university authorities.**

**25. If you did not report the unwanted sexual experience occurring to you during university to the university authorities, please describe what (if anything) would have made you more likely to report the experience?**

**26. Did you report the unwanted experience to the police authorities?**

- Yes
- No

**27. If yes, how long after the incident did you make the report to the police authorities?**

\_\_\_\_\_

**28. Please describe why you did or did not report the unwanted sexual experience to the police authorities.**

**29. If you did not report the unwanted sexual experience occurring to you during university to police authorities, please describe what (if anything) would have made you more likely to report the experience?**

**30. Is there anyone else to whom you disclosed the unwanted sexual experience? (select all that apply)**

- Friend(s)
- Family
- Counselor/therapist
- Other (please specify): \_\_\_\_\_
- I did not disclose to anyone

**31. If you sought counselling services, did you do so as an alternative to reporting to the police or university authorities?**

- Yes
- No
- Don't know
- I did not seek counselling services

**32. Were you aware of the resources and services available to you to access after the unwanted experience?**

- Yes
- No

**33. How do you define sexual assault?**

---

**34. Do you feel that your most recent unwanted sexual experience during university fits into your definition of sexual assault?**

- Yes
- No

**INSTRUCTIONS:**

The following questions pertain to contextual factors related to **the most recent unwanted sexual experience you experienced while in university**. Please answer the following questions to the best of your ability. There are no right or wrong answers to these questions.

**35. How many drinks of alcohol (if any) did you consume before you experienced the unwanted sexual experience?**

- 0
- 1
- 2
- 3
- 4
- 5+
- Don't know

**36. Did you engage in recreational drug use before the unwanted sexual experience?**

- Yes
- No

**37. If yes, what drug did you use?**

---

**INSTRUCTIONS:**

The following questions pertain to characteristics of the person who carried out the most recent unwanted sexual experience you experienced during university and refer to him/her as “the perpetrator”. Please answer the following questions to the best of your ability. There are no right or wrong answers to these questions.

**38. What was the sex of the perpetrator?**

- Male
- Female
- Unsure

**39. To your knowledge, how many drinks of alcohol (if any) did the perpetrator consume before the unwanted sexual experience?**

- 0
- 1
- 2
- 3
- 4
- 5+
- Don't know

**40. To your knowledge, did the perpetrator engage in recreational drug use before the unwanted sexual experience?**

- Yes
- No
- Don't know

**41. If yes, what drug did the perpetrator use?**

\_\_\_\_\_

**42. Had you ever met the perpetrator before?**

- Yes
- No

**43. If yes to question #42, how would you describe your relationship with the perpetrator? (Select all that apply)**

- Acquaintance
- Classmate
- Friend
- Friend you engage with sexually
- Romantic relationship partner
- Someone in a place of authority over you
- Other (please specify nature of relationship): \_\_\_\_\_

**44. Did the perpetrator possess a weapon or an object that you felt could inflict bodily harm?**

- Yes
- No
- Don't know

**45. Since the incident, have you ever worried that the perpetrator would carry out an unwanted sexual experience on someone else?**

- Yes
- No
- Don't know



Appendix C  
Post-Traumatic Cognition Inventory (PTCI)

## Post-Traumatic Cognition Inventory (PTCI)

The questions below ask you for the kind of thoughts which you may have had after **your most recent unwanted sexual experience that occurred during university**. Below are a number of statements that may or may not be representative of your thinking. Please read each statement carefully and tell us how much you AGREE or DISAGREE with each by putting the appropriate number between 1 & 7 in the box to the right of the statement. People react to traumatic events in many different ways. There are no right or wrong answers to these statements.

