An Examination of Female Sexual Offending: Toward a Gender-Specific Approach

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A Thesis Submitted to the University of Birmingham for the degree of Doctorate in Applied Forensic Psychology Practice (ForenPsyD)

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July 2014

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ABSTRACT

This thesis explores the characteristics, treatment needs and sub-types of Female Sexual Offenders (FSO). Chapter One presents an introduction to the research into FSO. Chapter Two presents a systematic review which assesses the literature that has investigated characteristics and typologies of FSO. Chapter Two identifies that FSO are a heterogeneous group and reports that the literature has emphasised differences between solo and co-offenders. Chapter Three critiques a scale from the Multiphasic Sex Inventory- II that has been used in FSO research. This scale is identified as being inappropriate for use with FSO and it is concluded that further research comparing FSO with Male Sexual Offenders (MSO) is required to understand their similarities and differences. Chapter Four attempts to address gaps in the research of FSO by statistically comparing solo and co-offenders (study 1) and solo, co-offenders and MSO (study 2) on a range of clinical characteristics. Significant differences were found between solo and co-offenders, and solo, co-offenders and MSO on a variety of characteristics. Chapter Four makes recommendations about the treatment needs and management of solo and co-offenders in light of these findings. Finally, Chapter Five presents an overall discussion of the chapters presented.

ACKNOWLEDGEMENTS

I would like to thank Anthony Beech who has been a supportive supervisor throughout my time at the University of Birmingham. I would also like to thank Steven Gillespie for his encouragement throughout conducting my research and writing my thesis. His sense of humour supported me to remain calm throughout stressful periods. I would like to thank the Lucy Faithfull Foundation for providing me with the opportunity to use their data and all of their staff members that supported me to throughout my data collection. Finally, I would like to thank my family and friends, in particular my mum, dad, Danielle and Nicola just for being there.

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CHAPTER ONE: INTRODUCTION

Males are perceived by society as being the gender that can be openly aggressive, can make sexual advances and can behave in a sexually aggressive and assaultive manner (Saradjian, 2010). This enables society to perceive them as possible perpetrators of child sexual abuse, as they do not have high expectations that men are caring and nurturing (Saradjian, 2010). On the other hand, females are viewed as 'protectors' and 'nurturers', thus the potential that they could act in a sexually deviant way towards children is inconceivable with society's beliefs about them (Saradjian, 2010). When female sexual offending does occur, Hetherton (1999) suggested that beliefs such as 'abuse committed by females is less harmful' or the view that 'if a woman was to do that she must be psychiatrically unwell' are used to understand this behaviour and maintain society's typical views of women as being caring towards children.

The minimisation and reconstruction of female sexual offending is not only found to be present in general society. Studies have indicated that these types of views can be seen in professionals involved in the Criminal Justice System (CJS). For example, Denov (2004) investigated beliefs of professionals involved in the prosecution of Female Sexual Offenders (FSO). He found that police officers reacted to female-perpetrated sexual abuse with disbelief, they minimised these offences and viewed this behaviour as less harmful and serious. If victims expect their experiences to not be taken seriously or to be minimised, it will impact on the likely disclosure of sexual abuse by FSO (Hetherton, 1999; Saradjian, 2010). Therefore, the actual amount of female-perpetrated abuse disclosed to the police is suggested to be an inaccurate level to the amount of abuse that takes place in reality (Johansson-Love & Fremouw, 2006).

In relation to studies that have investigated the prevalence of female-perpetrated sexual abuse there are large discrepancies in the suggested occurrence of this sexually deviant behaviour. These discrepancies are attributed to the differing methodologies that are used to research this area, in particular the prevalence rates are heavily dependent on the sample used within the study (Saradjian, 2010). Studies that have used victim reports have found much higher rates than those studies that have used convicted offender data (Saradjian, 2010). In order to gain a better understanding of the prevalence of female sexual offending, Cortoni and Hanson (2005) and Cortoni, Hanson, and Coache (2009) used both victimisation data and data from official offence records. They combined this information from Canada, UK, USA, New Zealand and Australia and calculated that females accounted for around 5% of all sexual offences. Although, this is a small proportion of all sexual offending, this still indicates that there are a considerable amount of victims of FSO. The consequences of female-perpetrated sexual offending are also suggested as being more severe for the victims. Saradjian (2010) indicated that because of society's perceptions of females, victims of sexual abuse may experience more thoughts about being to blame for their abusive experiences and subsequently experience high degrees of shame and guilt. Therefore, increasing research into this area will be valuable (Gannon & Cortoni, 2010). It will not only increase society's acceptance that such offending can occur, possibly increasing victim's disclosures, but it will also improve professional's understanding of how to assess and treat this type of offender (Gannon & Cortoni, 2010).

