

**Latent Class Analysis of Sexual Offending –
Extracting Offender and Offense Characteristics
for Investigative Interviewing and Interrogation
Process**

by

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Abstract

The purpose of this study was to explore how offender-related and victim-related case characteristics in a sexual assault impact offenders' decisions to confess or not during interrogation. Five offender and five victim profiles were identified and then offender by victim profile combinations were assessed to see how specific case characteristics influenced offenders to make a decision trade-off of admitting to or denying their involvement in a sexual assault event. The implications of these results for sexual assault investigations and offender profiling are discussed. In addition, interrogation strategies are provided for each offender-victim combination that is related to a decision not to confess during interrogation.

Keywords: sexual assault; confession; interrogation strategies; offender profiling; latent class analysis;

Dedication

This work is dedicated to my parents Robert and Larysa Farley for encouraging the pursuit of higher education, and for being a constant source of support and motivation in my life. All of my accomplishments so far would not be possible without your love, generosity, and sacrifice. Thank you so much for everything you have done for me. Without you I would not be what I am today.

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Table of Contents

Approval.....	ii
Partial Copyright Licence	iii
Ethics Statement.....	iv
Abstract.....	v
Dedication	vi
Acknowledgements.....	vii
Table of Contents.....	viii
List of Tables.....	ix
List of Figures.....	x
Chapter 1. Introduction	1
Chapter 2. Literature Review	4
2.1. Profiling Sex Offenders	4
2.2. Explanatory Models of Confession.....	16
2.3. Empirical Indicators of Confession	20
Chapter 3. Purpose of the Study.....	29
Chapter 4. Methods	31
4.1. Participants	31
4.2. Procedures.....	31
4.3. Measures	32
4.4. Analytical Strategy	36
Chapter 5. Results	42
Chapter 6. Discussion.....	59
Chapter 7. Conclusion	71
References	74

List of Tables

Table 5.1.	Descriptives for Offender-Related Case Characteristics	43
Table 5.2.	Descriptives for Victim-Related Case Characteristics	44
Table 5.3.	Bivariate Results on the Influence of Offender-Related Case Characteristics to Confess or Not Confess during Police Interrogation	45
Table 5.4.	Bivariate Results on the Influence of Victim-Related Case Characteristics to Confess or Not Confess During Interrogation	46
Table 5.5.	Fit Indices for All Possible Offender-Related Class Solutions	47
Table 5.6.	Fit Indices for All Possible Victim-Related Class Solutions	48
Table 5.7.	Comparison of Offenders' Characteristics and Behaviour across Classes.....	50
Table 5.8.	Comparison of Victims' Characteristics & Behaviour across Classes.....	53
Table 5.9.	Victim-Related Profiles by Offender-Related Profiles	57

List of Figures

Figure 4.1. Latent Class Model with a Covariate	39
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Chapter 1. Introduction

As of 2007, sexual offenses were less likely to be cleared by police than other types of violent crime, and charges were laid in only about a third of the cases that came to the attention of the police (Brennan and Taylor-Butts, 2008). Several factors may play a role in these findings, including the victim's perception that what happened to them is not important enough to be reported, and that most victims of sexual assault are acquainted with their assailants and do not wish to get them into trouble. McGregor, Marion and Wiebe (1999) found that even in the presence of physical evidence such as genital injury and the perpetrator's DNA, charges are not likely to be laid when the offender's relationship to the victim is accounted for, and only in cases of moderate to severe injuries are charges laid against known assailants.

Most of the time physical evidence is not even available in cases of sexual assault, whether or not they involve an offender who is a stranger or acquaintance to the victim. For example, researchers at a trauma center revealed that out of 612 cases (39% of which were characterized as a stranger assault while 61% were perpetrated against known victims), physical evidence was not available in 48% of them (Riggs, Houry, Long, Markovchick, and Feldhaus, 2000). The process of physical evidence recovery is not any more efficient in cases of child sexual abuse. For example, a study by paediatricians of 273 children under 10 years of age found that some form of forensic evidence was collected from 24.9% of children, all of whom were examined within 44 hours of their assault. However, over 90% of children with positive forensic evidence findings were seen within 24 hours of their assault. The majority of forensic evidence (64%) was found on clothing and linens, yet only 35% of children had clothing collected for analysis. Following 24 hours, all evidence, with the exception of one pubic hair, was recovered from clothing or linens and no swabs were taken from the child's body were positive for blood after 13 hours, or sperm/semens after 9 hours following sexual assault (Christian, Lavelle, Jong, Loisel, Brenner, and Joffe, 2000).

These results have important implications for investigative practices in sexual assault. Klockars and Mastrofski (1991) point out that establishing guilt of the offender can be accomplished in three ways: (1) witness statements, (2) physical evidence or (3) confession. However, in contrast to other interpersonal crimes, sexual assaults typically take place within personal settings, with few, if any, corroborating witnesses. The resolution of a sexual assault case largely relies on the offender's story against the victim's account of the crime (Kebbell, Hurren, and Mazerolle, 2006). Furthermore, contrary to popular belief, physical evidence is not a consistently reliable source of corroboration for the victim's story and is subject to considerable time constraints. Therefore, confession by the offender may be the only reliable way to prove an offender's guilt. In sexual assault cases, a confession may result in (1) an increased likelihood of a conviction; (2) a decreased likelihood of the negative impact on the victim from testifying in court about her/his victimization; and, (3) avoiding a lengthy trial, which reduces the financial costs related to prosecution (Kebbell, Hurren and Mazerolle, 2006).

Researchers estimate that 42 to 76% of offenders confess to having committed the crime when they are brought in for an interrogation (Baldwin, 1993; Bull, 2006; Moston, Stephenson, and Williamson, 1992). Interestingly, research has also demonstrated that sex offenders may be the least likely candidates for a confession, in comparison to other types of offenders, due to the social stigma and shame that this type of crime is typically associated with (St-Yves and Deslauriers-Varin, 2009). Despite offenders' initial reluctance to confess to a crime, it has been shown that they are likely to change their mind about confessing when they are exposed to certain types of interrogation strategies, and that this decision-making process is crime specific (Sigurdsson and Gudjonsson, 1994). Therefore, in the context of sexual assault, it is important to explore what crime-specific factors could facilitate sex offenders' decision to confess to the police.

Current investigative aids such as 'criminal profiling' provide some suggestions on how police officers could match particular interviewing strategies to specific profiles of sex offenders. However, this investigative tool has been criticized extensively for relying on subjective investigative experience rather than empirical validation. On the other hand, empirical profiling methods have completely excluded interviewing suggestions

when testing the validity of this technique, from their testing of profiling assumptions, with most of the empirical research focusing on whether or not offender characteristics can be determined from the various crime scene actions that characterize sexual assault. Hence, the aim of this study is to explore the utility of empirically derived profiles of offender- and victim- related case characteristics in the preparation of the interrogation strategies in sexual assault investigations. Suggestions for specific interrogation strategies matched to each combination of offender- and victim-related case characteristics will also be discussed.

Chapter 2. Literature Review

2.1. Profiling Sex Offenders

According to Napier (2010), the proper foundation for a sex crime investigation must begin with a thorough analysis of the crime scene data and behaviourally-oriented interview, where a description of the offender's actions is sought from the victim. Such offender actions may include the method of approach, the offender's control of the victim, his use of physical force, victim resistance, the offender's reaction to victim resistance, the type and sequence of sexual acts, possible sexual dysfunctions, verbal activity, and criminal experience (Napier, 2010). The second most important inquiry in a sex crime investigation is assessing victimology (Napier, 2010). Obtaining information about the victim's alcohol or drug use, security consciousness, sexual practices, and assertiveness may assist in the construction of the offender profile, because it allows investigators to better understand victim selection and possibly the offender's motivation for the crime (Napier, 2010).

The technique of 'offender profiling' refers to a process of identifying and interpreting crime behaviour or actions with the aim of predicting the personality of the offender, his modus operandi and motivations for his crime (Kocsis, 2006, p. 8). The uses of offender profiling include providing a social and psychological portrait of the offender, linking crimes that have been committed by the same perpetrator, and providing interviewing suggestions to the investigators. The process of constructing offender profiles depends on the knowledge domain of those tasked with the profiling of the crime (Allison, Goodwill, Almond, Heuvel and Winter, 2010). One of the oldest profiling techniques that was developed in the 1940's to 1950's is the clinical/practitioner approach, where knowledge of psychiatry or psychology were related to profiling of the crime (Kocsis, 2006; Alison et.al, 2010).

A cliché example of this profiling process would be the psychoanalytic interpretation of the 'Mad Bomber' crime scenes by psychiatrist James Brussel in 1956 (Woodworth and Porter, 2000). Brussel correctly predicted that the perpetrator would be "a heavy, single, middle-aged man who would be wearing a double-breasted, neatly buttoned up suit when he was arrested" (Woodworth and Porter, 2000, p. 244). In addition, from the analysis of the perpetrator's letters, Brussel deduced that the suspect was single based on the exaggerated curve with which he accented the letter **w**. In this case, **w** represented female breasts, and thus this pointed towards an individual who was sexually repressed (Roland, 2008). This 'psychodynamic profiling' approach is not commonly used today, but it is important to acknowledge it because it marked the first attempt at using modus operandi of the offender to assess his personality. This approach is also significant for the development of criminal profiling because it emphasized an inductive reasoning process of making qualified assumptions based on professional experience within a specific knowledge domain. This reasoning approach is what inspired the Federal Bureau of Investigation (FBI) in the 1970's to take advantage of their violent crime investigative experience to create what is one of the most popular and controversial profiling methods available today.

Mostly dissatisfied with theoretical notions from Applied Psychology courses at the Academy, which lacked practical examples from the field, a team of FBI agents conducted unofficial interviews with incarcerated sexual murderers and rapists to create guidelines on how to interpret these offenders' behaviours. Specifically, these agents wanted to understand the motivations behind, what at the time were viewed as, gruesome and 'motiveless' crimes. These agents developed a criminal profiling approach known as Criminal Investigative Advice (CIA) that specifically catered to the needs of law enforcement agencies. Some of the benefits of CIA were that it was readily available and comprehensible by law enforcement personnel without the need for special training in psychiatry or clinical psychology (Kocsis, 2006, p. 14).

The FBI's Behavioural Science Unit (BSU) attempted to create a profiling technique that was grounded in the investigative concepts of violent crimes. This technique included classification schemes to better understand distinctions among various types of offenders, and the specific motivations that could be deduced from

crime scene information available from victim interviews and forensic accounts of the crime. These sex offender classification schemes, aside from providing a portrait of the likely perpetrator, are important to the preparation of offender interview and interrogation because they allow the investigating officers to anticipate offenders' emotional strengths and weaknesses and justifications for their behaviour (Napier, 2010). Also, using crime scene behaviours and offender characteristics may help the investigating officers to identify who should conduct the interview, where the interview should be conducted, what type of environment is best suited for a particular interviewee, and what emotional appeals are most likely to be effective.

In cases of sexual assault, a commonly cited rapist typology is the one created by Groth (1979), which was expanded upon and adapted for investigative purposes by the FBI researchers (Robertiello and Terry, 2007). This classification scheme divides rapists into *Power Reassurance*, *Power Assertive*, *Anger Retaliatory* and *Sexual Sadist*. The primary motivation of the *Power Reassurance* rapist is to prove to himself his sense of masculinity by taking the power away from the victim. However, his primary strategy does not involve harming the victim through punishment or degradation because he does not like what he is doing, and he is concerned with potential harm to the victim. This offender is prone to harbouring a fantasy of a consenting relationship with the victim who is special to him in some way (Napier, 2010, pp. 159-161). The *Power Reassurance* rapist's key personality feature is low self-esteem and lack of personal confidence. As a result, he relies on the presence of a weapon for control and will not hesitate to defend himself if the victim resists his advances in an aggressive manner. However, this offender uses minimal force, such as slapping the victim, to get her to follow his requests. This rapist's sexual strategy involves one sex act, but he may engage in acts that are not necessary to complete the rape due to his paraphilias and ritualistic behaviour. In addition, this type of rapist would be willing to compromise with the victim if she refuses to perform a particular sexual act (Napier, 2010, pp. 159-160).

In the context of an interrogation with a *Power Reassurance* rapist, it is suggested, based on his characteristics, that the interviewer refer to him as 'Mister', and ask permission to use his first name at the outset of the interview, to build rapport with the suspect due to his low self-esteem. When introducing the subject of the interview,

the investigating officer is encouraged to use soft terms like “the thing that happened last Tuesday” as opposed to “the rape” (Napier, 2010, p. 175). It is also recommended to use examples of good or decent things he has done, even if it requires exaggeration. Following rapport building, it is suggested that the interviewer build up the offender’s self-esteem by pointing out that he made an effort not to harm the victim and he should be given credit for not hurting her. Furthermore, investigators are encouraged to compliment the offender on how he had control over the victim and did not participate in additional acts, unlike some other rapists.

By using the mind reading technique, the *Power Reassurance* rapist should be reassured that sooner or later, he will come across a situation that will end tragically with him hurting or killing a victim, and he should be told ‘horror’ stories about victims being seriously hurt or killed (Napier, 2010, p. 175). Also, the technique of minimization can be used by telling this offender that he treated the victim gently as a lady, like her boyfriend or lover would, and if he applied force this can be minimized by suggesting that it was used because of the way she acted, and he did not even call her name (Napier, 2010, p. 176). In addition, the interviewer could use the good cop/ bad cop strategy by suggesting to the offender that the prosecutor believes that the suspect has done terrible things, but after reviewing all the facts, he understands all the efforts that the suspect made to be nice and treat the victim well.

In contrast, the *Power Assertive* rapist’s primary motivation is a need to express or demonstrate to the victim his sexual prowess and entitlement to do as he wishes. With that in mind, he sees the victim as a vehicle for his gratification and objectifies her as a disposable item. This rapist is likely to be arrogant and ‘macho’ in that he views himself as a ‘man’s man’, and wants sexual contact purely for his benefit. He will also do whatever is required to accomplish his sexual assault, and it is likely that he will commit multiple sexual acts with each victim (Napier, 2010, p. 160). Unlike the *Power Reassurance* rapist, this offender’s weapon of choice is likely to be his hands and feet in order to hurt the victim, and he will use moderate to brutal force against his victim even if she does not resist his sexual advances.

When interviewing a suspected *Power Assertive* rapist, the officer should impress him with the competency and authority of a professional interviewer. Upon arrival, the offender's presence should be acknowledged, but the interview should be delayed by making the suspect wait a few minutes before directing him to the interviewing room (Napier, 2010, p. 178). Once the interview commences, the officer should have a planned interruption causing a delay in the process, and the interviewing officer should be praised within earshot of the suspect. If the suspect is brought in for a date or acquaintance rape, the interviewer should use minimization and projection techniques, such as "she did not know what she wanted, first she was attracted to him because [fill in the blank]; she encouraged him, then she cooled down; men cannot change that fast. It was not the suspect's fault that she drank so much and was out of control" (Napier, 2010, p. 178). If the victim is a stranger to the offender, the interviewer could say that it is likely she is making the claim because of the need to explain to her boyfriend what happened (Napier, 2010, p. 178).

In order to incorporate the *Power Assertive* rapist's sense of entitlement into the interrogation, the interviewer could project the blame on the victim by stating that another team is reviewing the victim's statement and that her story is likely to be a lie. The officer could also suggest that the victim came on to the suspect or that she consented to have sex and then changed her mind, and that a man cannot turn off his sex drive just like that (Napier, 2010, p. 179). The rationalization technique can also be used by the interviewing officer, which suggests to the suspect that he acted as a real man would with a sexually suggestive and aggressive woman (Napier, 2010, p. 179). In addition, if the victim sustained injuries, the officer could suggest to the offender the possibility that she became aggressive and attacked him, and that he was only defending himself. If the suspect is caught in a lie by the interviewer, it is suggested that the officer does not challenge him right away, but that he collect all false statements to confront the suspect with them collectively so they take on the 'feel of evidence' in the eyes of the suspect (Napier, 2010, p. 178).

The *Anger Retaliatory* rapist differs in his motivation from the *Power Assertive* rapist in that he is primarily seeking revenge against real or imagined wrongs done to him by women. The victims of this rapist are projections of a symbolic female with whom

he is angry, and injury to the victim is not a concern to this perpetrator as she is a vehicle for venting his anger. The force he uses against his victims is brutal and intentional, which leads to serious injuries, as he is likely to use the victim's sexual parts to hurt, degrade and punish her. The weapon of choice is likely to be personal and he will continue his assault until his emotional needs are fulfilled through a release of anger (Napier, 2010, pp. 161-162). The interviewing strategies for this suspect would be similar to the strategies suggested for the *Power Assertive* rapist, which are to minimize the crime and project responsibility onto the victim. An example of a theme that interviewers could use is, "with today's attitudes women have it easy and get jobs that men need to support their families" (Napier, 2010, p. 177). If the suspect becomes receptive to this theme, the officer should then inform the suspect that one way he could explain his side of the story is to get his opinion of women on record (Napier, 2010, p. 177).

The fourth rapist type is the *Anger Excitation/ Sexual Sadist* whose primary motivation is to receive sexual arousal through the victim's emotional and physical response to torture. This offender type views the victim as a submissive subject in a master-slave relationship, where she has to do as she is told otherwise she will be punished (Napier, 2010, pp. 159-161). This offender leads two different lives that can be characterized as normal and bizarre, due to his experimentation with the victim and excessive level of violence through torture. This rapist is the most violent of all and there is a high chance that his sexual assault may conclude with the death of the victim. As a part of the *Anger Excitation/ Sexual Sadist's* paraphilias and fantasy life, he is primarily aroused by torturing and terrifying his victim(s). As a result, this offender may only masturbate to, or have no sexual contact with his victim (Napier, 2010, pp. 159-161).