1	2	3	4	5	6	7
Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree

1. the event happened because of the way I acted
2. I can't trust that I will do the right thing
3. I am a weak person
4. I will not be able to control my anger and will do something terrible
5. I can't deal with even the slightest upset
6. I used to be a happy person but now I am always miserable.
7. people can't be trusted
8. I have to be on guard all the time
9. I feel dead inside
10. you can never know who will harm you
11. I have to be especially careful because you never know what can happen next
12. I am inadequate
13. if I think about the event, I will not be able to handle it
14. the event happened to me because of the sort of person I am

15. my reactions since the event mean that I am going crazy
16. I will never be able to feel normal emotions again
17. the world is a dangerous place
18. somebody else would have stopped the event from happening
19. I have permanently changed for the worse
20. I feel like an object, not like a person
21. somebody else would not have gotten into this situation
22. I can't rely on other people
23. I feel isolated and set apart from others
24. I have no future
25. I can't stop bad things from happening to me
26. people are not what they seem
27. my life has been destroyed by the trauma
28. there is something wrong with me as a person
29. my reactions since the event show that I am a lousy copier
30. there is something about me that made the event happen
31. I feel like I don't know myself anymore
32. I can't rely on myself
33. nothing good can happen to me anymore

Appendix G  
Trauma-Related Shame Questionnaire

## Trauma-Related Shame Questionnaire

The questions below ask you about how you felt after **the most recent unwanted sexual experience that you experienced during university**. Please indicate below the extent to which you AGREE or DISAGREE with each statement. People react to traumatic events in many different ways. There are no right or wrong answers to these statements.

1	2	3	4	5	6	7	8	9	10	11
Entirely Disagree					Neither Agree nor Disagree					Entirely Agree

1. I had some feelings I should not have had
2. As a result of my traumatic experience, I have lost respect for myself
3. I am so ashamed of what happened to me that I sometimes want to become invisible to others
4. If others knew what had happened to me, they would look down on me.
5. There is something about me that made the event happen

Appendix H

Fear of the Reporting and Legal Process Questionnaire

## Fear of the Reporting and Legal Process Questionnaire

The questions below ask you about how you felt about reporting **the most recent unwanted sexual experience that you experienced during university** to the authorities. *Authorities* refers to the police or university security/other university officials. Please answer the following questions to the extent you AGREE or DISAGREE with each statement. People react to traumatic events in many different ways. There are no right or wrong answers to these statements.

1	2	3	4	5	6	7
Entirely Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Mostly Agree	Entirely Agree

1. I was terrified of discussing my unwanted sexual experience with authorities
2. I was scared the authorities wouldn't believe me
3. I was worried that the process involved in reporting would be traumatic
4. I was worried that the legal process (e.g. a possible trial, testifying, seeing the perpetrator in court) would be traumatic
5. I didn't think reporting my unwanted sexual experience would do anything
6. I felt comfortable going to the university to report the unwanted sexual experience
7. I felt comfortable going to the police to report the unwanted sexual experience

Appendix I  
Sexual Experiences Survey – Short Form Victimization



## Sexual Experiences Survey – Short Form Victimization

The following questions concern sexual experiences that you may have had that were unwanted. They involve asking you to recall and describe specific incidences of sexual assault you have experienced. We know that these are personal and sensitive questions, so we do not ask your name or other identifying information. Your information is completely confidential. We hope that this helps you to feel more comfortable answering each question. You also have the option to skip this section. Place a check mark in the box showing the number of times each experience has happened to you. If several experiences occurred on the same occasion--for example, if one night someone told you some lies and had sex with you when you were drunk, you would endorse both items a and c. Each item you fill in is to be answered twice, once regarding “times in your life”, which refers to any time in your life including university, and the second time regarding “while being in university”, which refers to any time in which you were enrolled in university.

1. Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent ( <i>but did not attempt sexual penetration</i> ) by:	How many times in your life?	How many times while being in university?
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	0 1 2 3+	0 1 2 3+
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	0 1 2 3+	0 1 2 3+
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	0 1 2 3+	0 1 2 3+
d. Threatening to physically harm me or someone close to me.	0 1 2 3+	0 1 2 3+

Click here to **SKIP** this Section.

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e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	0 1 2 3+	0 1 2 3+
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<b>2. Someone had oral sex with me or made me have oral sex with them without my consent by:</b>	<b>How many times in your life?</b>	<b>How many times while being in university?</b>
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	0 1 2 3+	0 1 2 3+
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	0 1 2 3+	0 1 2 3+

c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	0 1 2 3+	0 1 2 3+
d. Threatening to physically harm me or someone close to me.	0 1 2 3+	0 1 2 3+
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	0 1 2 3+	0 1 2 3+