In recent years high-profile cases such as the 'Vanessa George' case have been documented thoroughly in the UK media, which has potentially impacted on the

acceptance and acknowledgement that this behaviour can occur. Research into the field of FSO has also increased (Gannon & Cortoni, 2010), which essentially will improve understanding, acceptance and identification. For example, there is now an understanding about the offence process of FSO. Gannon, Rose and Ward (2008) have developed a Descriptive Model of Female Sexual Offending which identifies how background characteristics, the period prior to the offending and the offence itself, have occurred and why they have occurred. This model also accounts for the differences between FSO and how the pathways that have led to their sexual offending may be different. It recognises differences between FSO and Male Sexual Offenders (MSO) and how pathways to offending in MSO may not be applicable to FSO. This model is promising and could have important implications for practitioners working with FSO. However, this model was developed based on a sample of 22 FSO, which limits its generalisability. This is a common occurrence in research investigating FSO, and often the quality of FSO studies has been criticised (Grayston & De Luca, 1999; Johansson-Love & Fremouw, 2006). Although research into this area has increased it will still take a substantial amount of time before research reaches a standard that will support evidence-based practice (Gannon & Cortoni, 2010). Unlike research into MSO which is able to provide empirically based findings to aid assessment and treatment strategies, FSO research will need to make extensive advances to reach this level (Cortoni, 2010).

Currently, research into FSO lacks in clinical usefulness, which limits practitioner's ability to approach work with FSO using empirically guided strategies (Ford, 2010). This limitation is evidenced in research investigating typologies of FSO. The studies that have had access to a larger sample of FSO (e.g. Sandler & Freeman, 2007;

Vandiver and Kercher, 2004) have attempted to categorise FSO based on victim and offence characteristics (Ford, 2010). Although these studies do provide important findings they provide little indication of how categories within FSO differ on clinical characteristics which would be of better use to those professionals working practically with these types of offenders. The importance of possible differences between those females who offend on their own (solo offenders) compared with those who offend with another perpetrator (co-offenders) has been emphasised throughout research into FSO (Beech, Parrett, Ward & Fisher, 2009; Gannon & Alleyne, 2013) and acknowledging this difference is considered as a requirement of research into FSO (Gannon & Alleyne, 2013). Understanding how these two groups are different has important implications for assessment and treatment approaches.

At the moment research has indicated that FSO often experience childhood sexual abuse (Grayston & De Luca, 1999; Johansson-Love & Fremouw, 2006), which can be considered as a specific treatment need of FSO. However, it is important that a broader range of factors are researched. This will support the development of a multi-faceted approach to treatment which addresses various areas of need. Ford (2010) suggested that there may be possible differences between solo and co-offenders in relation to their sexual deviance/ interest, coping styles and offence-supportive cognitions. However, currently these are merely assumptions which need to be investigated further. Ford (2010) was unable to provide firm suggestions of the treatment needs of FSO and indicated that currently research into this area is not sufficient.

An important consideration for the treatment of FSO is taking a gender-specific approach (Ford, 2010). Ford (2010) emphasised that FSO and MSO may have similar

areas of need for treatment, but why that need is important and how it should be targeted may be different for FSO and MSO. For example, FSO have been found to have offence-supportive cognitions which are an important treatment focus for MSO. However, the content of the offence-supportive cognitions in FSO are found to be gender-specific (Gannon, Hoare, Rose & Parrett, 2010; Gannon & Alleyne, 2013). FSO offence-supportive cognitions have been shown to include views and perceptions about males, including viewing them as threatening and being entitled to behave in a sexually deviant way, which can influence their offending behaviour (Gannon, Rose & Williams, 2009; Gannon & Rose, 2009; Gannon et al., 2010). Beech et al. (2009) also identified that the offence-supportive cognitions of solo and co-offender's are different. They found that co-offenders offence-supportive cognitions often incorporated distortions about their co-offenders (often their partner), which influenced their offending behaviour. This indicates that treatment approaches may vary for FSO depending on the presence of a co-offender. The presence of a co-offender is a factor which is unique to FSO and rarely considered in MSO (Cortoni, 2010). The consideration of such differences is important and conveys the inappropriateness of first, applying MSO derived intervention strategies to FSO and second assuming that all FSO are the same and not considering the differences between solo and co-offenders.