In the context of an interrogation, this type of suspect considers himself to be superior to the interviewing officer, and he will attempt to use the interview setting to find out if the police have any evidential proof against him (Napier, 2010, p. 179). The *Anger Excitation/ Sexual Sadist* is usually narcissistic, and 'stroking his ego' may be a valuable strategy for the interviewing officer to elicit crime-related information (Napier, 2010, p. 180). If this strategy proves to be unsuccessful, the *Anger Excitation/ Sexual Sadist's* narcissism makes him unable to withstand criticism, so subtle hints of failure, like "the victim said that she fought you in every room of her apartment, why weren't you able to

control her?” may lure him into bragging about how smart and cunning he is. However, it is important to note that this is only likely to happen if the offender perceives that there is substantial evidential proof against him (Napier, 2010, p. 180).

Apart from rapists, interpretations of crime scene characteristics and motivations are also applied to child sexual abusers, which are generally divided into *Situational* and *Preferential* types. Based on Lanning’s work on child sexual victimization, these two types were adapted by the FBI (Napier, 2010, p. 233). Basic sexual needs, or the gain of power and release of anger motivates the *Situational Child Molester*. This offender tends to be of lower socio-economic class, has low self-esteem, and possesses low intelligence, which is reflected in his lack of verbal skills. He is also likely to be impulsive and violent, which is apparent in his use of coercion during his sexual assaults, and he will have a varied criminal history that may involve interpersonal and property crimes. This child molester targets both stranger and known victims who are easily available and vulnerable. In general, this type of child molester lacks paraphilic sexual preferences, such as preferring a child to be a sexual partner (Napier, 2010, p. 236).

If the suspect is the *Regressed Child Molester* subtype, his precipitating factor for sexual abuse may be the inability to cope with stress, and as such he will target children that are easily available to him, with his own children possibly being at the greatest risk. This subtype of the *Situational Child Molester* is also likely to make amateur child pornography that depicts him engaging in sexual activity with children (Napier, 2010, p. 236). In the case of the *Morally Indiscriminate* subtype, sexual abuse of a child is just another aspect of his generally antisocial pattern of behaviour. This offender could be characterized as a user and abuser of people more generally, and when he has the urge to sexually offend, he may simply act on it in the spur of the moment. This offender is likely to choose pubescent children that are either strangers or related to him in some way (Napier, 2010, p. 236). On the other hand, offenders composing the *Inadequate* subtype may be afflicted with mental illness or have low intelligence. These individuals lack social skills and may be insecure, which may lead them to be thought of as a social misfit (Napier, 2010, p. 236). All of these characteristics, combined with sexual curiosity, is what may trigger child sexual abuse in this *Situational Child Molester* subtype. In addition, the inability to communicate may also cause frustration in the offender, leading

him to be angry and use coercive strategies to deal with the child, thereby resulting in serious injuries to the victim (Napier, 2010, p. 236).

During an interview with a *Situational Child Molester*, the officer is encouraged to use common or street language, as well as to be empathetic towards the offender in order to avoid being judgemental (Napier, 2010, p. 237). One of the main weapons in the arsenal of the interviewing officer with this suspect is the use of projection. For example, the blame could be projected on the economy since he is likely to be from a lower socio-economic strata, or it could be projected on the stresses of providing for a family, and that rich people commit these crimes too, but they are more likely to get away with it (Napier, 2010, p. 237). A minimization technique alluding to the suspect's impulsiveness could also be used by emphasizing that the suspect gave in to his biological needs and that it was a once in a lifetime mistake (Napier, 2010, p. 137). Minimization is also useful when the suspect used force or violence against the victim, and it should be suggested by the interviewer that he did not really hurt the child, there was no permanent injury, and it is not like he killed or maimed the victim (Napier, 2010, p. 137).

In contrast to the *Situational Child Molester*, the *Preferential Pedophile* will prefer children as sexual partners and will use them to fulfill his paraphilias and deviant sexual needs. Unlike the *Situational Child Molester*, he is likely to be of higher socio-economic class and of higher intelligence, which allows him to use verbal strategies to lure his victims and consequently use less force to commit his sexual assaults (Napier, 2010, p. 235). If he has a prior criminal record it will primarily contain sexual offenses that contribute to the creation of a crime template to fulfill his fantasy and avoid apprehension. The *Preferential Pedophile* will mostly target young children who do not have any relationship to him. If the *Preferential Pedophile* is of the *Seduction* subtype, he will groom his victims with gifts, attention, and affection to try and lure the child into trading sex for benefits. This subtype of pedophile may have many victims who are neglected or come from dysfunctional homes (Napier, 2010. p. 236).

In contrast, the *Introverted Pedophile* subtype of the *Preferential Pedophile* lacks verbal skills to seduce his victims. In order to gain access to children, he may marry, use a prostitute, travel abroad, or use the Internet. Furthermore, the *Diverse Pedophile*

subtype is an experimenter with multiple paraphilias, who blends his child victims into his existing sexual interests. The victims of this type of offender are likely to be his own children that he may involve in sexual partner swapping or group sex (Napier, 2010, p. 236). The last subtype of the *Preferential Pedophile*, and the least common, is the *Sadistic Pedophile* subtype. This perpetrator inflicts pain on his child victims to achieve sexual arousal. His victims are strangers whom he abducts and may subsequently murder to avoid identification (Napier, 2010, p. 236).

The general interviewing suggestions for the *Preferential Pedophile* include the minimization of responsibility by indicating that the situation he is involved in is simply human failure, and so many others are involved in similar circumstances (Napier, 2010, p. 238). Because this type of sex offender is usually of a higher socio-economic status, the interviewer may emphasize that the suspect's situation is currently private, but when the case goes to court and becomes known, there may be many negative stories going around and so it is best to straighten out this issue now (Napier, 2010, p. 238). If the offender used force against his victim, it may be useful for the interviewing officer to minimize the effect that this had on the victim by suggesting that the child did not sustain any psychological or permanent physical damage, and that the offender was nice to him/her (Napier, 2010, p. 238).

Although these rapist and child molester/ pedophile typologies contain a lot of useful information, they have been criticized in the empirical literature because they are premised on the assumption that sexual assault is not an expression of sexual desire, but the use of sexuality to express power and anger (Canter and Heritage, 1990). Furthermore, these classification schemes are criticized for emphasizing the various psychological functions that sexual crimes have for the offender, and not what behaviours they consist of. Canter and Heritage (1990) note that attempts to characterize and classify rapists and child molesters make little distinction between the crime scene actions present at the time of the offense, and the psychodynamic processes that account for or produce that behaviour. These researchers also highlighted the fact that there has been little attempt to distinguish aspects of the offender's motivations and lifestyle from his offending behaviour (Canter and Heritage, 1990, p. 187).

Importantly, the FBI's research on the behaviour of sexually violent offenders was the first attempt to systematically study how crime scene behaviours may be useful for understanding the motives and personalities of those who commit this type of crime. Furthermore, attempts made by the FBI to embed criminal profiling into the investigative process have popularized this tool among law enforcement agencies around the world. The popularity of criminal profiling has also piqued the interest of the scientific community to provide empirical evidence that supports the validity and utility of profiling as an investigative aid (Kocsis, 2006). In response to the fact that 'criminal profiling' was based primarily on unrepresentative offender samples and lacked any empirical validation or peer review confirming its utility, David Canter pioneered yet another approach known as 'offender profiling'. This empirical profiling approach emphasized multivariate analyses of behavioural information found at the crime scene to infer the offender's personality and demographic characteristics (Alison et al., 2010).

The main goal of this 'offender profiling' approach was to go beyond crime scene classification and propose scientifically-based profiling frameworks, while asking important empirical questions about the inference process required by investigators to construct a profile of a perpetrator. These questions include, but are not limited to, what are the important behavioural features of the crime that may help identify the perpetrator? What are the most appropriate ways of indicating the differences between crimes and between offenders? What inferences can be made about the characteristics of the offender that may help identify him or her? (Canter, 2000). The central hypotheses of offender profiling, open to direct empirical testing, are known as the *homology* and *consistency* assumptions. The *homology* assumption stipulates that people who commit crimes in a similar style will have similar background characteristics. The *consistency* assumption states that variations in crime scene behaviours of an offender across his series must be less than the variation in actions by all other offenders (Alison et al., 2010, p. 119).

Empirical research testing these assumptions is very informative in terms of how crime scene behaviours relate to offender characteristics, and whether they are consistent enough to link them to a specific perpetrator in serial crime. The conclusions made from numerous studies have been mixed, but ultimately suggest that there is

some predictive ability of offenders' modus operandi to account for their background characteristics (Alison et al., 2010). More importantly, a substantial amount of research demonstrates that there is variability in offending behaviour under the influence of situational and contextual factors, especially for sexual offences (Mokros & Alison, 2002). In addition, Ullman's (2007) work stressed the importance of victim behaviour during sexual assault, suggesting that the type of victim resistance strategy has a significant impact on the offender's behaviour and consequently on the outcome of the offence.

Furthermore, rapists have been found to be quite versatile in their criminal behaviour and more antisocial than other offenders, which is an important fact that directly relates to the link between offence behaviour and offender characteristics (Alison Bennell, Mokros and Ormerod, 2002; Harris, Smallbone, Dennison, and Knight, 2009). These findings suggest the importance of taking into account the influence of situational factors in offender profiling, especially for sexual offenses. In terms of consistency in offenders' crime scene behaviours during sexual assaults, the results are also mixed; however, there is some degree of supporting evidence that offenders commit crimes in a similar manner within their series that is sufficiently different from crime scene behaviours across crime series of other offenders (Grubin, Kelly, and Brunsdon, 2000; Santtila, Junkkila, and Sandnabba, 2005).

Another controversy in the field of offender profiling involves the identification of the most appropriate statistical techniques to be used to predict offender characteristics. This dispute is centered on limiting the predictions to direct associations, or collating crime scene actions into themes or scales of offender behaviour (Alison et al., 2010). Recently, Goodwill, Alison, and Beech (2009) conducted comparisons between direct association techniques and thematic/ typological approaches, and found multivariate direct association techniques to be more powerful in predicting offender characteristics than thematic approaches. However, these researchers also acknowledged that thematic and typological approaches, based on a multidisciplinary approach involving law enforcement, clinical, and statistical domains, performed better than purely statistical approaches. Although useful, this does not conclusively prove whether statistical analyses of behavioural information should be conducted in precise independent or

multivariate approaches, or whether they should involve themes and ‘fuzzy boundaries’ approaches (Alison et al., 2010).

More recently, researchers have also attempted to use probabilistic methods in search for patterns in relationships between crime scene behaviour and offender characteristics. For example, Baumgartner, Ferrari, and Palermo (2008) have employed Bayesian network modelling to aid in the suspect prioritization process for unsolved single victim homicides. These researchers state that they were able to successfully predict 80% of offender characteristics on average. Furthermore, a study by Fox and Farrington (2012) used latent class analysis to predict burglary profiles from crime scene behaviours, offender motivations, and the victim-offender relationship, among others. Fox and Farrington (2012) found statistically significant associations between offender traits and offense styles that combine together with various probabilities of occurrence, and this has important implications for offender profiling.

The substantial amount of literature on criminal profiling thus far provides important clues as to what works when linking crime scene variables to offender characteristics, as well as linking a series of offenses to one suspected perpetrator. Controversies aside, FBI research and investigative experience offer useful approaches that aid in suspect prioritization. This ‘profiling’ approach is currently the only one that connects specific offender profiles (i.e., typologies) to interviewing and interrogation strategies, which are important to the process of finding, charging, and convicting suspected individuals of their criminal behaviour. Thus, the FBI’s attempts at contextualizing profiling within the investigative framework of sexual crimes provides insight into statistical profiling approaches that are currently lacking in investigative applications. From a research perspective, this insight is needed so that improvements can be made to help law enforcement officials throughout the criminal investigative process.

In terms of the empirical research on offender profiling, it should be acknowledged that it substantiates the *homology and consistency* assumptions necessary for the profiling tool to be effective in aiding criminal investigations. This body of literature also highlights the current limitations in profiling violent crimes, such as

sexual assault, particularly as it relates to the limited attention that situational factors have received in the process of linking crime scene behaviours to offender characteristics. Furthermore, one of the most important gaps in the current profiling literature is the link between the offender's modus operandi and his personal characteristics to specific interviewing and interrogation strategies. In order to gain a better understanding of how offender profiles could be valuable to the process of interrogation, it is important to examine the explanations for decision-making strategies to confess or deny involvement in a sexual assault.

2.2. Explanatory Models of Confession

Gudjonsson (2006) provides a good overview of the reasons behind suspects' decisions to confess during interrogation. They include suspects' perceptions of whether the evidence against them is strong, their need to relieve feelings of guilt or shame, the difficulty of coping with custodial pressures of confinement and interrogation, and the suspects' focus on the immediate costs and benefits of their actions rather than long-term consequences. Gudjonsson (2006) further suggests that individual suspect differences in personality, intellectual, cognitive and emotional attributes are also important in some of these models. However, the aforementioned attributes can also be indicators of suspects' suggestibility and compliance, which could lead a vulnerable individual to falsely confess to a crime that he did not commit. Nonetheless, a few of these models also emphasize that suspects' decisions during the interrogation could be affected by a multitude of factors such as their background, relationships, the interviewer and the interrogation environment, and the contextual characteristics of the case.

Early psychoanalytic models by Reik (1959) and Berggen (1975) rely on the assumption that people are motivated to confess because they need to overcome feelings of guilt or remorse and that the unconscious compulsion to confess plays an important role in a number of social activities, including crime. In other words, individuals who developed a punitive superego will have excessive feelings of guilt and need for self-punishment.

This may contribute to a person's confession, and at times a false confession, because it is viewed as an outlet for his/ her guilt and is therefore cathartic. In addition, to feel relieved, the person has to confess to an individual in a position of authority, such as a priest or a police officer.

Irvin and Hilgendorf (1980) outlined another model of confession during a review for the Royal Commission on Criminal Procedure. This model focused on the decision-making of suspects during custodial interrogations, with an emphasis on the legal concepts of voluntariness and oppression. The key tenet of this model is that suspects engage in a demanding decision-making process during interrogation that includes trade-offs among decisions whether to speak or invoke the right to silence, to make incriminating self-admissions, to tell the truth, and how to answer factual questions. Furthermore, the suspect's decisions are determined by his or her perceptions of the available courses of action, his subjective perceptions of the various consequences that may result from those actions, as well as his subjective views of the benefits of those various courses of action. Suspects must also consider the relatively short-term and long-term consequences that are likely to follow from each. The decision to confess or not is basically a product of the various decisions that the suspect makes during the process of custodial interrogation.

Irvin and Hilgendorf (1980), based on their review, believe that an innocent suspect may initially confess to a crime that he did not commit during the interrogation because he believes that his innocence will be revealed at a later stage in the criminal justice process. As a result, threats and inducements, stated or implied, could have a large impact on the decision to confess due to the power imbalance between the suspect and the police who have the final say in the outcome of the interrogation. Furthermore, interrogation could undermine the validity of a suspect's confession when investigators employ socially and psychologically manipulative tactics that change the suspect's perception of the likely outcomes of different courses of action. In addition, Irvin and Hilgendorf (1980) assert that by using psychologically manipulative tactics, the interrogators impair the suspect's decision-making ability through increasing anxiety, fear, and discomfort by maximizing the costs of denial, and minimizing the costs associated with confession.

Moston, Stephenson and Williamson (1992) provided an interaction process model of confession that explains how suspect and case characteristics together influence the interaction between the investigator's style of questioning and the suspect's behaviour, and how this dynamic influences the outcome of the interrogation. These researchers assert that a suspect's initial response to an allegation is influenced by the interaction of three main sets of factors: (1) background characteristics of the suspect (e.g., age, sex, intelligence and personality) and the type and severity of the offense; (2) contextual characteristics of the case, such as the strength of evidence against the suspect; and, (3) the interviewer's questioning style. Overall, the model hypothesizes that the outcome of the interrogation is contingent on how these factors combine together.

Another cognitive-behavioural model of confession was described, and later elaborated on, by Gudjonsson (1992), where confessions materialize through the existence of a particular relationship between the suspect, the environment, and others of significance within that environment. Gudjonsson (1992) points out that in order to understand the relationship among the three elements in his model, it is important to look at the antecedents and consequences of confessing. According to Gudjonsson (1992), the antecedents are subjective states or events that occur prior to interrogation that may contribute to a suspect's confession (e.g., a state of shock, fatigue, social isolation, etc.). The consequences of confession refer to subjective states that could be immediate or long-term and typically include emotional (e.g., feelings of guilt and shame, uncertainty associated with confinement), cognitive (e.g., a suspect's beliefs about his rights, expectations for future treatment), situational (e.g., pain, fatigue or withdrawal from drugs), and physiological events (e.g., length and aversive nature of confinement).