<b>3. A man put his penis into my vagina, or someone inserted fingers or objects without my consent by:</b>	<b>How many times in your life?</b>	<b>How many times while being in university?</b>
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	0 1 2 3+	0 1 2 3+
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	0 1 2 3+	0 1 2 3+
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	0 1 2 3+	0 1 2 3+
d. Threatening to physically harm me or someone close to me.	0 1 2 3+	0 1 2 3+
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	0 1 2 3+	0 1 2 3+

**4. A man put his penis into my butt, or someone inserted fingers or objects without my consent by:**

**How many times in your life?**

**How many times while being in university?**

a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	0 1 2 3+	0 1 2 3+
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	0 1 2 3+	0 1 2 3+
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	0 1 2 3+	0 1 2 3+
d. Threatening to physically harm me or someone close to me.	0 1 2 3+	0 1 2 3+
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	0 1 2 3+	0 1 2 3+

<b>5. Even though it didn't happen, someone TRIED to have oral sex with me, or make me have oral sex with them without my consent by:</b>	<b>How many times in your life?</b>	<b>How many times while being in university?</b>
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	0 1 2 3+	0 1 2 3+
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	0 1 2 3+	0 1 2 3+
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	0 1 2 3+	0 1 2 3+
d. Threatening to physically harm me or someone close to me.	0 1 2 3+	0 1 2 3+
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	0 1 2 3+	0 1 2 3+

6. Even though it didn't happen, a man TRIED to put his penis into my vagina, or someone tried to stick in fingers or objects without my consent by:	How many times in your life?	How many times while being in university?
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	0 1 2 3+	0 1 2 3+
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	0 1 2 3+	0 1 2 3+
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	0 1 2 3+	0 1 2 3+
d. Threatening to physically harm me or someone close to me.	0 1 2 3+	0 1 2 3+
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	0 1 2 3+	0 1 2 3+

7. Even though it didn't happen, a man TRIED to put his penis into my butt, or someone tried to stick in objects or fingers without my consent by:	How many times in your life?	How many times while being in university?
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	0 1 2 3+	0 1 2 3+
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	0 1 2 3+	0 1 2 3+
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	0 1 2 3+	0 1 2 3+
d. Threatening to physically harm me or someone close to me.	0 1 2 3+	0 1 2 3+
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	0 1 2 3+	0 1 2 3+





Appendix G  
Social Media Posts

## Social Media Posts

**Facebook posts:**

Are you a current or former female university student aged at least 18 who experienced an unwanted sexual incident while in university?

Researchers at Lakehead University are looking to learn more about unwanted sexual experiences and reporting practices of female university students. The findings from this study have the potential to inform Canadian university sexual assault policies and guidelines.

Participation consists of completing an anonymous and confidential online questionnaire that you can end at any time.

This study has been approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone outside of the research team please contact Sue Wright at the Research Ethics Board at [807-343-8283](tel:807-343-8283) or [research@lakeheadu.ca](mailto:research@lakeheadu.ca)

For more information, please go to this website:

<https://www.surveymonkey.com/r/SA-UniversityReporting>

**Twitter posts:**

Did you experience an unwanted sexual incident while in university? Researchers at Lakehead University are looking for current/former female university students aged 18 or older to complete an anonymous online research survey. <https://www.surveymonkey.com/r/SA-UniversityReporting>

**Image attached to Twitter and Facebook posts:**



## **Did you experience an unwanted sexual incident in university?**

**Researchers at Lakehead University are conducting a study to learn more about unwanted sexual experiences that are happening on university campuses.**

**Please click the link for more information.**

Appendix H  
Cover Letter



Department of Psychology  
t: (807) 343-8441 f: (807) 346-7734  
e: [jlund@lakeheadu.ca](mailto:jlund@lakeheadu.ca)

Dear potential participant,

Thank you for your interest in this study. Before you begin, we would like to give you some information. The study is being conducted by Jessie Lund ([jlund@lakeheadu.ca](mailto:jlund@lakeheadu.ca)), an MA Clinical Psychology student at Lakehead University, and her thesis advisor, Dr. Josephine Tan ([jtan@lakeheadu.ca](mailto:jtan@lakeheadu.ca)).

To qualify for participation in this study, you must be a current or former female university student who is at least 18 years of age and who has experienced an unwanted sexual experience during university. Specifically, we are seeking participants who have experienced unwanted physical sexual encounters.