This issue is also transferable to the use of male-derived assessment tools. Due to the limited empirical basis of FSO research on consistent characteristics and risk factors of FSO, professionals are inclined to use assessment tools developed for MSO in their work with FSO (Cortoni, 2010). There are still gaps in the understanding of how MSO and FSO are different or similar. Until knowledge about the differences/similarities

increases, simply applying assessment tools designed for MSO is inaccurate (Cortoni, 2010). As highlighted above, the presence of a co-offender is a unique factor in FSO, which suggests that MSO assessment tools would not account for this factor or assessment areas that may be important for co-offenders. In addition, treatment approaches for FSO if they are solo or co-offenders has been suggested as being different (Ford, 2010). Therefore, MSO assessment tools may not be able to appropriately address the diversities within FSO and correctly identify treatment needs for both solo and co-offenders. Currently, Cortoni (2010) recommends that the best approach to the assessment of FSO is using empirically guided clinical judgement.

The use of male informed assessment tools with FSO is also impacting on research progress and quality (Ford, 2010). Researchers have been shown to use male-derived tools in investigating characteristics of FSO. This includes the use of such tools as the Multiphasic Sex Inventory II (MSI-II; Nichols & Molinder, 1996) and the Static 99 (Hanson & Thornton, 2000), which have both been developed for MSO. The selection of gender-appropriate tools is an important consideration for research investigating FSO and will support the validity of studies. Gannon, Rose and Cortoni (2010) suggest that in the future, rather than aiming to validate male-derived assessment tools with FSO, it is more beneficial to develop female-specific measures. Identifying how FSO are different from MSO is an important focus for research into FSO (Gannon & Cortoni, 2010). It has been identified that this will not only support the development of gender-specific assessment tools and intervention strategies, but will also improve research methodologies.

In addition, research that does not acknowledge the differences between FSO, in particular solo and co-offenders, also impacts on the development of research on FSO. Gannon and Alleyne (2013) indicated that research investigating offence-supportive cognitions of FSO often failed to consider the distinction between solo and co-offenders, which have been identified as having different offence-supportive cognitions. Therefore, identifying how FSO can be different will also support the development of useful assessment measures and treatments which can address the variety of needs that different FSO have. These issues appear to be essential focuses in the field of FSO. Ford (2010) reported that previous research has failed to address factors that will support the clinical usefulness of findings for practitioners working with FSO. Research investigating these two issues: 1) FSO and MSO differences; and 2) solo and co-offender differences, will therefore have important practical implications for these professionals.

1.1 Aims of the Thesis

The aims of this thesis are:

1. To investigate and assess the current literature that explores the characteristics associated with FSO and the differences within FSO.
2. To further explore the usefulness of using a male-derived assessment tool with FSO.
3. To investigate the differences in clinical characteristics between those FSO who offend on their own (solo offenders) with those who offend with another perpetrator (co-offender).

4. To investigate the differences in clinical characteristics between FSO and MSO.
5. To investigate the offence-supportive cognitions of FSO and how they may differ from MSO.

To achieve these aims, Chapter Two presents a systematic review that investigates the characteristics of FSO and the differences within them. It also assesses the quality of this research, identifies what characteristics are supported empirically and highlights areas that research investigating FSO can be improved. In addition, it makes recommendations about research areas that will be important to address in the future.

Chapter Two also identifies various tools that researchers have used to identify key characteristics of FSO. One of these tools is the MSI-II, which is a male-derived assessment tool developed for MSO. Chapter Three investigates the appropriateness of using the MSI-II Cognitive Distortions and Immaturity Scale with FSO. It critiques the properties and applicability of this scale to FSO and assesses whether this tool can accurately identify the offence-supportive cognitions of FSO.