One of the most influential models of confession was proposed by Inbau, Reid and Buckley (1986) that explained the processes of a suspect's resistance and denial, and how to overcome these processes through nine steps of interrogation. This model views interrogation as the psychological undoing of denial, which is assumed to be equivalent to deception. The model's most basic assumption is that people are unwilling to provide a confession, and therefore engage in deception to avoid the perceived negative consequences of doing so. In order for a suspect to confess, the perceived

consequences of confession have to be seen as more desirable than the anxiety associated with deception (Inbau et al., 1986). As a result, the investigator must confront the suspect with themes that are meant to help the suspect rationalize, project, or minimize the consequences of the crime that he has committed (Napier, 2010). A study by Leo (1996) demonstrates that interrogation strategies, such as appealing to the suspect's conscience, identification of contradictions in the suspect's statement, as well as praise and flattery, seem to influence the process of confession. Findings from Leo's (1996) study also demonstrate that these techniques allow the suspect to ease his guilt by providing moral justifications and psychological excuses that are effective in obtaining a confession.

Inbau et al (1986) interrogation technique has been received with a lot of criticism in the literature on suspect interrogation and confession, and has been reported as being manipulative, unethical, and something that could lead to a false confession when practiced on a vulnerable individual. Some researchers also believe that it is a technique that perpetuates offenders' distorted thinking, affecting their rehabilitation efforts post-conviction. The empirical research on this issue for the most part does not support these contentions. False confession rates in countries where the Reid technique is practiced have been few and far between, and when they did occur, they were attributed to misidentification, insufficient expertise, and officer misconduct (St-Yves and Deslauriers-Varin, 2009). Gudjonsson (2006) also argues that interviews with sex offenders need to be conducted in a 'softly fashion' and with the understanding of the suspected person's perspective and emotional needs in order to overcome their resistance. This perspective is supported by empirical research with sex offenders, who during their interviews, revealed that they would be more likely to confess to their crime if the police treated them in a humane manner, using a more personal approach, that includes empathy, friendliness and co-operation (Holmberg and Christianson, 2002; Kebell, Hurren, and Mazerolle, 2006).

In addition, the assumption that using offenders' cognitive distortions during interrogation to appear more empathic and understanding affects their rehabilitation is also not supported by research. In fact, the research states that individuals who neutralize their offending behaviour demonstrate a commitment to social norms, and

they understand that what they have done is wrong (Maruna and Mann, 2006). For example, recent meta-analytic studies show that taking responsibility is not consistently related to recidivism among sex offenders, other than the finding that offenders make post hoc excuses for what they have done (Hanson and Bussiere, 1998; Hanson and Morton-Bourgon, 2005). Taking all of these results into account, an important question, which poses a theoretical and empirical dilemma with regards to interviewing and interrogation practices, is whether they have an effect on suspects' decision-making to confess to their crime? Given that most confession models specify, either directly or indirectly, that the outcome of an interrogation is a function of interactions among offenders' backgrounds, contextual characteristics of the case, and interviewers' questioning styles, knowing which of these interactions are conducive to confession will be of great value to criminal investigations.

2.3. Empirical Indicators of Confession

One of the major challenges of suspect interviewing and interrogation is whether or not a suspect's decision to confess could be influenced through interviewing strategies specifically tailored to his characteristics and the type of crime he has committed. The opinions and empirical evidence on this matter vary considerably. For example, some researchers believe that an offender's decision to confess is made before interrogation commences, or at the very beginning, and therefore using psychologically manipulative strategies or persuasive methods is not essential to the process of interrogation (Baldwin, 1993; Bull, 2006; Evans, 1993; Irving and McKenzie, 1989; Moston, Stephenson and Williamson, 1992; Pearse and Gudjonsson, 1996; Pearse, Gudjonsson, Claire and Rutter, 1998). Conversely, other researchers believe that the majority of suspects intend to deny their criminal involvement, and when investigators apply interviewing and interrogation strategies, many of them succumb to the influence of these strategies and make incriminating statements or a full confession (Inbau, Reid, Buckley, and Jayne, 2001). Interestingly, Deslauriers-Varin (2006) noted that 43.5% of convicted offenders who confessed to investigators admitted that they were ready to do it at the beginning of the interrogation, whereas 31.5% of offenders stated that they initially planned to deny the allegations, but changed their mind during

interrogation. Furthermore, Deslauriers-Varin and St-Yves (2006) found that a suspect's decision-making process could be influenced to make a confession or inhibit it from taking place. More specifically, the results of their study demonstrated that 25% of convicted offenders admitted they had changed their initial decision during the interrogation process, with almost half of these individuals (46%) revealing that they had initially intended to confess, but changed their mind afterwards.

Another empirical work by Deslauriers-Varin, Beauregard and Wong (2011) examined confession as an initial and final decision that is influenced by contextual factors during interrogation. These researchers categorized their results into four groups of suspects based on these decisions. The first group, labelled the 'confessor – confessor' (36.4%), is someone who initially intended to confess and carried out that decision regardless of the contextual factors. The second group, called the 'non-confessor – non-confessor' (44.1%), are offenders who had no intention of confessing prior to interrogation and had not confessed during the interview despite the contextual factors. The third group of offenders, named 'confessors – non-confessors' (10.9%), are individuals who initially intended to confess but then changed their mind following exposure to contextual factors during interrogation. The final group of offenders, the 'non-confessors – confessors' (10.4%), are people who initially intended to deny their involvement in the crime, but changed their minds following exposure to contextual factors of the interrogation. The results of these studies beg the following questions: *what do we need to know prior to and during the interrogation to change a suspect's mind about confessing? What do we need to know prior to and during the interrogation to facilitate a willing suspect's decision to make incriminating statements or a full confession?*

A body of empirical literature examining the influence of various factors on confession provides a good indication of what could change a suspect's readiness to confess. The decision-making process during interrogation is influenced by a number of different factors that single-handedly, or in conjunction with one another, could lead to different interrogation outcomes. These factors include the age of the offender, his personality, his criminal background, the type and seriousness of the crime he has committed, as well as a number of contextual factors (e.g., legal advice, quality and

strength of the evidence, and interviewing/interrogation strategies). To date, the majority of the empirical literature on confession has focused on offender characteristics and the context of the interrogation process itself. Researchers are now beginning to examine how crime specific factors relate to offenders' decisions to divulge any information with regards to their involvement in the crime, and this may have important implications in terms of how we look at the investigative process and suspect interviewing as a part of it.

Most, if not all, of the earlier studies on offender confession were intended to explore the efficiency of the criminal justice system, or they were conducted with the purpose of assessing the effect of the Miranda decision (i.e., advising suspects of their rights in the U.S.) on the context of interrogation. As a result, demographic characteristics of the offender, the crime he has committed, the nature of the evidence against him, as well as the interrogation strategies used by investigators became of primary interest to researchers. For example, Leiken (1970) studied the effect of the Miranda decision on the context of interrogation and he found that almost 43% of defendants under 25 years of age confessed to their crimes, whereas older offenders confessed only about 18% of the time. This result supported his assertion that older individuals are more likely to assert their rights. In addition, Leiken (1970) went on to speculate that adults are more psychologically mature, and thus more able to cope with the demands of interrogation, although general life experience and temperament have not been ruled out as plausible explanations for this association.

Similarly, Baldwin and McConville (1980) found that younger offenders are more likely to confess than older offenders, which coincides with the conclusions of another study in the United Kingdom that confirmed older offenders (aged over 21 years and above) are less likely to make an admission or fully confess than suspects who are 21 years of age and younger (Softley, 1980). On the other hand, Neubauer (1974) found that individuals who are 20 years old or younger confess at the same rate as older offenders, but when the type of crime is controlled for, age is no longer a significant factor associated with confession. This finding fits well with the conclusions made by Moston, Stephenson and Williamson (1992), who found no main association of age with confession.

In addition to age, race of the suspected individual has also been implicated in the decision-making process during interrogation, particularly in sexual offenses where differences between Caucasians and other ethnicities are especially pronounced (St-Yves, 2002, 2006a). A study by Leo (1996) found that Caucasian suspects are more likely to confess than suspects of other ethnic origin. On the other hand, empirical work by Deslauriers-Varin, Lussier and St-Yves (2011) found that non-Caucasian suspects are more inclined to confess than their White counterparts. However, it is important to note that other studies found no such association (e.g., Pearce, Gudjonsson, Claire and Rutter, 1998; Wald, Ayres, Hess, Schantz, and Whitebread, 1967). According to Philips and Brown (1998), this may be due to the fact that the relationship between ethnicity and confession may be moderated by other factors such as age, criminal background, and strength of the evidence.

Baldwin and McConville (1980) found that suspects who possess a criminal record are more likely to confess and provide a verbal or written statement of their guilt than suspects who do not have a criminal record. Furthermore, Neubauer (1974) demonstrated that offenders with a criminal record who committed a property offense confessed more than half of the time, however violent offenders with a criminal record confessed only in 15% of cases. In another study, Softley (1980) observed that suspected individuals with a previous criminal record are less likely to confess than suspects without a criminal history. In contrast to the aforementioned studies, Moston, Stephenson and Williamson (1992) found no main association between possessing a criminal record and confessing to a crime. However, a more recent study by Beauregard, Deslauriers-Varin and St-Yves (2010) found that criminal experience, such as specializing in sex offending or being a versatile offender with a diverse criminal history, is one of the most important predictors of confession. These researchers found that specialist sex offenders are more likely to confess than versatile perpetrators.

A suspect's employment and relationship status have also been considered in the literature on confession as factors that play a role in his decision-making during interrogation. Softley (1980) found that suspects who are employed are less likely to admit the responsibility for the crime than those who are unemployed at the time of the crime. However, this researcher also found that after age is controlled for, this

association is no longer significant. Conversely, Faller, Birdsall, Henry, Vandervort and Silverschanz (2001) found that in their sample of child molesters, those who were unemployed or had unskilled jobs were more likely to confess than offenders who were professionals. Furthermore, research has demonstrated that being married or in a relationship at the time of the interrogation is less likely to lead to a confession than being single (Deslauriers-Varin, Lussier, and St-Yves, 2011; St-Yves, 2006b). Interestingly, Beauregard and Mieczkowski (2011) found no significant association between a suspect's relationship status and the outcome of interrogation in their sample of sexual offenders.

Offenders' personality profiles are featured in investigative interviewing research as one of the main explanations as to why offenders confess. For example, a study by Beauregard, Deslauriers-Varin and St-Yves (2010) found that extroverted sex offenders are much less likely to confess than their introverted counterparts. This result conforms to what has been found in previous studies that suspects with antisocial and narcissistic features are less collaborative than those with introverted personality features (Bernard & Proulx, 2002; St-Yves, 2002, 2004a). An explanation for this finding could be that people with an extroverted personality are more prone to experiencing lack of remorse, while introverted suspects are likely to experience guilt and remorse, and this makes them respond differently to interrogation strategies (Gudjonsson and Sigurdsson, 1999; St-Yves, 2002; 2004b). To illustrate this point, Gudjonsson and Sigurdsson (1999) found that anxiety proneness (i.e., neuroticism) and compliance are significantly correlated with an internal need to confess, and to a lesser extent, with external pressure. The implication of these findings is that offenders who possess both anxious and compliant temperaments are more likely to make confessions to the police because they feel remorse and the need to 'get it off their chest' (Gudjonsson and Sigurdsson, 1999). The results also suggest that the internal need to confess is associated with one's inability to do so because of feelings of shame about the offence, and not wanting people to know what he has done. Gudjonsson and Sigurdsson (1999) point out that this is likely to be the case with sex offenders who often experience feelings of remorse, which facilitates a confession, but they simultaneously experience feelings of shame that function as an inhibition to making a confession. Furthermore, Beauregard, Deslauriers-Varin and St-Yves (2010) found that personality characteristics interact with age and the criminal

record of the offender. For example, a specialist sex offender who has an introverted personality and is younger than 40 years of age is associated with a higher chance of confession than if he were extroverted and older than 40 years of age.

The rate of confession has varied according to the type, and severity, of crime the suspect allegedly committed. For example, Neubauer (1974) points out that individuals accused of property crimes are more likely to confess than individuals suspected of drug offences or crimes against a person. It has also been suggested that within the category of crimes against a person, sexual offenses are less likely to result in a confession than other interpersonal crimes, and this might be explained by the negative perception such as shame, rejection or humiliation that is often associated with sexual crimes (Holmberg and Christianson, 2002; St-Yves, 2002; 2006a; 2006b). On the other hand, Mitchell (1983) found that suspects interrogated for sexual offenses confessed more readily than other types of offenders. However, other empirical research has found no consistent variation in confession rates by crime category (Baldwin and McConville, 1980; Deslauriers-Varin, 2006; Deslauriers-Varin, Lussier, and St-Yves, 2011; Moston, Stephenson & Williamson, 1992). Moston, Stephenson and Williamson (1992) did find that when it comes to crime severity, even when confronted with strong evidence, suspects are less likely to admit to the crime when severity of the offense is high (55%) than in cases (75%) where offense severity is low.

Aside from offender demographics and criminal history, contextual characteristics of a criminal case have also undergone empirical scrutiny. Moston, Stephenson and Williamson (1992) found that factors such as strength of the evidence and legal advice play a significant role in suspects' decisions to deny or admit to the crime. Importantly, this was one of the first studies to provide support for interactive, rather than just direct, effects of certain factors on offenders' decision to confess during interrogation. In terms of legal advice, Moston, Stephenson and Williamson (1992) found that if there is moderate evidence against a suspect without legal advice he is more likely to confess (48%), while those with legal advice tend to deny (51%) the allegations against them. Furthermore, in the face of strong evidence, suspects without legal advice are much more likely to admit to the crime (80%). Conversely, those who receive legal advice are

likely to confess much less frequently (49%), and when the evidence against a suspect is weak, there are no significant variations in denial or admittance during interrogation.

Another interesting relationship between strength of the evidence and confession was discovered by Softley (1980) who found that as the strength of the evidence increased, juvenile suspects denied an allegation more frequently (26%) than did older suspects (15%). Older suspects tended to neither admit nor deny an allegation by using their right to silence. Surprisingly, Softley (1980) also found that when the evidence was just of moderate strength, juvenile suspects were likely to deny the allegations less frequently than adults. In addition, Moston, Stephenson and Williamson (1992) found another moderating factor in the relationship between strength of the evidence and confession, suggesting that when the evidence against a suspect is strong, denial increases in proportion to the severity of the offense.

Furthermore, the outcome of the interrogation and strength of the evidence is moderated by suspects' previous criminal histories (Moston, Stephenson, and Williamson, 1992). That is, when the evidence is strong, the suspects without criminal records are much more likely to make an admission (78%), and although the rate of admission is lower for suspects with a criminal record, in the face of strong evidence against them, they are still more likely to confess (59%) during interrogation. In addition to these findings, Lippert, Cross, Jones and Walsh (2010) found that with the exception of suspect age, all of their confession predictors were associated with the strength of the evidence against the suspect, with the most powerful evidential proof being the child victim's disclosure. Most of the empirical evidence on confession thus far confirms the conclusion made by Moston and colleagues (1992) that relating individual variables to case outcomes, in the face of overwhelming evidence that suspects' characteristics, their criminal history and contextual factors of the case interact among each other, may contribute to erroneous results. In addition, empirical evidence has indicated that it is incorrect to treat case characteristics as independent factors that influence behaviour.

Some of the contextual case characteristics, such as victim characteristics as well as victim and offender interactions, have been understudied in the literature on suspect interviewing, particularly as it relates to sex offenders. In their examination of

confessions involving pedophiles, Lippert et al. (2010) found that several child-related case characteristics played a significant role, including the child's age, child-suspect relationship and sexual penetration. However, Lippert and colleagues (2010) contend that it could be due to the fact that these variables partially, or completely, correlated with child disclosure. These researchers also note that the context surrounding disclosure or non-disclosure, like a concerned family member reporting the abuse to the police, or family opposition and concern for the suspect, could support a suspect's admission or denial. Unlike Lippert et al. (2010), Faller and colleagues (2001) did not find significant associations among the child's gender, age at disclosure, or the child – suspect relationship and confession. However, these researchers did find that suspects of child sexual abuse were more likely to confess if allegations of penetration, with or without fondling, were involved, and that a partial confession was a more likely outcome in comparison to the offender admitting to all of the acts described by the child.

Another recent study by Beauregard, Deslauriers-Varin and St-Yves (2010) found that victim characteristics played an important role in an offender's decision to confess or not during interrogation. These results confirmed that if a sexual assault involved a female victim who came from a criminogenic environment, and is known to the suspect, then the case is not likely to be resolved through the offender's confession. However, if the victim is a stranger to his/ her offender, then the case is more likely to be resolved through a confession. Furthermore, these researchers found that an offender's modus operandi plays an important role in his behaviour in the interrogation room. Beauregard et al. (2010) found that sex offenders who commit their crimes during the day and use no force, or more force than necessary against their victim, are more likely to confess in comparison to those who committed a sexual assault using minimal force against their victim and for which the risks of apprehension were low.

In addition, Beauregard and Mieczkowski (2011) contend that a suspect's likelihood to confess is situated in a wider context than the interrogation room itself, and that the interplay of offender, victim and criminal event characteristics profoundly influences the dynamics of interrogation well before the actual interrogation takes place. In an attempt to observe possible relationships among confession and these 'pre-interrogation' factors, Beauregard and Mieczkowski (2011) found some interesting

patterns. For example, they noted that younger offenders who used at least some force against their victim, in the absence of any resistance from the victim, and those who used no force against the victim when he/ she offered some resistance were less likely to confess. Beauregard and Mieczkowski (2011) also found that older offenders are not likely to use any force against a child victim who offers no resistance, and that these offenders are also less likely to confess during interrogation. However, even for those older offenders who reported using force against their victims, confession was not a likely outcome during interrogation.