In this study we are investigating the reporting practices of female students who experienced an unwanted sexual experience while being in university. We are interested in understanding what influences the willingness to report the experience to the authorities. The results from this study can help us understand how to support female students who have experienced an unwanted sexual experience through the reporting process and to inform university policies and sexual assault prevention strategies.

Participation includes filling out an online research questionnaire. The questionnaire will lead you step-by-step through the process and will take between 30 to 60 minutes to complete. You can complete the questionnaire whenever and wherever you want. However, you would need to complete it in one sitting because you will not be able to return to an incomplete questionnaire to finish it up.

There will be questions that ask about your background, any unwanted sexual occurrences you experienced before or during university, your feelings surrounding the most recent unwanted sexual experience that occurred during university, and your feelings about reporting it to the authorities. Some questions ask for specific and personal details regarding these unwanted experiences which may cause some discomfort.

This study has been approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone outside of the research team please contact Sue Wright at the Research Ethics Board at 807-343-8283 or [research@lakeheadu.ca](mailto:research@lakeheadu.ca).

For more details about the study, please click the NEXT button below. It will take you to the consent form that will give you additional important information before you participate.

Appendix I  
Consent Form



Department of Psychology  
t: (807) 343-8441 f: (807) 346-7734  
e: [jlund@lakeheadu.ca](mailto:jlund@lakeheadu.ca)

**Title of Study:** Female University Students' Unwanted Sexual Experiences and their Willingness to Report

**Researchers:** Jessie Lund (MA student), Dr. Josephine Tan (supervisor)

**Objective:** To examine what influences the reporting practices of female university students who have experienced an unwanted sexual experience occurring during university.

**Important Information:**

- a. Your participation is fully voluntary. You can withdraw from the study anytime you wish without explanation or penalty. Please note that once you have submitted your answers, they cannot be retracted because we cannot trace them back to you. Whatever answers you have provided will be saved but will remain anonymous and confidential. If you drop out of the study by exiting the questionnaire part way through, whatever responses you have provided will be saved, remain anonymous and confidential, and will not be used in any analysis. You can refuse to answer any question you choose and are able to skip any section you would like using the SKIP option.
- b. We will keep all information completely confidential and anonymous and no names are collected. Your answers will be identified only by a numerical code. This consent form and the research questionnaire are held at two separate web links so that we cannot trace your answers back to you.
- c. We are using SurveyMonkey to administer the online research questionnaire. SurveyMonkey is an online survey tool that is hosted in the USA. The US Patriot Act permits US law enforcement officials, for the purpose of anti-terrorism investigation, to seek a court order that allows access to the personal records of any person without the person's knowledge. In the unlikely event that such a court order is served, we cannot guarantee absolute confidentiality and anonymity of your data.
- d. The data will be kept in secure storage on a password-protected hard drive in Dr. Josephine Tan's locked laboratory in the Department of Psychology at Lakehead University for a period of at least 5 years, after which time it may be destroyed.
- e. There is some risk involved in your participation because some questions are personal and sensitive in nature and may cause psychological distress to some participants. However please know you are free to skip any question you would like and you can terminate your participation at any time by exiting the questionnaire. Upon exiting, the answers you have provided will remain confidential and anonymous. You will also be provided with counseling and crisis resources available to anyone who



needs help or someone to talk to.

f. There is no direct benefit to you in participating in the study. However, the information from this study can contribute new knowledge to the field and be helpful to inform sexual assault prevention policies and guidelines on Canadian university campuses.

g. The findings of this study will be disseminated at scientific conferences and in scientific journals. Any presentations or publications that come out of this study will not have any identifying information on the participants, and the information that is shared will be in an aggregate or grouped format.

h. All participants are eligible to receive a summary of our findings when the study is completed. We will share our results with you upon request. The results will not have any identifying information and will be reported in an aggregate fashion.

**Please check the box below to indicate that you have read, understood, and accept the terms and information above and wish to participate in the study.**

***I have read and understand all of the above information, and consent to participate in this study.***

- Yes
- No

**Are you interested in receiving a copy of the summary of the findings from this study?**

- Yes
- No

If yes, please provide your email address below:

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To thank you for your participation, you also have the option of being entered into a random cash draw prize of \$100 which will be held after data collection is complete. If you would like to be entered into the draw, please provide your email address below so you can be notified if you are the winner.