Lastly, Chapter Four presents an empirical paper that seeks to identify the differences or similarities between solo and co-offenders by comparing them using a framework developed using FSO rather than using a male-derived tool. This framework contains a variety of factors which enables a comparison of solo and co-offenders clinical characteristics. In addition, Chapter Four also presents a comparison between FSO and MSO using the same framework. This framework contains an offence-supportive

cognitions scale which allows for a specific comparison of the presence of these cognitions in solo and co-offenders, and FSO and MSO.

CHAPTER TWO: A SYSTEMATIC REVIEW: INVESTIGATING THE CHARACTERISTICS AND DIVERSITIES OF FSO

Chapter Rationale

As highlighted previously, research into FSO has grown in recent years and slowly the understanding and knowledge of this type of offender is increasing. However, the practical usefulness and quality of research into FSO has been questioned. The aim of this chapter is to gain an up to date perspective of research into FSO by conducting a systematic literature review. The review will aim to gain an understanding of the common FSO characteristics and also how FSO can differ (typologies of FSO). This chapter will aim to quality assess research in this area and identify what improvements have been made since previous reviews and also identify how this field of research can make improvements in the future.

2.1 ABSTRACT

2.1.1 Background

Reviews conducted on the research into FSO have struggled to draw firm conclusions regarding key characteristics and adequately supported typologies of FSO. Apart from research consistently identifying and supporting the finding that FSO often experience childhood sexual abuse little is known about what factors are frequently present in FSO. The lack of knowledge about female sexual offending has often been related to lack of quality in research methodologies. The reviews suggested that research into this field is under-developed and many of the studies lack control and quality. More recent reviews have also recognised similar problems and suggested that future research should aim to replicate previous findings using larger sample sizes and standardised measures. The

aim of this review is to complete an up to date analysis of research studying FSO. It will also aim to analyse research investigating the typologies of FSO and identify how FSO are different. Finally, it will aim to recognise gaps in the literature and make recommendations about how research can progress in the future.

2.1.2 Method

Five online databases were searched (Psychinfo, Medline, Embase, Web of Science and Applied Social Sciences Index Abstracts); searches of reference lists and contacts with known professionals within the field of female sexual offending were completed in order to identify studies relating to this field. Overall, 601 studies were identified, which was then reduced to 68 when the reviewer analysed the title and abstract of each paper, and obtained all accessible studies. The reviewer then implemented the inclusion/exclusion criteria and 40 studies were removed. This left twenty-eight studies which were then quality assessed on internal and external validity, sampling and measurement bias, and those that scored below 55% were removed from the review. Overall, this review included 19 studies, all of these studies were analysed, and consistent data was extracted from each of them.

2.1.3 Results

Quality assessment scores ranged from 55 - 82%, with five of the studies reviewed scoring above 70%. The most consistently supported characteristics of FSO were found to be experiencing frequent and severe childhood sexual abuse. This characteristic was supported by high quality studies that used control groups, statistical analysis to analyse data and standardised tools to collect data. This review also found that like childhood

sexual abuse FSO were consistently found to experience other negative experiences in their childhood and in their adulthood. These characteristics were also supported by high quality studies.

In addition, research into areas such as offence-supportive cognitions and recidivism is progressing. Specifically, offence-supportive cognitions are a factor that has attracted interest in recent years and our understanding of this factor in relation to FSO has increased.

This review identified that overall research into FSO would improve if it contained a representative sample of FSO, including a diverse range of ethnicities, sexual offences committed and recruited from a range of settings (prison/probation/community/mental health settings). Nine studies of the studies included in this review investigated the differences between FSO. The results suggest that FSO differ depending on whether or not they have offended on their own (solo offenders) or with another person or persons (co-offenders). Solo and co-offenders were consistently found to differ on offence and victim characteristics, but other characteristics need to be explored further.

2.1.4 Conclusions

This review has identified that research investigating FSO has progressed in the past few years. FSO have been shown to experience various forms of abuse and negative experiences during childhood, which persist into adulthood. FSO have been consistently reported as having personality disorders and/or traits in various forms but further replication is necessary using standardised tools and statistical analysis. It can be

concluded that FSO are a diverse group, but research needs to continue to understand these diversities more thoroughly. This review has recognised that future research should continue to use control groups, statistical analysis and standardised measures in order to make additional improvements to the understanding of FSO.