The results of the empirical work on contextual characteristics of confession specific to cases of sexual assault highlight the importance of the offender's characteristics, his actions during the crime, and his victim choice, with regards to his decision to confess or not during interrogation. More importantly, they highlight the fact that many offenders may make a decision about whether or not to confess to the crime before the actual interrogation takes place. This evidence has enormous implications for the field of offender profiling because it demonstrates that compiling just the personality and demographic characteristics of the perpetrator may not be sufficient to aid investigators in their interrogation efforts. In addition, the results of the previous studies also demonstrate that the offender's victim choice, his behaviour during the crime, and his interaction with the victim may correspond to different patterns of decision-making during interrogation. Therefore, all of these factors should be taken into account when constructing offender profiles for investigative purposes.

Chapter 3. Purpose of the Study

Current research demonstrates that objective physical evidence is not reliable proof of an offender's guilt in sexual assault investigations. Ultimately, this means that in the absence of objective proof or corroborating witness statements, the resolution in a sexual assault case relies on the word of the victim against that of the offender. In cases like this, an offender's confession may be the best, and sometimes only, proof of guilt. However, most research on confession has paid attention to factors that either constitute personal vulnerabilities, which may lead an innocent person to confess, or on contextual factors of the interrogation itself (e.g., interrogation styles, availability of evidence, availability of counsel, etc.). The lack of understanding of what factors lead to confession beyond individual vulnerabilities and the context of interrogation necessitates research that concentrates on what works in terms of influencing a suspect's decision to admit his guilt.

Interestingly, recent research on suspect confession found that the decision to admit or deny involvement in a crime might be influenced by the interplay of factors that precede the actual interrogation (Deslauriers-Varin, 2006; Deslauriers-Varin, Beauregard and Wong, 2011). More importantly, this research highlights the fact that these 'pre-interrogation' factors allow a suspect to follow through with his initial decision to confess or not, even after being exposed to the context of the interrogation (Deslauriers-Varin, Beauregard and Wong, 2011). Therefore, law enforcement officials should take into consideration the context of the crime, as well as the individual characteristics of the offender, when preparing to interrogate a suspect. These results have important implications for offender profiling and the possibility of linking suspect profiles to specific interviewing strategies, in order to improve the probability of obtaining a confession.

Therefore, the purpose of this study is to (a) create suspect profiles that are based on sex offender characteristics relevant to sexual assault investigation, and

empirically linked to sex offender confession; (b) create victim profiles based on factors that are relevant to profiling offenders' victim selection strategy, and that are empirically linked to sex offenders' decisions to confess or not during interrogation; (c) examine both victim and offender profiles in order to assess the significant victim-offender profile combinations and their associated probabilities of resulting in confession (e.g., non-confessor offender profile/ victimology profile associated with denial, or confessor-offender profile/ victimology profile associated with denial); and, (d) suggest possible interrogation strategies for various offender-victimology profile combinations that may have practical implications for sexual assault investigations.

Chapter 4. Methods

4.1. Participants

The sampling frame for this study includes adult males who were serving a sentence of 2 years or more at a Canadian federal prison for a sexual offense. The participants were recruited for a survey between April 1994 and June 2005, and they signed a consent form that indicated all information gathered during the study would be used for research purposes only. The participation rate in this study was 93%, with 624 offenders agreeing to take part in the research project. During the survey, the majority of the offenders were incarcerated at a maximum-security institution, Regional Reception Centre, which is under the jurisdiction of the Correctional Service of Canada. The inmates stay at this institution, on average, for 8 weeks, during which they undergo correctional assessment procedures before being transferred to an institution appropriate to their level of risk and treatment needs. Most of the participants in this study were White (87.7%), 39 years old on average (SD=12.0), and they were serving an average sentence of 4.2 years (SD=3.6). The majority of the perpetrators offended against female victims (81.4%), and just under half of these victims (44.9%) were 12 years of age or younger. In addition, 30.6% of the offenders in this sample were sexual recidivists.

4.2. Procedures

The data for this study were collected during a semi-structured interview with each participant, using Computerized Questionnaire for Sexual Aggressors (CQSA; St. Yves, Proulx, and McKibben, 1994). CQSA is an interviewing guide that contains questions on the offender's life, criminal activity, correctional information, as well as pre-crime, crime, and post-crime behaviours and attitudes. The interviewing guide also

contains details on victimology, developmental factors, and psychiatric diagnoses. Other details about the participants' criminal activity were obtained from police records, victim statements, and institutional case files. In cases of disparity between self-reported behaviours and official data, the researchers used official data records. The mean kappa for inter-rater reliability, based on 16 interviews and consultation of official records, was 0.87, which indicates very strong agreement between the two raters who jointly conducted this procedure.

4.3. Measures

The measures in this study include theoretically and empirically relevant indicators of confession, which are divided into suspect-related and victim-related sexual assault characteristics. These measures are chosen specifically to represent *offender profiles* and *victim profiles* as they are generally assessed in the criminal investigation of sexually violent crimes (Napier, 2010). Offender-related characteristics that have an effect on confession include age of the offender, relationship status of the offender, his employment status, his personality, and his criminal career. Age of the suspect is coded dichotomously (*0= less than 30 years old; 1= more than 30 years of age*). Much of the literature indicates that younger offenders are more likely to make a statement that implicates them in the sexual assault, or make a full confession during interrogation, as opposed to older offenders who are much less likely to do so (Beauregard, Deslauriers-Varin and St-Yves, 2010; Beauregard and Mieczkowski; Leo, 1996; Mitchell, 1993; Gudjonsson, 2003).

The next indicator, relationship status of the suspect, is also coded dichotomously (*0= single; 1= in a relationship*). If an offender is coded as being in a relationship, this would include offenders who are dating someone, cohabitating with a partner, or who were married at the time that they were charged with the sexual assault. Research has shown that offenders who are in a relationship or married at the time of the sexual assault investigation, are much less likely to make any incriminating statements or give a full confession (Deslauriers-Varin, Lussier, and St-Yves, 2011; St-Yves, 2006). The next variable, offender's employment status, is coded dichotomously as well (*0= unemployed; 1= employed*). Employment status of the offender has also

been found to have a relationship to confession during interrogation, with unemployed offenders being more likely to confess than those offenders who are employed (Beauregard and Mieczkowski, 2011; Faller, et.al. 2001).

A personality indicator refers to diagnoses made by a psychologist with the aid of the Diagnostic and Statistical Manual of Mental Disorders (4th edition). Beauregard, Deslauriers-Varin and St-Yves (2010) used a two-step cluster analysis on the seven personality variables to limit the number of predictors for the purposes of their research. The final clusters were utilized as a variable for the current study. The first cluster includes a personality profile that is characterized by antisocial, borderline, narcissistic, and impulsive personality disorders. On the other hand, the second cluster is characterized by avoidant, dependent, and passive-aggressive personality disorders (Beauregard, Deslauriers-Varin and St-Yves, 2010). Based on the results of the two-step cluster analysis, the variables were coded dichotomously (*0=introverted; 1=extroverted*). Personality is included in the study because research has shown that different outcomes are associated with those who have an introverted or extroverted personality profile. Previous studies that examined personality characteristics found that offenders who are introverted are more likely to make a confession than offenders who have extroverted profiles (Beauregard, Deslauriers-Varin and St-Yves, 2010; Beauregard and Mieczkowski, 2011; Gudjonsson, 1999; Gudjonsson and Sigurdsson, 1999).

The next indicator, criminal career, is coded dichotomously (*0=specialist; 1=versatile*). This variable was also created in the study conducted by Beauregard, Deslauriers-Varin and St-Yves (2010) who used a two-step cluster analysis of five criminal career variables. Late onset of offending, lack of crime variety, perpetration of few sexual offenses, and very few crimes against property or persons characterize the specialist criminal career cluster. Conversely, an early onset of offending, perpetration of a few sexual crimes, but an abundance of crimes committed against property and persons characterize the versatile criminal career cluster (Beauregard, Deslauriers-Varin, and St-Yves, 2010). Some studies found that offenders with a previous criminal record are more likely to confess (Beauregard, Deslauriers-Varin, and St-Yves, 2010; Beauregard and Mieczkowski, 2011; Leo, 1996), and that suspects with a versatile criminal career are less likely to confess during interrogation as opposed to those with a

specialist criminal career (Baldwin and McConville, 1980; Beauregard, Deslauriers-Varin, and St-Yves, 2010; Beauregard and Mieczkowski, 2011).

Suspect-related characteristics also include two crime-specific contextual variables. Contextual characteristics specific to sexually violent crime are of interest in this study because most research on confession has focused on the context of the actual interrogation room, and very few studies have examined how contextual characteristics of sexual assault influence the offender's decision to confess before the actual interrogation takes place. In light of recent findings, the pre-interrogation context is very important to examine because some sex offenders already establish whether or not they will confess, and follow through with that decision, despite the interrogation room environment (Beauregard, Deslauriers-Varin, and Wong, 2010).

The contextual characteristics that are related to the outcome of the sexual assault interrogation are use of force, and whether or not the offender forces the victim to perform sexual acts. Use of force was originally coded as an ordinal variable with three categories (*0= no force; 1= minimal force; 2= more force than necessary*). Minimal force refers to the offender applying just enough force to subdue his victim during the course of the sexual assault. The offender's use of more force than necessary refers to the application of extreme force that would be beyond what is needed to subdue the victim. For the purposes of this analysis, use of force was dichotomized (*0 = no force/ minimal force; 1= more force than necessary*) to better capture how the severity of the sexual assault impacts offenders' decisions to confess. When offenders use force they are generally less likely to confess than offenders who do not use force during the sexual assault (Beauregard and Mieczkowski, 2011). Lastly, forcing the victim to perform sexual acts is coded dichotomously (*0=no; 1=yes*), and refers to offenders asking the victim to perform various forms of intrusive and non-intrusive sexual activity either on themselves or the offender. This variable has been previously tested as an indicator of confession, and the results demonstrate that when offenders force their victims to perform sexual acts they are less likely to confess (Beauregard and Mieczkowski, 2011). In addition, Faller et al. (2001) examined the acts of sexual fondling and penetration in the context of confession, and found that sexual coercion is related to pedophiles confessing during interrogation.

Following *offender profile* indicators, variables tapping into *victim profiles* were selected for this study. These indicators are individual and contextual factors of sexual assault, pertaining specifically to demographic and behavioural characteristics of the victim that impact the offender's willingness to confess or not during interrogation. These variables include age of the victim, gender of the victim, whether the victim comes from a criminogenic environment, and the victim's relationship with the offender. Age of the victim was originally an ordinal measure (*0=12 and under; 1= 13-17; 2=18 and older*), but it was dichotomized in the current study (*0 = less than 13; 1= 13 and older*). Although there is evidence to suggest that this variable may have no impact on a sexual offender's willingness to confess (Faller, et al., 2001), it is still theoretically relevant because it allows for the distinction between rapists and pedophiles, who have been found to have different likelihoods of confession (Beauregard and Mieczkowski, 2011; Gudjonsson and Sigurdsson, 2000).

Gender of the victim is coded dichotomously (*0= female; 1= male*) and is included in this study because it has been shown to be an important indicator of confession. Gender was found to have a relationship to confession when the victim is a male, and to a non-confession outcome when the victim is a female (Beauregard, Deslauriers-Varin, and St-Yves, 2010). Whether or not a victim is from a criminogenic environment (*0= no; 1= yes*) has also been previously linked to whether or not offenders confess to their crimes. Specifically, it has been found that when the victim does not come from a criminogenic environment the offender is not likely to confess during interrogation (Beauregard and Mieczkowski, 2010). A criminogenic environment refers to a victim living under conditions that do not provide sufficient resources to meet the basic needs of life (e.g., sleeping, eating, clothing, housing, and security), as well as exposure to physical, sexual, and psychological abuse, prostitution, or alcohol and drug abuse. Furthermore, the victim's relationship to the offender, originally trichotomized (*0= stranger, 1= related, 2= known/linked*), but dichotomized in the current study (*0= stranger; 1= known/related*), has been found to be a significant factor for the outcome of an interrogation. When the victim is a stranger, the offender is more likely to confess than when the victim is either known or related to him (Beauregard and Mieczkowski, 2010). However, Faller et al. (2001) suggests that there may be no association between the offender-victim relationship and confession.

In this *victim profile* set there are also two confession indicators that take into account the situational factors of sexual assault. These factors include victim resistance and whether the victim sustained injury during the crime. Victim resistance was coded as a nominal variable initially (0= no resistance; 1= verbal resistance; 2= physical resistance). However, it was dichotomized (0= no resistance; 1= resistance) in the current study namely to determine if the victim offered resistance or complied with the offender's demands, rather than the kind of resistance that was demonstrated by the victim. Resistance by the victim has been previously examined as an indicator of confession, in conjunction with other variables, indicating that it is differentially related to confession based on its relationships with other confession indicators (Beauregard and Mieczkowski, 2010). The main reason why these variables are included in this study is due to the fact that previous sex offender profiles have been criticized for not taking situational contingencies of sexual assault into account.

Victim injury is the next indicator for confession in the *victimology profile* and it was coded as a dichotomy (0= none; 1=physical injury). This variable is important because it is an indicator of the severity of the sexual assault. Although there are no studies known to the author that link victim injury to confession, it has been found that offenders who commit crimes more severe crimes are less likely to confess, even if presented with strong evidence against them (Moston, Stephenson, and Williamson, 1998). Furthermore, for both sets of offender-related and victim-related characteristics, the confession variable (0 = did not confess; 1= confessed) is added as a covariate to influence the formation of both the *offender* and *victimology profiles*.

4.4. Analytical Strategy

The primary analytical strategy in this study is Latent Class Analysis (LCA). In technical terms, LCA postulates that some number of parameters of a specified statistical model differ across unobserved subgroups, which form the categories of a categorical latent variable (Vermunt and Magidson, 2003). LCA is a person-focused approach designed to identify latent classes within a group of individuals based on at least two or more indicator variables (Francis, Bowater, and Soothill, 2004). The main goal of this statistical technique is to group people into categories, whereby individuals

within a group are similar to each other, but also qualitatively different than other groups of individuals (Muthen and Muthen, 2000).

LCA analysis was first introduced by Lazarsfield in the 1950s, who used this method to build typologies based on dichotomous observed variables (Vermunt and Magidson, 2003). A couple of decades later, Goodman (1974) brought this modeling technique into practice by developing an algorithm for obtaining maximum likelihood estimates of the model parameters (Vermunt and Magidson, 2003). Over the years, various extensions of the latent clustering technique were proposed, and the improvements in these various options made it a much more practical, and powerful, analytical tool over other clustering methods. An important benefit of LCA is that it classifies people into groups based on membership probabilities estimated directly from the model, as opposed to traditional classification algorithms that group cases near each other in accordance to some definition of distance (Magidson and Vermunt, 2002).

Furthermore, LCA does not rely on the traditional assumptions of modeling such as having a linear relationship, normal distribution, and homogeneity that are often violated in practice (Magidson and Vermunt, 2002). However, LCA has a basic assumption of local independence. This assumption states that the observed items are independent of each other given an individual's score on the latent variables (Vermunt and Magidson, 2002). Stated otherwise, it means that the latent variable should be the source of the correlation among observed items, and should fully account for these associations. Sometimes this assumption is not met, or it is not desired for all of the observed items to be independent, so this assumption can be relaxed by including direct effects (allowing items to correlate) in the model. The local independence assumption will be checked in this study by looking at values of error correlations or bivariate residuals (BVRs), which are supposed to be not substantially larger than one. If any BVRs substantially larger than one are observed the number of classes will be increased until the relationships are well-reproduced by the model (Vermunt and Magidson, 2005).

Another benefit of using the LCA technique is improved cluster or segment description based on the relationship between latent classes and covariates or auxiliary variables. Also, it is important to acknowledge that in comparison to other clustering

techniques, LCA modeling allows assessment of the covariates or auxiliary variables simultaneously with the identification of the classes (Magidson and Vermunt, 2002). Assessing classes together with covariates helps eliminate an additional stage of analysis that is performed in traditional clustering techniques to relate the cluster results to covariates, be they demographic or otherwise (Magidson and Vermunt, 2002). Furthermore, it eliminates the possibility of having biased estimates when classes are used as observed variables in analyses that relate these latent classes to their covariates that were not included in the model (Clark and Muthen, 2009).

The covariate option will be used for the purposes of this study because latent profiles of offender and victim characteristics will be estimated with the confession variable to determine how they are related to confessing or not during an interrogation. In LatentGOLD 4.5 software, covariates or auxiliary variables can be included as “inactive” or “active” (Vermunt and Magidson, 2005). If they are “inactive”, the same model parameters are obtained when no covariates are specified at all, with the output showing relationships between classes and the covariates without altering model parameters (Vermunt and Magidson, 2005). However, when the covariates are “active”, additional parameters (gammas) are included in the latent class models, which are estimated concurrently with the indicators (betas), and thus affect these model parameters. Due to the theoretical and practical interests of this research, the “active” covariate option will be used, as it is of absolute importance that it affects the “levels” of the latent categorical variable.

An example of a latent class model with a covariate can be observed in **figure 1**, where a latent class, as well as the observed items that define that class, are demonstrated. The boxes u_1 and u_2 in the diagram represent observed items that are measuring the latent class C , which is an unordered, categorical latent class variable with K classes. The arrows in the diagram indicate that the latent variable C is predicting the observed items, or explaining the correlations among the observed outcomes u_1 and u_2 (Clark and Muthen, 2009). Importantly, it can also be observed in **figure 1** that a covariate X is predicting the categories of the unordered latent class variable C , through its impact on the observed response pattern of the items.