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To begin the Research Questionnaire, please click NEXT. It will take you to a different web link so that your responses to the Research Questionnaire will be anonymous and will not be linked back to your contact information above.



Appendix J  
Debriefing Page for Non-Qualifying Participants

Debriefing Page for Non-Qualifying Participants

**We would like to thank you for your interest in our research study. Unfortunately, we are only looking for participation from current or former female university students who**

**experienced an unwanted sexual experience in university and who are 18 years of age or older.**

Before you go, we would like to provide you with more information regarding the topic of this research study. In Canada, approximately one in three women will experience a form of sexual violence in their lifetime and female university students have been found to be at a particularly high risk.

Sexual assault is a criminal offense under Canada's criminal code. There are a number of myths about sexual assault that can lead individuals to blame the survivor (referred to as victim-blaming), but we would like to emphasize that experiencing a sexual assault is never the fault of the survivors. After experiencing a sexual assault, survivors can experience many different thoughts and feelings, including shock, fear, anger, self-blame, among others. We have provided the following links that provides more information on the feelings, facts, and myths associated with sexual assault:

- What you may be feeling: <https://sapac.umich.edu/article/161>
- Facts about sexual assault: <http://www.canadianwomen.org/facts-sexual-assault-sexual-harassment>
- Myths about sexual assault: <http://sacha.ca/resources/myths-and-lies>
- Information regarding victim-blaming [https://crcvc.ca/docs/victim\\_blaming.pdf](https://crcvc.ca/docs/victim_blaming.pdf)

To address concerns regarding the prevalence of sexual assaults occurring on Canadian campuses, provincial governments have begun to introduce legislation to enforce sexual assault policies at universities within each province. However, more information is needed to inform such policies as they are developed and implemented. The current study will provide information regarding reporting practices of female university students, which will help us better support female students who have experienced a sexual assault with the potential to inform university policies and sexual assault prevention strategies. You can access Lakehead University's Sexual Violence Response Policy here:  
<https://www.lakeheadu.ca/sites/default/files/uploads/106/policies/SVP%20v6%20December%2021th%20final%20APPROVED.pdf>

Please know that any information you provided is anonymous and confidential. Your answers will be only identified by a numerical code and nothing can be traced back to you. If you have any questions please feel free to contact Jessie Lund at [jlund@lakeheadu.ca](mailto:jlund@lakeheadu.ca) or 1-807-355-1071, or the project supervisor, Dr. Josephine Tan, at [jtan@lakeheadu.ca](mailto:jtan@lakeheadu.ca) or 1-807-346-7751.

Even though you did not go through the entire study, we are still very appreciative of your interest in participating. If you had requested for a summary of the results and provided your email, we will be pleased to share our findings with you when the project has been completed. If you had provided your email address for the random prize draw, we will email you should you be the winner in the draw.

Before you leave, we would also like to share with you a number of counselling and crisis resources that are available to anyone who may need help or someone to talk to. Please feel free to print a copy of the following resources or to share it with others who may be interested.

### Resources for the online community

Canadian residents:

- 24-hour support: <http://good2talk.ca/> or Good2Talk helpline for postsecondary students: 1-866-925-5454
- 24-hour support: <http://www.awhl.org/>, click on “Urgent Contact Info” on the top right corner of the screen, for the assaulted women’s helpline telephone numbers <http://www.mentalhealthhelpline.ca/>
- <http://www.heretohelp.bc.ca/screening/online/>
- [http://www.cmha.ca/mental\\_health/getting-help/#.VwFb8eF9AE](http://www.cmha.ca/mental_health/getting-help/#.VwFb8eF9AE)
- National list of crisis response services: <http://www.partnersformh.ca/find-help/crisis-centres-across-canada/>

American residents:

- 24-hour support: <https://www.rainn.org/> or RAINN sexual assault hotline: 800.656.HOPE
- <http://www.mentalhealthamerica.net/finding-help>
- <http://healthyplace.com/>
- <http://psychcentral.com/>