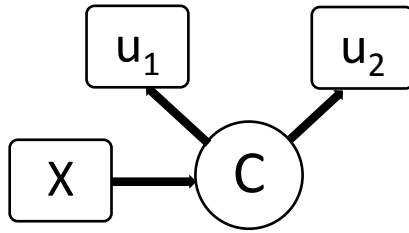


Figure 4.1. Latent Class Model with a Covariate
 Note: Adapted from Clark and Muthen (2009).

The categorical latent class example with a covariate represented in **figure 4.1** could be modeled through multinomial logistic regression as:

$$P(c_i = k | x_i) = \frac{e^{a_k + y_k x_i}}{\sum_{s=1}^K e^{a_s + y_s x_i}}$$

where $a_k = 0, y_k = 0$ so that $e^{a_k + y_k x_i} = 1$, implying that the log odds of comparing class k to the last class K is:

$$\log \left[\frac{P(c_i = k | x_i)}{P(c_i = K | x_i)} \right] = a_k + y_k x_i.$$

Along with model specification options, LCA provides various model fit statistics in order to be able to choose the best solution available. These statistics are L-squared, Chi-squared and Cressie-Read (Vermunt and Magidson, 2005). L-squared is the likelihood ratio goodness of fit value, and the latter two are alternatives to L-squared that should yield a similar value if the model fits. All of these chi-square based statistics should be above significance level of 0.05 to be valid, and demonstrate a good model fit. In addition, a few different information criteria can be used to compare models in terms of their fit, and include Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), and Consistent Akaike Information Criterion (CAIC). These information criteria are based on the log-likelihood statistic of the fitted model and take into account the parsimony, degrees of freedom, and the number of parameters, to assess model fit. When comparing the models with different restrictions, the lower the values of AIC, BIC or CAIC, the better the model fit (Vermunt and Magidson, 2005).

Besides chi-squared statistics and information criteria, the conditional bootstrap option provides assistance in assessing the improvement of a model. This option imposes one or more testable restrictions on another model by estimating a p-value (Vermunt and Magidson, 2005). The conditional bootstrap is a more general test than the -2LL option and it can be used to assess the statistical significance of imposing any set of model restrictions (Vermunt and Magidson, 2005). If the difference in model fit between two models is not significant, than the more restricted model is preferred on the grounds of being more parsimonious. However, if the difference is significant, the less-restricted model is preferred over the more restricted one (Vermunt and Magidson, 2005). This bootstrap procedure will be applied in this study to test whether an additional class improves the model fit, or whether a more parsimonious model should be the preferred solution.

Along with the model fit, classification statistics may be used to assess how well the model classifies the cases into clusters. The classification error statistic reports the proportion of cases that are misclassified when the classification of cases is based on model assignment. The closer the classification error is to zero, the better the classification of the cases into clusters (Vermunt and Magidson, 2005). Furthermore, Reduction of Errors, Entropy R-squared, and Standard R-squared can be used to

determine how well the model can predict class memberships based on the indicators and covariates. Values that are closer to one indicate better class membership prediction (Vermunt and Magidson, 2005). The information criteria statistics, classification statistics, as well as the bootstrapping procedure will be used to assess model fit in this study.

Following model fit assessment, the parameters of the model should be examined to identify substantively interpretable clusters of people who are similar to each other, but qualitatively distinguishable from other clusters. There are two types of LCA model parameters: item parameters and class probability parameters. For LCA models with categorical outcomes, the item parameters correspond to the conditional item probabilities. These item probabilities are specific to a given class, and they give the probability that an individual within that class endorses any given item. On the other hand, the class probability parameters just specify the relative size of each class (Nylund, Asparouhov, and Muthen, 2007, p. 539).

Chapter 5. Results

First, frequency counts are examined for the sample of offender and victim-related case characteristics. As demonstrated in **Table 5.1**, more than half of the sampled sexual assault cases (55%) involve offenders that are younger than 40 years old. The majority of the cases also include offenders who are single (66.2%) and who are unemployed (66.2%) at the time they committed their sexual offense. In terms of personality, half of the offenders (49.8%) possess introverted features, and the majority of them (66.5%) are considered to be specialists. With regards to offenders' behavioural characteristics, many used more than necessary force (36.5%) against their victims during the perpetration of the sexual assault, and just over half of the offenders (55.9%) forced their victims to perform sexual acts. Furthermore, just fewer than half of the offenders in this sample (42.8%) made a decision to confess to the sexual assault during interrogation.

Table 5.1. Descriptives for Offender-Related Case Characteristics

Variables	%	(n)
OFFENDER-RELATED CASE CHARACTERISTICS		
Age		
Less than 40	55.4	346
Relationship Status		
Single	66.2	413
Employment Status		
Unemployed	59.5	371
Personality Clusters		
Introverted	49.8	311
Criminal Career Clusters		
Specialist	66.5	415
Use of Force		
More than Necessary	36.5	228
Offender Forced Victim to Perform Sexual Acts		
Yes	55.9	349
Confess		
Yes	42.8	267

In just under half of the sexual assault cases (44.9%), the victims are children 12 years of age and younger, with 18.6% of cases involving a victim of male gender. Some of these victims (34.3%) are also more likely to have come from a criminogenic background. Furthermore, a substantial number of the victims in this sample of sexual assaults (81.1%) are either related to, or know, their offenders (81.1%). In terms of the victims' behaviours during the perpetration of the crime, a slight majority (55.1%) offered either verbal or physical resistance to their offenders' sexual advances, and some of these victims (36.7%) suffered physical injuries at the hands of the perpetrator.

Table 5.2. Descriptives for Victim-Related Case Characteristics

Variables	%	(n)
VICTIM-RELATED CASE CHARACTERISTICS		
Age		
Less than 13	44.9	280
Gender		
Male	18.6	116
Victim is From Criminogenic Environment		
Yes	34.3	214
Relationship to Offender		
Known/Related	81.1	506
Victim Resistance		
Yes	55.1	344
Injury		
Yes	36.7	229

Following the frequency counts, bivariate relationships are examined to determine the influence of offender and victim-related case characteristics on offenders' decision to confess or not during police interrogation. Offender traits such as relationship status and employment status, as well as the behavioural indicator of force used during the crime were found to be insignificant. However, these variables will be interpreted and kept for further analyses due to their theoretical relevance (see Beauregard et al., 2010; Deslauriers-Varin et al., 2011; Faller et al., 2001; St-Yves, 2002). In Table 5.3 it can be observed that offenders who are younger than 40 years old (61.8%), single (68.5%), and unemployed (61.4%) are more likely to confess. Regarding personality and criminal career, those offenders who make a decision to confess are likely to be introverted (56.2%), and to present a specialist criminal career (75.3%). In terms of behavioural characteristics of the offenders, using more force than necessary (37.1%) and not forcing the victim to perform sexual acts (48.7%) are also related to offenders' decisions to confess.

Table 5.3. Bivariate Results on the Influence of Offender-Related Case Characteristics to Confess or Not Confess during Police Interrogation

	Do Not Confess (N=357) %(N)	Confess (N=267) %(N)	χ^2	Phi Coefficient
OFFENDER-RELATED CASE CHARACTERISTICS				
Age			7.615	-.110**
Less than 40	50.7(181)	61.8(165)		
Relationship Status			1.155	-.043
Single/Lives Alone	64.4(230)	68.5(183)		
Employment Status			.750	-.035
Unemployed	58(207)	61.4(164)		
Personality Clusters			6.764	.104**
Introverted	45.7(163)	56.2(150)		
Criminal Career Clusters			16.130	-.161***
Specialist	59.9(214)	75.3(201)		
Use of Force			.059	.010
More than Necessary	36.1(129)	37.1(99)		
Offender Forced Victim to Perform Sexual Acts			4.039	-.080*
No	40.6(145)	48.7(130)		

Note: *** p<.001; ** p <.01; * p<.05

With regards to victims' characteristics, the age of the victim, victim resistance, and whether or not the victim sustained an injury are not significant variables in these bivariate analyses. However, due to their theoretical relevance, in conjunction with previous findings that have found support for their relationship with an offender's decision to confess, they will be interpreted and retained for further analyses. As shown in **table 5.4**, sexual assault cases involving victims who are younger than 13 years old (46.4%), and victims who are male (22.5%), are more likely to result in confession. Furthermore, sexual assault cases that result in the offender deciding to confess are more likely to include victims who do not come from a criminogenic environment (72.3%), and who are likely to be strangers (23.6%) to their perpetrators. Also, offenders are more likely to confess if the assault included no verbal or physical resistance by the

victims (46.1%), and if physical injury is inflicted on the victims (38.2%) during the sexual assault.

Table 5.4. Bivariate Results on the Influence of Victim-Related Case Characteristics to Confess or Not Confess During Interrogation

	Do Not Confess (N=357) %(N)	Confess (N=267) %(N)	χ^2	Phi Coefficient
VICTIM-RELATED CASE CHARACTERISTICS				
Age			.465	-.027
Less Than 13 Years	43.7(156)	46.4(124)		
13 Years and Older	56.3(201)	53.6(143)		
Gender			4.648	.086*
Female	84.3(301)	77.5(207)		
Male	15.7(56)	22.5(60)		
Victim is From Criminogenic Environment			8.966	-.120**
No	60.8(217)	72.3(193)		
Yes	39.2(140)	27.7(74)		
Relationship to Offender			6.681	-.103**
Stranger/ Not Related	15.4(55)	23.6(63)		
Known/Related	84.6(302)	76.4(204)		
Victim Resistance			.270	-.021
None	44(157)	46.1(123)		
Verbal/Physical	(56)200	(53.9)144		
Injury			.454	.027
None	64.4(230)	61.8(165)		
Physical Injury	35.6(127)	38.2(102)		

Note: *** p<.001; ** p <.01; * p<.05

After examination of bivariate relationships among offenders' decision to confess or not and all of the variables included in the study, latent class analysis is performed to identify underlying groups of offender-related and victim-related case characteristics. Two models with one to six classes are tested in these analyses, with two sets of indicator variables that encompass empirically and theoretically relevant measures.

Although more potential class solutions could have been chosen, for reasons of parsimony one to six classes were the maximum selected class solutions. To determine the optimal solution for the classes, Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), and Consistent Akaike Information Criterion (CAIC) are considered. In **Table 5.5** these model fit measures provide an indication of how well each of the offender-related latent class solutions fits to the observations in the data, with the lowest values indicating the best possible fit.

Table 5.5. Fit Indices for All Possible Offender-Related Class Solutions

No. of Classes	AIC(LL)	BIC(LL)	CAIC(LL)	LL	Npar	Df	Class Error
Offender – Related Case Characteristics							
1	5048.5167	5075.1336	5087.1336	-2518.2584	6	120	.0000
2	4857.6340	4919.7401	4933.7401	-2414.8170	14	112	.1313
3	4801.5253	4899.1206	4921.1206	-2378.7626	22	104	.1877
4	4788.9331	4922.0176	4952.0176	-2364.4665	30	96	.1917
5	4781.9746	4950.5483	4988.5483	-2352.9873	38	88	.2054
6	4790.1132	4994.1762	5040.1762	-2349.0566	46	80	.2343

Note: AIC= Akaike Information Criterion; BIC= Bayesian Information Criterion; CAIC= Consistent Akaike Information Criterion; Df= Degrees of freedom; LL= Log likelihood; Npar= number of parameters; The values in bold represent the class solution that best fits to the data.

For the offender-related case characteristics, AIC favours a 5-class solution, whereas BIC and CAIC both suggest a 3-class solution. The five-class solution is selected for this set of indicators because the 3-class solution ($p = .005$) is below the accepted value of $p > .05$, which indicates that there is a significant difference in the fit between the 3-class solution and the data. Furthermore, even though AIC has been documented to over fit the data in comparison to BIC and CAIC in Monte Carlo simulations under different conditions, it has also been demonstrated to have the best overall performance for binary latent class models (Dias, 2006). That being said, AIC will be the information criterion relied upon in this case since the BIC and CAIC seem to under fit the data with a conservative estimate of a 2-class solution that is significantly different from the observed data, and thus constitutes a poor fit.

However, in order to make sure that the 5-class solution is the best possible fit to the data, the bootstrapping procedure is employed to validate the final class solution being selected for offender-related case characteristics. The bootstrapping procedure is very useful when it is necessary to estimate model improvement with additional classes. The bootstrapping procedure confirms that the 5-class solution is an improvement in comparison to the 4-class solution, and that adding a 6th class does not significantly improve the fit to the data. Consequently, the 5-class solution is chosen as the final solution with the aid of the AIC and the bootstrapping procedure.

In terms of victim-related case characteristics, the AIC statistic in **Table 5.6** demonstrates that the 5-class solution is the best fit to the data. On the other hand, the BIC and CAIC both suggest a 2-class solution. In this case, similar to the offender-related indicator set above, the 2-class ($p = .001$) and the 3-class ($p = .02$) solutions are both below the accepted value $p > .05$ for a good model fit. Accordingly, the bootstrapping procedure is conducted to determine whether the 5-class model is the optimal solution to the data as suggested by the AIC fit index. The results of this procedure confirm that the 5-class solution constitutes an improvement on the 4-class solution, and that the addition of a 6th class does not improve the results. Therefore, based on the AIC and the bootstrapping procedure, the 5-class model is chosen as the final solution for victim-related case characteristics.

Table 5.6. Fit Indices for All Possible Victim-Related Class Solutions

No. of Classes	AIC(LL)	BIC(LL)	CAIC(LL)	LL	Npar	Df	Class Error
Victim-Related Case Characteristics							
1	4556.2169	4582.8338	4588.8338	-2272.1084	6	120	.0000
2	4209.1673	4271.2734	4285.2734	-2090.5836	14	112	.0793
3	4187.1616	4284.7619	4306.7619	-2171.5833	22	104	.1383
4	4180.2801	4313.3647	4343.3647	-2060.1401	30	96	.1617
5	4173.9120	4342.4858	4380.4858	-2048.9560	38	88	.1848
6	4175.1017	4379.1646	4425.1646	-2041.5508	46	80	.2373

Note: AIC= Akaike Information Criterion; BIC= Bayesian Information Criterion; CAIC= Consistent Akaike Information Criterion; Df= Degrees of freedom; LL= Log likelihood; Npar= number of parameters; The values in bold represent the class solution that best fits to the data.

Following model evaluation and selection of the optimal number of classes, the latent profiles of victim-related and offender-related case characteristics are examined based on conditional item probabilities, which reflect the likelihood of the cases falling into a certain class. Conditional item probabilities are comparable to factor loadings in factor analysis, and thus can be interpreted as percentages of cases within each of the latent clusters (Fox & Farrington, 2012). Before interpreting the profiles, it is important to note that the variable measuring the offender's relationship status was removed from the analysis because it was consistently insignificant in the offender-related models with different combinations of offender traits and behavioural indicators. **Table 5.7** displays the contents of the clusters, as well as the total percentage of the sampled cases within each profile.

Table 5.7. Comparison of Offenders' Characteristics and Behaviour across Classes

		Profile 1: Introverted Specialists	Profile 2: Versatile Extraverts	Profile 3: Immature Specialists	Profile 4: Unemployed Introverts	Profile 5: Aggressive Introverts
Total % of Offenders within Clusters		29.6	23.1	22.5	14.5	10.3
INDICATORS (% within clusters):						
Offender Age	Less than 40	21	77	74.5	42.1	83.5
	40 and Older	79.1	23	25.5	57.9	16.5
Offender's Employment Status	Unemployed	40.6	69.3	98.7	57.6	8.1
	Employed	59.4	30.7	1.3	42.4	91.9
Offenders' Personality Clusters	Extraverted	32	91.6	55.2	17.8	40.7
	Introverted	68	8.4	44.8	82.2	59.3
Offenders' Criminal Career Clusters	Specialist	83	16.3	66.2	92.8	95.4
	Versatile	17	83.7	33.8	7.2	4.6
Offender Used Force During the Crime	Minimal	87.3	40.4	52.4	99.4	20.2
	More than Necessary	12.7	59.6	47.6	0.6	79.8
Offender Forced Victim to Perform Sexual Acts	No	23	40.5	81.1	8.6	81.8
	Yes	77.1	59.5	18.9	91.4	18.2
COVARIATE (% within clusters):						
Offender's Decision During Interrogation	Did not Confess	90.5	77	41.5	3.9	26.9
	Confessed	9.6	23	58.5	96.1	73.1

The most common profile, *Introverted Specialists*, contains 29.6% of offenders out of the overall sample of sexual assaults. This group of offenders is more likely to be 40 years of age and older (79.1%), and have some type of employment at the time of the offense (59.4%). Furthermore, offenders in this cluster are likely to possess an introverted personality (67.1%), and present a specialist (83.1%) criminal career. These offenders are also more likely to use minimal force (87.3%) against their victims during the crime, and force their victims to perform sexual acts (77.1%). Lastly, the offenders in this class are highly unlikely to make any statements tying them to the crime or make a full confession (90.5%) during interrogation.

The second profile is composed of 23.1% of offenders from the total case sample. In comparison to the *Introverted Specialists*, these offenders, labeled *Versatile Extroverts*, are younger than 40 years of age (77.1%) and are likely to be unemployed (69.3%) at the time of the offense. Also, unlike the *Introverted Specialists*, these perpetrators tend to be extroverted (91.6%) and possess a versatile (83.7%) criminal career. At the scene of the crime these offenders use more force than necessary (59.6%) against their victims, and force them (59.5%) to perform sexual acts. These perpetrators are not inclined towards making statements about their culpability in the offense or confess (76.9%) when brought in for an interrogation.

The next group of offenders consists of 22.5% of the overall case sample. The offenders in this profile are also younger than 40 years of age (74.5%), and similar to *Versatile Extroverts*, they are very likely to be unemployed (98.7%) at the time of the offense and have an extroverted personality (55.2%). However, these offenders begin their criminal career later than do *Versatile Extroverts*, and they specialize (66.2%) in sexual offenses. In contrast to *Versatile Extroverts*, the perpetrators in this group use minimal force (52.4%) to subdue their victims and are not very likely to be successful (81.1%) at forcing their victims to perform sexual acts. Relying on the characteristics and behaviours that distinguish these perpetrators from other offender groups, they are labeled *Immature Specialists*. These offenders, in comparison to *Versatile Extroverts*, are more prone to divulging information related to their sexual offense or make a full confession (58.3%) during interrogation.

The next profile entails 14.5% of offenders. These sexual perpetrators are older than *Immature Specialists*, typically 40 years of age or older (57.9%), but they are also unemployed (57.6%) at the time of their offenses. Unlike the previous group of offenders, they have an introverted personality (82.2%), but similar to *Immature Specialists*, tend to start their sexual offending later in their life and they specialize (92.8%) in sexual offenses. These offenders also use minimal force on their victims (99.4%) during the sexual assault, but in contrast to *Immature Specialists*, they are able to force their victims (91.4%) to perform sexual acts. Due to the fact that the only distinguishing characteristics of these offenders are their unemployment status, combined with their introverted personality, this group is labelled *Unemployed Introverts*. Out of all of the offender groups, *Unemployed Introverts* have the highest tendency towards providing statements that may tie them to their sexual assault, or compel them to make a full confession (96.1%).

The last profile identified includes 10.3% of offenders. These offenders are younger than 40 years old (83.5%), and unlike the *Unemployed Introverts*, they are almost always employed (91.9%) when committing their crimes. This offender group is also afflicted with an introverted personality (59.3%), and often presents a specialist (95.4%) criminal career. The most distinguishing feature of this offender group is that they frequently use more force than necessary against their victim (79.8%), which is a pattern of behaviour similar to *Versatile Extroverts*; however, unlike *Versatile Extroverts*, they are not often successful in forcing their victims into performing sexual acts (81.8%). Thus, based on this distinguishing characteristic, these perpetrators are called *Aggressive Introverts*. Just like *Unemployed Introverts*, this offender group is quite likely to make statements that implicate them in the sexual offense, or make a full confession (73.1%) during interrogation.

With respect to victims' characteristics and behaviours during the crime, the largest percentage of sampled cases (44.5%) falls within the profile referred to as *Familiar Female Children*. These cases involve female victims (86.7%) who are younger than 13 years of age (78.6%), and these characteristics most distinguish this profile. *Familiar Female Children* do not come from a criminogenic environment (73.2%), are either known or related to the offender (97.3%), do not verbally or physically resist

offenders' sexual advances (70.2%), and they do not receive any physical injury (89%) from the offender. Thus, implicating statements or a full confession are not likely to be the outcome (59.5%) in cases involving this type of victim.

Table 5.8. Comparison of Victims' Characteristics & Behaviour across Classes

		Cluster 1: Familiar Female Children	Cluster 2: Adult Female Strangers	Cluster 3: Dysfunctional Adult Females	Cluster 4: Dysfunctional Male Children	Cluster 5: Resistant Male Children
Total Percentage of Victims within Clusters		44.5	22.3	20.6	8.8	3.8
INDICATORS (% within clusters):						
Victim's Age	Less than 13	78.6	4	4.7	60.1	72.2
	13 and Older	21.4	96	95.3	39.9	27.8
Victim's Gender	Female	86.7	95.6	97.2	11	12.9
	Male	13.3	4.4	2.8	89	87.1
Vulnerability of the Victim	Victim is not from a criminogenic environment	73.2	84	45.3	13.4	99.3
	Victim is from a criminogenic environment	26.8	15.5	54.7	86.6	0.7
Relationship to Offender	Stranger	2.7	61.1	12.2	8.5	22
	Known/Related	97.3	38.9	87.8	91.5	78
Victim Resisted During Offense	No	70.2	19.4	4	82.2	33.3
	Yes	29.8	80.7	96	17.8	66.7
Victim Received Injury During Offense	No injury	89	24.2	42.4	89.3	44.9
	Physical Injury	11	75.8	57.6	10.7	55.1
COVARIATE (% within clusters):						
Offender's Decision During Interrogation	Did not Confess	59.5	40.8	80.2	57.3	1.0
	Confessed	40.5	59.2	19.8	42.7	99

The second largest profile is composed of 22.3% of victims out of all sampled cases. Being a stranger victim (61.1%) is the distinguishing characteristic of this victim group. These victims are 13 years of age and older (96%) and the majority of them are female (95.6%). Due to these distinguishing characteristics, this victim profile is named *Adult Female Strangers*. Similar to *Familiar Female Children*, these victims do not come from a criminogenic environment (84.5%), but in contrast to *Familiar Female Children*, they are likely to verbally or physically resist offenders' attempts at sexual behaviour (80.7%), and thus they often receive physical injury (75.8%) during the assault. This victim profile is more likely to result in offenders' decisions to admit to certain aspects of the offense, or make a full confession (59.2%) during interrogation.

The next group of victims represents 20.6% of the overall sampled cases. Similar to the previous profile, victims in this group are 13 years of age and older (95.3%), and they are primarily female (97.2%). However, the distinguishing characteristic of this victim group is that they come from a criminogenic environment (54.7%), meaning they either live in poverty, are exposed to physical, psychological or sexual abuse, engage in prostitution, or are exposed to drug or alcohol abuse. Thus, this group is named *Dysfunctional Adult Females*. These victims are either known or related (87.8%) to their offenders, they verbally or physically resist their perpetrators' sexual attempts (96%), and they tend to suffer physical injuries (57.6%) during the assault. In cases involving this victim profile, the offender is not likely to admit to certain acts or fully confess to the crime during interrogation (80.2%).

The fourth type of victim profile involves 8.8% of the overall sampled cases. In comparison to *Dysfunctional Adult Females*, these victims are children who are younger than 13 years old (60.1%), male (89%), but who are also from a criminogenic background (86.6%). Therefore, this victim profile is named *Dysfunctional Male Children*. This group of male children is either familiar with or related to their offender (91.5%), and they do not verbally or physically resist the offender's actions (82.2%) during the sexual assault. Furthermore, the substantial majority of these male children (89.3%) do not experience any physical injury as a result of the assault, unlike *Dysfunctional Adult Females*. In the criminal cases involving *Dysfunctional Male Children*, the investigators

are not likely to persuade the offenders to make any statements revealing their culpability or get a full confession (57.3%) during interrogation.

The last profile composes a very small group of victims, with only 3.8% of the overall case sample. Similar to *Dysfunctional Male Children*, this group of victims also includes children younger than 13 years of age (72.2%) who are male (87.1%). In contrast to the previous group of male victims, this profile is characterized by victims not being from a criminogenic environment (99.3%) who verbally or physically resist the offender's sexual attempts (66.7%). These victims are also more likely to receive physical injury (55.1%) in comparison to their *Dysfunctional Male Children* counterparts. However, like the previous male victim group, these child victims are also known or related (66.7%) to the person perpetrating the assault. Based on the distinguishing characteristics of this group, and their differences with other victim profiles, they are named *Resistant Male Children*. In cases involving this victim group, offenders are most likely to divulge information related to the sexual assault or make a complete confession (99.1%) during interrogation.

After profile extraction, the final step in the analyses is to establish a link between offender and victim profiles to determine the most likely relationships among them. In order to accomplish this, chi-square tests of association are run to indicate which relationships among victim and offender profiles are significantly different from chance alone. As the most common victim profiles are sought within the offender profiles, both column and row percentages are shown in the table. The column percentages demonstrate the contents of victim-related case profiles by offender-related case profiles, and the row percentages allow for an examination of the contents in victim profiles within offender profiles against each other.

In order to determine which cells within the table significantly differ with respect to observed versus expected frequencies, *Adjusted Standardized Residuals* (ASRs) are used. ASRs indicate how many standard deviations above or below the expected count an observed count is, and how significant the cell is to the chi-square value of the contingency table (Fox and Farrington, 2012). ASRs take into account the sample size and give a fairer indication of how much an observed count differs from the expected

count (Farrington, Snyder, and Finnegan, 1988). If the ASR is statistically significant (i.e., above or below 1.96 standard deviations), it means that an individual cell is different from chance expectation.

Findings from the chi-square test indicate a moderate and statistically significant relationship among five victim-related profiles and five offender-related profiles ($\chi^2=288.074$; $df=16$; $p=.001$). It can be observed from **Table 5.9** that *Introverted Specialists* tend to sexually assault *Familiar Female Children* (66.1%). A significant and positive ASR value for this cell indicates that *Introverted Specialists* target *Familiar Female Children* more than expected (ASR= 7.8; $p<.05$). In addition, *Familiar Female Children* (46.8%) are victims of this offender type as well, and *Dysfunctional Male Children* (49.1%) are victims of *Introverted Specialists* in higher proportions than in any other offender profile.

Table 5.9. Victim-Related Profiles by Offender-Related Profiles

OFFENDER PROFILES	VICTIMIOLOGY PROFILES					
	Familiar Female Children	Adult Female Strangers	Dysfunctional Adult Females	Dysfunctional Male Children	Resistant Male Children	Total
Introverted Specialists	125 ^a	6 ^b	31 ^b	27 ^a	0 ^b	189
	66.1%	3.2%	16.4%	14.3%	0%	100%
Versatile Extraverts	46.8%	4.3%	22.3%	49.1%	0%	30.3%
	27 ^b	32	68 ^a	5 ^b	2	134
Immature Specialists	20.1%	23.9%	50.7%	3.7%	1.5%	100%
	10.1%	23.2%	48.9%	9.1%	8%	21.5%
Unemployed Introverts	41 ^b	57 ^a	38	3 ^b	11 ^a	140
	29.3%	40.7%	20%	2.1%	7.9%	100%
Aggressive Introverts	15.4%	41.3%	20.1%	5.5%	44%	24.4%
	66 ^a	9 ^b	3 ^b	19 ^a	6	103
Total	64.1%	8.7%	2.9%	18.4%	5.8%	100%
	24.7%	6.5%	2.2%	34.5%	24%	16.5%
Total	8 ^b	34 ^a	9	1 ^b	6 ^a	58
	13.8%	58.6%	15.5%	1.7%	10.3%	100%
Total	3%	24.6%	6.5%	1.8%	24%	9.3%
	267	138	139	55	25	624
Total	42.8%	22.1%	22.3%	8.8%	4%	100%
	100%	100%	100%	100%	100%	100%

Note: $\chi^2 = 288.074$, $p = .001$, $n = 624$, $df = 16$. Column and row percentages are shown with observed cell counts. a indicates a positive significant Adjusted Standardized Residual (ASR) value at the $p = 0.05$ level. b indicates a negative significant ASR value at the $p = 0.05$ level.

A moderate proportion of *Dysfunctional Adult Females* (22.3%) was also found within the *Introverted Specialist* profile. In addition, a significant and positive ASR value was found for *Versatile Extroverts* (ASR= 8.9, $p < .05$) who have the highest concentration (50.7%) within the *Dysfunctional Adult Female* profile. Likewise, *Dysfunctional Adult Females* appear in highest proportions within this offender profile

(48.9%), meaning that they are more likely to be victims of *Versatile Extroverts* than any other offender type. Within this offender profile, there is also a moderate concentration of *Familiar Female Children* (20.1%), with a negative and significant ASR value demonstrating that fewer *Versatile Extroverts* sexually assaulted *Familiar Female Children* than what would be expected (ASR= -6.0, $p < .05$).

On the other hand, *Immature Specialists* often victimize *Adult Female Strangers* (40.7%), with a significant and positive ASR value suggesting that more of these offenders sexually assault *Adult Female Strangers* than would be expected (ASR =6.0, $p < .05$). Likewise, *Adult Female Strangers* have high concentrations within *Immature Specialists* (41.3%), thereby confirming that they are often the victims of this offender profile. However, the highest proportion of *Immature Specialists* (44%) falls within *Resistant Male Children* profile, which makes them the most common victim type of this offender profile. *Immature Specialists* also sexually assault *Familiar Female Children* (29.3%), with a negative and significant ASR value indicating that fewer of these offenders victimize *Familiar Female Children* than would be expected (ASR= -3.7, $p < .05$).

Like *Introverted Specialists*, the *Unemployed Introverts* tend to sexually assault *Familiar Female Children* (64.1%), with a positive and significant ASR value indicating that more of them sexually assault these victims than would be expected (ASR= 4.8; $p < .05$). In addition, *Dysfunctional Male Children* are often victims of *Unemployed Introverts*, with a moderate concentration of these victims (34.5%) within this offender profile. Finally, the last offender profile, *Aggressive Introverts*, sexually assault *Adult Female Strangers* (58.6%) in highest proportions, with a positive and significant ASR value suggesting that more of these offenders victimize *Adult Female Strangers* than would be expected (ASR= 4.8; $p < .05$). Furthermore, a moderate concentration of *Adult Female Strangers* (24.6%) can be observed within *Aggressive Introverts*, again highlighting the fact that *Adult Female Strangers* are often victims of this offender profile. There is also a moderate concentration of *Resistant Male children* (24%) that can be observed within *Aggressive Introverts*, suggesting that *Resistant Male Children* are often victims of this offender type.

Chapter 6. Discussion

The first objective of the current research was to create offender profiles that are associated with a decision to confess or not during interrogation. Five offender profiles were identified with LCA in this study. Interestingly, out of the five profiles, only two were associated with the decision not to confess, whereas the other three offender profiles do confess to their crimes. These findings shed some light on why previous research has been finding disparate results in terms of the significance and direction of association of some factors with confession. For example, most researchers comparing sex offenders' confession rates to other types of offenders find that sex offenders are generally less likely to admit to their involvement in the offense (Holmberg and Christianson, 2002; St-Yves, 2002; 2006a; 2006b). However, another study found that sexual offenders confess more readily than do other types of offenders (Mitchell, 1983). The results of the current study demonstrate that these disparate findings may have been due to the differences in the types of offenders sampled and the specific case characteristics (i.e., the types of victims), both of which influence the adoption of a particular decision-making strategy during interrogation.

Among the five offender profiles, the *Introverted Specialists* (29.6%) and the *Versatile Extroverts* (23.1%) both include the largest proportions of the sample, suggesting that they may be the two most common sex offender profiles. These types of offenders have a high probability of denying their involvement in a sexual assault, which is 90.4% and 77% respectively. Although these offender profiles are in opposition to one another, they are both likely to adhere to the same decision outcome. Despite this, each offender type is likely to make the decision not to confess to the sexual assault for different reasons, and therefore it is important to distinguish between these two groups for the purposes of interrogation.

The fact that *Introverted Specialists* are older than 40 years of age and have some type of employment demonstrates their general life experience and maturity, as well as their investment in a socially acceptable lifestyle. These qualities provide *Introverted Specialists* with the ability to better cope with the demands of interrogation because they have more to lose if they provide incriminating statements about their involvement in the crime (Baldwin and McConville, 1980; Leiken, 1970; Softley, 1980). In addition, offenders in this profile possess an introverted personality type that is often associated with an internal need to confess (Gudjonsson and Sigurdsson, 1999). However, they are unable to confess due to their feelings of shame and fear of being publicly exposed, and that inhibits their feelings of guilt and remorse about the offense (Gudjonsson and Sigurdsson, 1999).

In terms of the contextual characteristics of the crime, *Introverted Specialists* are more likely to use minimal force against their victim. This variable has previously been found to be associated with both denial and admittance of involvement in the crime (Beauregard, Deslauriers-Varin, and St-Yves, 2010; Beauregard and Mieczkowski, 2011). It is interesting to note that *Introverted Specialists* are also not likely to confess to their crimes even though they force their victims to perform sexual acts, which has been associated with an outcome of confession in previous empirical literature (Lippert et al., 2010). This finding may be explained by the theoretical assumptions of the confession model articulated by Irvin and Hilgendorf (1980), which state that suspects engage in a decision-making process that includes trade-offs among decisions about available courses of action, and the subjective perceptions of the consequences that follow those courses of action. Given the fact that *Introverted Specialists* are more mature and more invested in a socially acceptable lifestyle, they have to make a trade-off decision between easing their guilt and remorse for the crime they have committed, and the consequences of a possible conviction following admission of sexual activity with the victim.

Unlike their non-confessor counterparts, *Versatile Extroverts* are more likely to be younger than 40 years of age and unemployed at the time of their offense. These offenders are also likely to have an extensive criminal history encompassing a variety of crime types, which speaks to their general lack of investment in a conventional lifestyle

and their lack of concern for social norm violations. In addition, due to their extroverted personality with antisocial and narcissistic tendencies, these offenders are also more prone to experience a lack of guilt and remorse for their crimes, and thus are less cooperative during interrogation (Bernard and Proulx, 2002; Gudjonsson and Sigurdsson, 1999; St-Yves, 2002, 2004a).