### Local resources for Thunder Bay residents

- 24-hour support: Emergency services available at the Thunder Bay Regional Hospital
- Sexual Assault/ Violence Treatment Centre Thunder Bay: 807-684-6751
- Your family physician or a walk-in clinic physician can help make a referral to mental health resources in Thunder Bay
- Lakehead University Health and Counseling Services – free to all Lakehead University students: 807-343-8361
- Thunder Bay Counseling Centre: 807-684-1880
- More resource information available from the Thunder Bay Canadian Mental Health Association: 807-345-5564

If you or someone you know would like to report a sexual assault, they are able to do so through the following resources:

- **Report to the police** - call 911 or visit your local police station
- **Report to Lakehead University** – contact the Office of Human Rights and Equity at 807-346-7785 or visit them on campus at LI5012. More information is available at <https://www.lakeheadu.ca/faculty-and-staff/departments/services/human-rights-and-equity/sexual-violence-supports>

Thank you again for your interest.



Appendix K  
Debriefing Page for Qualifying Participants

Debriefing Page for Qualifying Participants

**We would like to thank you for your participation in our research study.**

Before you go, we would like to provide you with more information regarding the topic of this research study. In Canada, approximately one in three women will experience a form of sexual violence in their lifetime and female university students have been found to be at a particularly high risk.

Sexual assault is a criminal offense under Canada's criminal code. There are a number of myths about sexual assault that can lead individuals to blame the survivor (referred to as victim-blaming), but we would like to emphasize that experiencing a sexual assault is never the fault of the survivors. After experiencing a sexual assault, survivors can experience many different thoughts and feelings, including shock, fear, anger, self-blame, among others. We have provided the following links that provide more information on the feelings, facts, and myths associated with sexual assault:

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To address concerns regarding the prevalence of sexual assaults occurring on Canadian campuses, provincial governments have begun to introduce legislation to enforce sexual assault policies at universities within each province. However, more information is needed to inform such policies as they are developed and implemented. The current study will provide information regarding reporting practices of female university students, which will help us better support female students who have experienced a sexual assault with the potential to inform university policies and sexual assault prevention strategies. You can access Lakehead University's Sexual Violence Response Policy here:

<https://www.lakeheadu.ca/sites/default/files/uploads/106/policies/SVP%20v6%20December%2021th%20final%20APPROVED.pdf>

We would like to reiterate that your participation was anonymous and confidential. Your answers will only be identified by a numerical code and results shared will not have any identifying information and will be reported in an aggregate fashion. The consent form and the research questionnaire were held at two separate web links so that we cannot trace your answers back to you.

If you had requested for a summary of the results and provided your email, we will be pleased to share our findings with you when the project has been completed. If you had provided your email address for the random prize draw, we will email you should you be the winner in the draw.

We wish to express our very sincere thanks for your participation in the study. We appreciate that the questions we asked were personal and sensitive, and were not easy to answer. However, the information that we gain from this study is important because it has the potential to help us understand the factors that increase or decrease the likelihood that survivors will report the unwanted sexual experiences or sexual assault. Such information holds implications for improving support and services to sexual assault survivors.



Before you leave, we would like to share with you a number of counselling and crisis resources that are available to anyone who may need help or someone to talk to. Please feel free to print a copy of the following resources or to share it with others who may be interested.

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- <http://www.heretohelp.bc.ca/screening/online/>
- [http://www.cmha.ca/mental\\_health/getting-help/#.VwFb8eF9AE](http://www.cmha.ca/mental_health/getting-help/#.VwFb8eF9AE)
- National list of crisis response services: <http://www.partnersformh.ca/find-help/crisis-centres-across-canada/>

American residents:

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- <http://healthyplace.com/>
- <http://psychcentral.com/>

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- Assaulted Women’s Helpline: 1-866-863-0511
- Your family physician or a walk-in clinic physician can help make a referral to mental health resources in Thunder Bay
- Lakehead University Health and Counseling Services – free to all Lakehead University students: 807-343-8361
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- More resource information available from the Thunder Bay Canadian Mental Health Association: 807-345-5564

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Thank you again for your help in this study. If you have any questions, please feel free to contact Jessie Lund at [jlund@lakeheadu.ca](mailto:jlund@lakeheadu.ca) or 1-807-355-1071, or the project supervisor, Dr. Josephine Tan, at [jtan@lakeheadu.ca](mailto:jtan@lakeheadu.ca) or 1-807-346-7751.