Interestingly, the offense strategies used by *Versatile Extroverts*, like using more force than necessary against their victims and forcing them to perform sexual acts, have been previously associated with both case outcomes. For example, a recent study by Beauregard, Deslauriers-Varin and St-Yves (2010) found that sex offenders who commit their crimes during the day, and use no force, or more force than necessary, are more likely to confess than those who use minimal force to commit their crime. Furthermore, Beauregard and Mieczkowski (2011) found that younger sex offenders who used at least some force in the absence of any resistance from the victim were less likely to confess their crimes. A reason as to why the current results contradict those of Beauregard, Deslauriers-Varin and St-Yves (2010) is because in their study the relationship between use of force and confession was moderated by the time of the crime. Specifically, offenders who committed their crimes during the day when the chance of encountering potential witnesses was high were more likely to confess.

In this study, indicators of evidential proof were not taken into account, and it is therefore not possible to conclude whether or not *Versatile Extroverts* would make a decision to confess under these circumstances. However, previous studies have confirmed that the strength of the evidence is a powerful indicator of confession even in cases where the offenders have an extroverted personality and extensive criminal records (Moston, Stephenson, and Williamson, 1992; Softley, 1980; St-Yves and Deslauriers-Varin, 2009). In the second instance, the findings from the current study fit well with those of Beauregard and Mieczkowski (2011) due to the fact that *Versatile Extroverts* do not experience guilt and remorse for their actions. In other words, these offenders are less likely to be concerned for the welfare of the victim and the severity of their offense, and thus not likely to make any incriminating statements in the course of the interrogation.

The results of the LCA analysis also demonstrate that among the sex offender profiles, there are three confessors: *Immature Specialists*, *Unemployed Introverts* and *Aggressive Introverts*. Offenders that fall into the *Unemployed Introverts* profile (14.5%) are very similar to *Introverted Specialists* who happen to be non-confessors, with the only exception being that *Unemployed Introverts* lack employment at the time of their crime. This result warrants a closer look at the mutual independence and exclusivity of the profiles. One possible explanation for this is that some of the confessor profiles are subtypes of the two most common non-confessor profiles, with variations in the absence or presence of the same characteristics influencing the decision to confess or not during interrogation. This would explain why most of the confession studies find that sex offenders are generally less likely to confess, but some studies do report that they are more likely to confess than other types of offenders (Holmberg and Christianson, 2002; St-Yves, 2002; 2006a; 2006b).

Another scenario could be that *Unemployed Introverts* are statistically different from *Introverted Specialists*, but they are not qualitatively different from one another. In other words, differentiating offenders into separate profiles based on the absence or presence of employment may not yield profiles that are sufficiently unique. An alternative explanation is that unemployment, apart from the absence of a job, could be indicative of other personal characteristics (e.g., a lack of intelligence or the type of social status) that have an impact on offenders' decision to confess or not during interrogation. This explanation is consistent with the results of Faller et al. (2001) who found that child molesters who were unemployed or had unskilled jobs confessed to their crimes, in contrast to professionals and those who had skilled employment.

Furthermore, in contrast to the non-confessor profiles, the confessor profiles all have a common feature of sexual crime specialization. In other words, these profiles include previous criminal history that is characterized by a late onset, a lack of crime variety, and commission of a few sexual offenses, but very few crimes against property or persons. Criminal experience or possession of a criminal record is an indicator of case outcome that has been largely debated in the literature on confession. Previous studies have found that suspects with a criminal record are more likely to confess than suspects who do not have any criminal experience. Other empirical literature, however,

has concluded that suspects with a previous criminal record are less likely to confess than individuals who do not have a criminal record (Baldwin and McConville, 1980; Softley, 1980).

In light of the current results, it becomes apparent that the reason why there is a disagreement in the literature about the relationship between previous criminal history and confession is because the nature of criminal experience is not accounted for in some of this earlier research. For example, a recent study by Beauregard, Deslauriers-Varin, and St-Yves (2010) found that the nature of an offender's previous convictions is very important, and there is a need to look beyond the mere presence or absence of previous criminal history. In this particular study, sex offenders were grouped together based on whether they were specialized or versatile offenders. The results demonstrated that those with a specialist criminal career (i.e., specialization in sexual offenses) are more likely to confess than sex offenders whose criminal repertoire involves a variety of antisocial and illegal activities.

Beauregard, Deslauriers-Varin and St-Yves (2010) also point out that offenders who follow a versatile criminal career path are similar to antisocial offenders with extroverted personality features, and this makes them more resistant to pressure from the investigators during interrogation. Interestingly enough, in the current study, one of the confessor profiles labeled *Immature Specialists* (22.5%) contrasts with the findings of Beauregard, Deslauriers-Varin and St-Yves (2010) who noted that specialist sex offenders who are younger and introverted are more likely to confess. *Immature Specialists* are found to be younger than 40 years of age, extroverted, and have a specialist criminal career. These differences could be explained by the combination of being young and lacking criminal experience that may predispose this offender type to poor coping skills when faced with the pressures of the interrogation environment, regardless of their personality. Another possible explanation is that *Immature Specialists'* decision to confess could be influenced by their previous experience with the process of interrogation following sexual offense charges, which are not controlled for in this study. This explanation would be consistent with Gudjonsson's (2003) suggestions that some offenders may have been traumatized by their first interrogation experience and subsequently give in more easily.

It is also important to note that *Aggressive Introverts* (10.3%) who are older than 40 years of age, have an introverted personality and a specialist criminal career, were the only confessors who also used more force than necessary to perpetrate their crimes, but did not force their victims to perform any sexual acts. This result contradicts the previous findings of Beauregard and Mieczkowski (2010) that older offenders who reported using any force were much less likely to confess than those who reported no use of force. This finding also contradicts what has been found in previous research on crime severity and its relationship to confession. Most studies examining the relationship between crime severity and the outcome of the case tend to agree that the more severe the crime, the more likely it is that the offender is not going to confess (Holmberg and Christianson, 2002; Neubauer). This discrepancy could be explained by the fact that *Aggressive Introverts* possess a personality that includes anxiety proneness and compliance, which are in turn associated with feelings of guilt and remorse (Gudjonsson and Sigurdsson, 1999). As a result, these offenders are more likely to care about the consequences of their aggression on the perceptions of the investigators, and the public, in terms of the severity of the sexual assault.

The second objective of this study was to create victimology profiles that are associated with a decision to confess or not during interrogation. Five victimology profiles were identified, out of which two are associated with confession and the other three profiles are associated with a decision not to confess. The victimology profiles associated with confession include *Adult Female Strangers* and *Resistant Male Children*. The first confession-related victimology profile includes 20.6% of the sample and it is composed of adult females who are not known or related to their offenders. The second confession-related profile contains only 3.8% of the sample, and these victims are males who are younger than 13 years old, and who are known to their perpetrators.

Generally, both of the confession-related profiles seem to conform to previous results on sexual assault case outcomes with regards to age, gender and victim-offender relationship. More specifically, if the victim is a male child, sex offenders are more likely to admit to the crime than if the victim is a female child. Furthermore, being an adult female who is a stranger to the offender has been previously associated with a confession outcome. For example, Beauregard, Deslauriers-Varin and St-Yves (2010)

found that sexual assaults involving stranger victims were more likely to be resolved through a confession than if the victims were known or related to the offender. Interestingly, *Resistant Male Children* know, or are related to, their offenders, and yet this profile is still more likely to be associated with a decision to confess. This result contradicts previous conclusions that familiarity with the victim is more likely to result in the offender denying involvement in the sexual crime.

The possible explanation for this outcome is that *Resistant Male Children* do not come from a criminogenic environment where they are neglected by their parents, or surrounded by an environment of substance abuse and prostitution. The immediate environment of the child victim affects whether he is likely to receive support from his family members when reporting this type of crime. For example, Lippert et al. (2010) found significant associations between the child's age and the offender-victim relationship to confession, and these could be explained by their relationship to child victim's disclosure. The context surrounding disclosure, like a concerned family member reporting the abuse to the police, or family members opposing the abuse and expressing concern for the suspect, could affect whether or not the perpetrator admits to the crime. Furthermore, resistance by a child victim towards the perpetrator's sexual advances has previously been associated with an offender's subsequent decision to confess (Beauregard and Mieczkowski, 2010).

The profiles associated with a decision not to confess include *Familiar Female Children*, *Dysfunctional Adult Females*, and *Dysfunctional Male Children*. The first victimology profile includes the largest concentration of sampled cases (44.5%). Female children who are from a non-criminogenic environment, who know or are related to their offenders, and who neither resist the sexual assault nor receive any injury as a consequence of it, characterize this profile. Sexual assaults perpetrated against *Familiar Female Children* are a perfect example of cases that are not likely to be resolved through confession because most of the characteristics of this victimology profile have been previously associated with a negative outcome of interrogation. For example, being a female child, from a non-criminogenic environment, and knowing or being related to the offender have all been associated with a decision not to confess in previous

empirical literature (Beauregard, Deslauriers-Varin, and St-Yves, 2010; Beauregard and Mieczkowski, 2010).

The next profile associated with non-confession is *Dysfunctional Adult Females* that constitute 20.6% of the overall cases. This profile includes adult females who are known to their offenders, come from a criminogenic environment, and who are likely to sustain injury during the sexual assault. Similarly, the profile known as *Dysfunctional Male Children* includes about 9% of the sampled cases, and these victims are also known to their offenders, come from a criminogenic environment, but they neither resist nor sustain injury during the crime. Both of these victim types have a common characteristic of being from a criminogenic environment, which in previous research has been emphasized as one of the most important factors related to a decision not to confess during interrogation. For example, Beauregard, Deslauriers-Varin and St-Yves (2010) found that if a sexual assault involved a female victim who came from a criminogenic environment, and who is known to the suspect, then the case is not likely to be resolved through a confession.

The reason why *Dysfunctional Adult Females* are often associated with the offender's denial of responsibility for the sexual assault is because they are more likely to abuse drugs or alcohol, or engage in prostitution, and thus they are not likely to be perceived as "stand-up" victims by the police (Beauregard, Deslauriers-Varin, and St-Yves, 2010). In this context, it is possible for the offender to challenge the credibility of *Dysfunctional Adult Females* due to their background, which may also affect the decision by the prosecution to press charges (Beauregard, Deslauriers-Varin, and St-Yves, 2010). Furthermore, these victims are already familiar with their offenders, and even if they sustained physical injury during the assault, they may not press charges against their abusers because they are reluctant to get them into trouble (McGregor, Marion, and Wiebe, 1999).

On the other hand, the *Dysfunctional Male Children* profile does not conform to previous findings on case outcomes that involve child victims. In particular, being a male child victim has been previously associated with confession (Beauregard, Deslauriers-Varin, and St-Yves, 2010), and this contradicts the results of the current study. However,

upon closer examination of this profile, it becomes apparent that offenders may deny the sexual assault because there is no victim resistance, and furthermore, the victim typically does not sustain any physical injuries. It is possible that even if the victim is a child, because he/ she comes from a criminogenic environment and there is no physical evidence of abuse, offenders may try to exploit the victim's credibility during the interrogation. Furthermore, given that the victim knows his/ her offender, there may be lack of support from the immediate family, and that has been found to have an impact on child victim disclosure of the crime (Lippert et al, 2010).

The final objective of this study was to explore offender-victimology profile combinations to determine the most common victim selection strategy by offender type. According to Napier (2010), assessing victim selection patterns suggests offenders' possible motivations for the crime, and this can aid investigators in their selection of interview strategies prior to the interrogation. The first result that stands out in these profile combinations is that each offender type targets victims that may be quite different from each other (e.g., male child versus female child, or child victims versus adult females). These victimization patterns demonstrate the difficulty in objectively categorizing sex offenders into rapist or pedophile subtypes, and assessing their motivations for the crime.

In other words, categorizing sex offenders into mutually exclusive rapist or pedophile types with motivational aspects of power or anger, as suggested by the FBI typologies, may not be feasible because they are not mutually exclusive in terms of their victim choice. These typologies also do not seem to be mutually exclusive in terms of their motivations for the crime, which in this study appear to be the availability and vulnerability of the potential target to fulfill sexual gratification. For example, in the current study one of the non-confessor profiles. *Introverted Specialists*, is likely to offend against victimology profiles that are also associated with an outcome of denial during interrogation. This offender profile targets *Dysfunctional Male Children* (49.1%) in highest proportions, followed by *Familiar Female Children* (46.8%) as the second most common victim choice, and *Dysfunctional Adult Females* (22.3%) in moderate proportions as well.

These results demonstrate the significance of tailoring interrogation strategies to a specific case, or on a case-by-case basis, rather than preparing for an interrogation that takes into account just the characteristics of the offender. In the context of sexual assault, the interrogation strategies should be contingent on whether the victim is a child or an adult female, as well as whether or not the victim comes from a dysfunctional background. In cases involving *Introverted Specialists* offending against *Familiar Female Children*, the technique of minimization can be used to downplay the offender's behaviour with the victim by suggesting that what happened was a human failure, and that the investigator is familiar with other cases involving the same situation (Napier, 2010). Furthermore, a useful tactic for investigators to change the offender's mind might be to point out that his situation may become public knowledge if the case goes to court, and that this may reflect negatively on his reputation (Napier, 2010).

In addition, it may be possible to employ strategies that appeal to the offender's guilt and remorse for the crime, based on his familiarity with the victim. Even though offenders who are familiar with their victims are much less likely to confess, the fact that the victim comes from a non-criminogenic environment and may receive full support of the family can be used to change the offender's mind about confessing. The investigating officer could suggest to the offender that although he was nice to the victim and did not cause any permanent damage, the prosecutor and the victim's family may not see it that way, and therefore they are prepared to support the child's story at trial. The officer should also relate to the offender by displaying sympathy and understanding, and suggesting that he is trying to figure out what happened and what may have led to "this situation". Furthermore, it might be helpful for the interviewer to say that he is trying to see "this situation" from the suspect's point of view. The outcome may just be a partial confession, rather than admittance of full responsibility for the crime; however, considering the victim is a child, it may just be necessary to confirm that the offender engaged in inappropriate sexual conduct with the child.

On the other hand, when *Introverted Specialists* victimize *Dysfunctional Male Children*, it may not be effective to appeal to the offender's guilt and remorse, or the lasting negative effects of the case on the offender's reputation. Throughout the course of the interrogation, if the investigating officer brings these issues to the foreground, the

offender might start to question the background of the victim and his family, as well as his integrity. This may also inadvertently ruin the rapport established by the officer with the accused. In circumstances where an *Introverted Specialist* offends against a *Dysfunctional Male Child*, it could be useful for the investigating officer to minimize the offender's fault by complementing him. For instance, the investigating officer might complement the offender on being nice to the victim and keeping an eye on him when his family was not there to do so. If the offender used force, the investigator could minimize the harm to the victim by suggesting that he did not sustain any lasting physical damage. The investigator should also demonstrate his sympathy and understanding towards the offender's situation, and assure him that he wants to understand what happened from the point of view of the offender.

In a case where *Introverted Specialists* are likely to select *Dysfunctional Adult Females* as their victims, a useful interrogation strategy may involve building up the offender's self-esteem and minimizing the harm done to the victim (Napier, 2010). The offender could be told that he treated the victim gently as a lady, like a boyfriend or a lover should, and if he applied any force that this was only because of the way she acted. The officer may also point out that the offender did not even call her names (Napier, 2010, p. 176). In addition, the investigator could build rapport with the offender by projecting the blame onto the victim. For example, the investigating officer might say that another team is reviewing the victim's story and it is likely that she lied about what happened, which is why he needs to hear the offender's side of the story in order to find out what really happened.

Another non-confessor profile that warrants attention in terms of interrogation strategies is *Versatile Extroverts*, because this group selects victim profiles that are more likely to be associated with a non-confession outcome during interrogation. Similar to *Introverted Specialists*, victimology profiles known as *Dysfunctional Adult Females* and *Familiar Female Children* are also the likely victim selection choices of *Versatile Extroverts*. However, unlike *Introverted Specialists*, *Dysfunctional Adult Females* are more likely to be victimized by this type of offender (50.7%) than any other victim profile, followed by *Familiar Female Children* (20.1%).

In both cases, the interviewing suggestions would be for an officer to impress the offender with competency and authority of a professional interviewer. The officer could acknowledge the offender's presence, but delay the interview by making the offender wait a few minutes before directing him to the interviewing room (Napier, 2010, p. 178). Once the interview starts, the officer should have a planned interruption, and within the earshot of the offender, get praised by another individual (Napier, 2010, p. 178). In the case of a sexual assault against *Familiar Female Children*, the officer's best strategy is to collect as much information as he can about the sexual assault in order to point out the contradictions in the offender's story at a later time that may be perceived by the offender as evidential proof against him. In circumstances where a *Dysfunctional Adult Female* was victimized, the interviewing officer should use techniques of projection and minimization. For instance, the investigating officer may say that the victim did not know what she wanted (e.g., first she came onto the offender, and then changed her mind), or that men cannot cool down that fast, and it was not the offender's fault that the victim drank so much and was out of control (Napier, 2010, p. 178).

Unlike the previous two offender profiles, *Immature Specialists* are generally confessors. However, sometimes they offend against a victimology profile that is associated with the outcome of denial during interrogation. Specifically, this offender profile victimizes *Familiar Female Children* (29.3%) in moderate proportions. What is notable about this offender-victim combination is that there is no resistance from the victim and hence no injury, and the offender does not force the victim to perform sexual acts. In this context, there is virtually no proof of the sexual assault, except the word of the victim against that of the offender. Under these circumstances, the interrogation strategy available to the investigator is to appear as professional as possible and know the context of the case well enough to get a detailed statement from the offender. It is hoped that this strategy allows the investigating officer to identify any discrepancies in the offender's side of the story against that of the victim. Identifying these contradictions and confronting the offender with them will demonstrate the knowledge of the investigator about the case, and that may make the offender feel the weight of the evidence mounting against him (Napier, 2010).

Chapter 7. Conclusion

The purpose of the current study was to create offender and victim profiles based on characteristics relevant to investigations of sexual assault events, and to examine how these offender and victimology profiles are linked with the decision to confess or not during interrogation. In addition, offender profiles were examined in conjunction with victim profiles, and suggestions for specific interrogation strategies were given on a case by case basis for those combinations where either the offender or the victimology profile were associated with a non-confession outcome. The results demonstrated that the decision-making strategy of the offender to confess or not during interrogation is influenced by factors that precede the context of the interrogation room. Furthermore, in order to prepare interrogation strategies, the context of the crime itself requires careful scrutiny by the investigating officers. Specifically, it was demonstrated in this study that case characteristics like victim-offender interactions, the victim's relationship to the offender, and the background characteristics of the victim play an important role in the outcome of the interrogation.

In addition, the findings of this study also demonstrated that tailoring interrogation strategies to the profile of the offender is not enough, as the same offender type may change his mind about confessing based on the target selection patterns and the situational contingencies of the sexual assault. These results have important implications for the field of offender profiling. It may no longer be feasible to simply label offenders as being either rapists or pedophiles due to the fact that one offender profile may target victims of different ages and genders in various proportions. In turn, the offender's victim selection and the situational contingencies of the sexual assault affect his crime commission strategies (e.g., type of force used, occurrence of sexual activity with the victim, etc.). These conclusions fit well with what was suggested by Mokros and Allison (2002) that there is substantial variability in offenders' actions under the influence of contextual and situational factors, especially in sexual offenses.

The results of the current study also point out the weaknesses in empirical offender profiling literature on linking individual modus operandi factors to offender characteristics. Many empirical studies on offender profiling have attempted to use sophisticated multivariate or direct association techniques to examine those modus operandi strategies that are predictive of specific offender characteristics. Empirical profiling literature generates descriptions of offenders that are solely dependent on their actions, and not the dynamic exchange between the victim and offender that is more representative of what occurs during a sexual assault. It is therefore imperative that the profiling literature takes the offender-victim interactions, and the context surrounding the crime, into consideration when profiling offenders.

This study also has implications for the confession literature. Most of the research on interrogation and confession has focused on either offender demographics or behaviours of the actors present in the interrogation room. However, very few studies in this field have looked at the importance of contextual characteristics of the crime on an offender's decision to confess or not during interrogation. The results of this research demonstrate that it is important to look at the differences between sexual assault events and their impact on confession, rather than just comparing sexual assault confession rates to those of other crime types.

Although the results of this study are informative, they are not without limitations. First, all of the sexual assault cases in this sample included convicted sexual offenders who were incarcerated at a penitentiary. As such, the findings cannot be generalized to cases that involve first time offenders suspected of sexual assault, and those offenders who committed less serious types of sexual assault. In addition, the limitations of the LCA may also have had an impact on the results, as the profiles of both the offenders and the victims, along with their probabilities of confession, are sensitive to the types of indicators included in the analysis. The variables included in this study were also common offender and victim behaviours that are likely to occur in most, if not all, cases of sexual assault, and they may have not provided enough differentiation in offender and victim profiles to be useful for criminal investigation.

Furthermore, this research did not include many of the situational and contextual characteristics (e.g., time of the crime, length of the sexual assault, and the type of location) that may play an important role in the offender's behaviour during the interrogation, and that may also be used to the investigator's advantage when preparing interrogation strategies. Future research should be conducted on different offender samples and it should take into consideration the contextual and situational factors that typically surround a sexual assault. These factors are important because an offender's decision of whether or not to deny his involvement in the crime will largely depend on the types of factors included in the offender and case profiles, which aid investigators in the preparation of interrogation strategies. Also, it will be important to assess which offender and case characteristics are more important to the offender's decision-making prior to, and during, interrogation. As some factors may be important prior to interrogation, others may no longer be a priority during the interview as the suspect begins to interact with the investigator(s) who use different types of strategies to extract a confession from him.

References

- Alison, L., Bennell, C., Mokros, A., and Ormerod, D. (2002). The personality paradox in offender profiling: A theoretical review of the processes involved in deriving background characteristics from crime scene actions. *Psychology, Public Policy, and Law*, 8(1), 115.
- Alison, L., Goodwill, A., Almond, L., Heuvel, C., and Winter, J. (2010). Pragmatic solutions to offender profiling and behavioural investigative advice. *Legal and Criminological Psychology*, 15(1), 115-132.
- Baldwin, J. (1993). Police interview techniques. Establishing truth or proof? *British Journal of Criminology*, 33(3), 325-352.
- Baldwin, J. and McConville, M. (1980). *Confessions in Crown Court trials*. Royal Commission on Criminal Procedure Research Study No. 5. London: HMSO.
- Baumgartner, K., Ferrari, S., and Palermo, G. (2008). Constructing bayesian networks for criminal profiling from limited data. *Knowledge-Based Systems*, 21(7), 563-572.
- Berggren, E. G. (1975). *The psychology of confession (Vol. 29)*. Brill Archive.
- Beauregard, E., Deslauriers-Varin, N., and St-Yves, M. (2010). Interactions between factors related to the decision of sex offenders to confess during police interrogation: A classification-tree approach. *Sexual Abuse: A Journal of Research and Treatment*, 22(3), 343-367.
- Beauregard, E., and Mieczkowski, T. (2011). Outside the interrogation room: The context of confession in sexual crimes. *Policing: An International Journal of Police Strategies & Management*, 34(2), 246-264.
- Bernard, G., and Proulx, J. (2002). Caractéristiques du passage à l'acte de criminels violents états-limites et narcissiques. *Revue Canadienne de Criminologie*, Janvier, 51-75.
- Brennan, S., and Taylor-Butts, A. (2008). Sexual assault in Canada. *Canadian Centre for Justice Statistics*.

- Bull, R. (2006). *Research on the police interviewing of suspects*. Paper presented at the Séminaire d'échanges de bonnes pratiques sur les auditions de police judiciaire. Paris, 23-26 January.
- Canter, D. (2000). Offender profiling and criminal differentiation. *Legal and Criminological Psychology*, 5(1), 23-46.
- Canter, D., and Heritage, R. (1990). A multivariate model of sexual offence behaviour: Developments in 'offender profiling'. I. *The Journal of Forensic Psychiatry*, 1(2), 185-212.
- Christian, C. W., Lavelle, J. M., De Jong, A. R., Loiselle, J., Brenner, L., and Joffe, M. (2000). Forensic evidence findings in prepubertal victims of sexual assault. *Pediatrics*, 106(1), 100-104.
- Clark, S. L., and Muthén, B. (2011). Relating latent class analysis results to variables not included in the analysis. 2009. *Manuscript submitted for publication*.
- Deslauriers-Varin, N. (2006). Les facteurs déterminants dans le processus d'aveu chez les auteurs d'actes criminels. Master's thesis. Université de Montréal.
- Deslauriers-Varin, N., Beauregard, E., and Wong, J. (2011). Changing their mind about confessing to police: The role of contextual factors in crime confession. *Police Quarterly*, 14(1), 5-24.
- Deslauriers-Varin, N., Lussier, P., and St-Yves, M. (2011). Confessing their crime: Factors influencing the offender's decision to confess to the police. *Justice Quarterly*, 28(1), 113-145.
- Deslauriers-Varin, N., and St-Yves, M. (2006). *An empirical investigation of offenders' decision to confess their crime during police interrogation*. Paper presented at the 2nd International Conference on Investigative Interviewing, Portsmouth, 5-7 July.
- Dias, J. G. (2006). Model selection for the binary latent class model: A Monte Carlo simulation. In *Data science and classification* (pp. 91-99). Springer Berlin Heidelberg.
- Evans, R. (1993). *The conduct of police interviews with juveniles*. Royal Commission on Criminal Justice Research Report No. 8. London: HMSO.
- Faller, K. C., Birdsall, W. C., Henry, J., Vandervort, F., and Silverschanz, P. (2002). What makes sex offenders confess? An exploratory study. *Journal of Child Sexual Abuse*, 10(4), 31-49.
- Fox, B. H., and Farrington, D. P. (2012). Creating burglary profiles using latent class analysis a new approach to offender profiling. *Criminal Justice and Behavior*, 39(12), 1582-1611.

- Francis, B., Bowater, R., and Soothill, K. (2004). *Using homicide data to assist murder investigations*. (Home Office online report). London: UK: Home Office.
- Goodwill, A. M., Alison, L. J., and Beech, A. R. (2009). What works in offender profiling? A comparison of typological, thematic, and multivariate models. *Behavioral Sciences & the Law*, 27(4), 507-529.
- Grubin, D., Kelly, P., and Brunson, C. (2001). *Linking serious sexual assaults through behaviour* (Vol. 215). Home Office, Research, Development and Statistics Directorate.
- Gudjonsson, G. H. (1992). *The psychology of interrogations, confessions and testimony*. Oxford, England: John Wiley & Sons.
- Gudjonsson, G. H. (2006). Sex offenders and confessions: How to overcome their resistance during questioning. *Journal of Clinical Forensic Medicine*, 13(4), 203-207.
- Gudjonsson, G. H., and Sigurdsson, J. F. (1999). The Gudjonsson Confession Questionnaire-Revised (GCQ-R) factor structure and its relationship with personality. *Personality and Individual Differences*, 27(5), 953-968.
- Hanson, R. K., and Bussiere, M. T. (1998). Predicting relapse: A meta-analysis of sexual offender recidivism studies. *Journal of Consulting and Clinical Psychology*, 66(2), 348.
- Hanson, R. K., and Morton-Bourgon, K. E. (2005). The characteristics of persistent sexual offenders: a meta-analysis of recidivism studies. *Journal of consulting and clinical psychology*, 73(6), 1154.
- Harris, D. A., Smallbone, S., Dennison, S., and Knight, R. A. (2009). Specialization and versatility in sexual offenders referred for civil commitment. *Journal of Criminal Justice*, 37(1), 37-44.
- Holmberg, U., and Christianson, S. A. (2002). Murderers' and sexual offenders' experiences of police interviews and their inclination to admit or deny crimes. *Behavioral Sciences & the Law*, 20(1-2), 31-45.
- Inbau, F. E., Reid, J. E., and Buckley, J. P. (1986). *Criminal Interrogation and Confessions*, 3rd edition. Baltimore, MD: Williams and Wilkins.
- Inbau, F.E., Reid, J.E., Buckley, J.P., and Jayne, B.C. (2001). *Criminal Interrogation and Confessions*, 4th edition. Gaithersburg, MD: Aspen.
- Irving, B and Hilgendorf, L. (1980). Police interrogation: The psychological approach. Research studies N^o 1. London: HMSO.

- Irving, B. and McKenzie, I. (1989). *Police interrogation: The effects of the Police and Criminal Evidence Act*. London: HMSO.
- Kebbel, M., Hurren, E., and Mazerolle, P. (2006). *An investigation into the effective and ethical interviewing of suspected sex offenders* (Final Report, Criminology Research Council 12/03-04). Canberra, Australia: Criminology Research Council.
- Klockars, C.B., and Mastrofski, S.D. (1991). *Thinking about Police: Contemporary readings* (2^{ed.}). New-York, NY: McGraw-Hill.
- Kocsis, R. N. (2006). *Criminal profiling: Principles and practice*. Totowa, NJ: Humana Press Inc.
- Magidson, J., and Vermunt, J. (2002). Latent class models for clustering: A comparison with K-means. *Canadian Journal of Marketing Research*, 20(1), 36-43.
- Maruna, S., and Mann, R. E. (2006). A fundamental attribution error? Rethinking cognitive distortions. *Legal and Criminological Psychology*, 11(2), 155-177.
- McGregor, M. J., Le, G., Marion, S. A., and Wiebe, E. (1999). Examination for sexual assault: Is the documentation of physical injury associated with the laying of charges? A retrospective cohort study. *Canadian Medical Association Journal*, 160(11), 1565-1569.
- Mitchell, B. (1983). Confessions and police interrogation of suspects. *Criminal Law Review*, (SEP), 596-604.
- Mokros, A., and Alison, L. J. (2002). Is offender profiling possible? Testing the predicted homology of crime scene actions and background characteristics in a sample of rapists. *Legal and Criminological Psychology*, 7(1), 25-43.
- Moston, S., Stephenson, G. M., and Williamson, T. M. (1992). The effects of case characteristics on suspect behaviour during police questioning. *British Journal of Criminology*, 32(1), 23-40.
- Leiken, L. S. (1970). Police interrogation in Colorado: The implementation of Miranda. *Denver Law Journal*, 47, 1-53.
- Leo, R. A. (1996). Inside the interrogation room. *Journal of Criminal Law and Criminology*, 86, 266-303.
- Lippert, T., Cross, T. P., Jones, L., and Walsh, W. (2010). Suspect confession of child sexual abuse to investigators. *Child maltreatment*, 15(2), 161-170.
- Napier, M. R. (2010). *Behavior, truth and deception: applying profiling and analysis to the interview process*. Boca Raton, FL: CRC Press.

- Neubauer, D.W. (1974). Confessions in Prairie City: Some Causes and Effects. *Journal of Criminal Law and Criminology*, 65, 103-112.
- Nylund, K. L., Asparouhov, T., and Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural equation modeling*, 14(4), 535-569.
- Pearse, J. and Gudjonsson, G. (1996). Police interviewing techniques at two South London police stations. *Psychology, Crime and Law*, 3(1), 63-74.
- Pearse, J., Gudjonsson, G. H., Clare, I. C., and Rutter, S. (1998). Police interviewing and psychological vulnerabilities: Predicting the likelihood of a confession. *Journal of Community & Applied Social Psychology*, 8(1), 1-21.
- Philips, C., and Brown, D. (1998). *Entry into the criminal justice system: A survey of police arrests and their outcomes*. London: Home Office.
- Reik, T. (1959). *The compulsion to confess*. Farrar, Straus and Cudahy.
- Riggs, N., Houry, D., Long, G., Markovchick, V., and Feldhaus, K. M. (2000). Analysis of 1,076 cases of sexual assault. *Annals of Emergency Medicine*, 35(4), 358-362.
- Robertiello, G., and Terry, K. J. (2007). Can we profile sex offenders? A review of sex offender typologies. *Aggression and Violent Behavior*, 12(5), 508-518.
- Roland, P. (2008). *In the minds of murderers*. London, UK: Arcturus Publishing Ltd.
- Santtila, P., Junkkila, J., and Sandnabba, N. K. (2005). Behavioural linking of stranger rapes. *Journal of Investigative Psychology and Offender Profiling*, 2(2), 87-103.
- Sigurdsson, J. F., and Gudjonsson, G. H. (1994). Alcohol and drug intoxication during police interrogation and the reasons why suspects confess to the police. *Addiction*, 89(8), 985-997.
- Softley, P. (1980). *Police Interrogation: An observational study in four police stations*. Home Office Research Study No. 61. London: HMSO.
- St-Yves, M. (2002). Interrogatoire de police et crime sexuel: profil du suspect collaborateur. *Revue Internationale de Criminologie de Police Technique et Scientifique*. 81-96.
- St-Yves, M. (2004a). La psychologie du suspect. In M. St-Yves & J. Landry (Eds.). *Psychologie des entrevues d'enquête, de la recherche à la pratique*. (pp. 73-84). Cowansville, Québec: Yvon Blais.

- St-Yves, M. (2004b). Les facteurs associés à la confession: La recherche empirique. In M. St-Yves and J. Landry (Eds.). *Psychologie des entrevues d'enquête, de la recherche à la pratique*. (pp. 53-71). Cowansville, Québec: Yvon Blais.
- St-Yves, M. (2006a). Confessions by sex offenders. In T. Williamson, *Investigative interviewing: Rights, research, regulation*. (pp. 107-122). Cullompton: Willan Publishing.
- St-Yves, M. (2006b). The psychology of rapport: Five basic rules. In T. Williamson, *Investigative interviewing: Rights, research, regulation*. (pp. 87-106). Cullompton: Willan Publishing.
- St-Yves, M., and Deslauriers-Varin, N. (2009). The psychology of suspects' decision-making during interrogation. In R. Bull, T. Valentine & T. Williamson (Eds.). *Handbook of psychology of investigative interviewing: Current developments and future directions*, 1-15.
- St-Yves, M., Proulx, J., and McKibben, A. (1994). CQSA: *Computerized Questionnaire for Sexual Aggressor*. Unpublished manuscript.
- Ullman, S. E. (2007). A 10-year update of 'review and critique of empirical studies of rape avoidance'. *Criminal Justice and Behavior*, 34(3), 411-429.
- Vermunt, J. K., and Magidson, J. (2003). Latent class models for classification. *Computational Statistics & Data Analysis*, 41(3), 531-537.
- Vermunt, J. K., and Magidson, J. (2002). Latent class cluster analysis. *Applied latent class analysis*, 89-106.
- Vermunt, J. K., and Magidson, J. (2005). Latent Gold 4.0. *User's Guide*.
- Wald, M., Ayres, R., Hess, D. W., Schantz, M., and Whitebread, C. H. (1967). Interrogations in New Haven: the impact of Miranda. *Yale Law Journal*, 76(8), 1519-1648.
- Woodworth, M., and Porter, S. (2000). Historical foundations and current applications of criminal profiling in violent crime investigations. *Expert Evidence*, 7(4), 241-264.