2.2 BACKGROUND

The field of female sexual offending is an area that has been identified as under-reported and under-acknowledged (Johansson-Love & Fremouw, 2006). Both professionals and members of wider society have in contrast to male sexual offending minimised that female sexual offending can occur and minimised the harm that it can cause (Denov, 2004; Gannon & Cortoni, 2010).

However, in more recent years, research into this field has started to grow and knowledge about FSO has increased (Gannon & Cortoni, 2010). These developments are still far behind the empirical level that research into male sexual offending has progressed to, thus FSO research is still considered as in its infancy. Therefore, it is essential that research into FSO continues to expand, but also continues to progress in terms of its quality. The quality of studies investigating FSO has been explored and reviewers have been able to identify key areas of improvement for this field of research, as well as combine findings about FSO (Grayston & De Luca, 1999; Johansson-Love & Fremouw, 2006; Rousseau & Cortoni, 2011; Gannon & Alleyne, 2013).

Firstly, Grayston and De Luca (1999) conducted a review on all of the literature on FSO up until the time of their review. They focused on summarising and making conclusions about studies that had investigated characteristics of FSO. They identified that FSO can be considered as a diverse and heterogeneous group. However, they acknowledged that consistently FSO have been found to have experienced a difficult childhood which included extensive forms of abuse and growing up in a dysfunctional family environment. Their negative experiences often continued into their adulthood and they

were found to often be of low socio-economic status and have poorly paid jobs. FSO have also been found to have mental health difficulties and common mental disorders they experience include: Post Traumatic Stress Disorder (PTSD) and Borderline Personality Disorder. These psychological vulnerabilities often mean they have not developed self-esteem or the resources to cope with their emotional experiences. Thus they resort to substance use or have been found to often have suicidal tendencies.

Grayston and De Luca (1999) were also able to make conclusions about typical offence characteristics of FSO and indicated that often they offend against someone they know, they often offend with an accomplice and offend against females. However, these conclusions indicate that their sample of studies did not equally represent those FSO who offended without an accomplice, which may lead to different conclusions about typical offence characteristics. They were unable to make conclusions regarding the motivations of FSO to offend and whether there was evidence to suggest that they were sexually motivated. They also discussed how typologies that have been developed need to be further validated before professionals begin using them in practice. Even though Grayston and De Luca (1999) were able to provide an indication of common characteristics found in FSO they noted that all of the research up until their review should be viewed with caution. They identified that studies lacked controls and did not contain a representative sample of FSO. They did not quality assess the studies included in their review, but suggested that they were of poor quality. When research quality is low it is difficult to make firm conclusions about FSO and what characteristics are important for them. This creates problems for those professionals who are working practically with these types of offenders.

A more recent review was conducted by Johansson-Love and Fremouw (2006). This review is able to provide an indication of whether research on FSO has progressed since Grayston and De Luca's (1999) paper. Johansson-Love and Fremouw (2006) were able to provide detailed information about the studies, their findings and their limitations. They were also able to have stricter inclusion criteria, excluding any studies that did not have a sample size exceeding 10. Overall, they reviewed 13 studies that had been published between 1989 and 2004. The 13 studies included 5 exploratory studies that did not have a control group, and 8 studies that used varying control groups.

Similarly to Grayston and De Luca's (1999) review Johansson-Love and Fremouw found that FSO are more likely to have negative childhood experiences and experience frequent sexual victimisation more so than others. They also consistently identified that FSO have psychological difficulties such as: depression, substance abuse, anxiety, dissociation and PTSD. Unlike Grayston and De Luca (1999), they identified that FSO offend just as much on their own as they do with an accomplice. They were also in contrast to Grayston and De Luca (1999) unable to conclude about frequent victim gender or victim relationships.

Johansson-Love and Fremouw suggested that FSO research lacks quality because of the limited studies that include a comparison group. This factor makes it particularly difficult to draw conclusions from the research and provide professionals with empirically supported information to aid their clinical practice. Another issue that arose from the methodology of these studies included reporting descriptive results rather than statistically analysing data. There were also often data collection inconsistencies which

meant different information was available for different participants. They also discussed that often studies used file analysis in their methodology and when doing so failed to report inter-rater reliability, which affects the quality of their data collection and analysis.

These issues were also apparent in comparative studies and when considering the studies as an overall group, the representativeness of the samples used were also questioned. Many of the samples recruited participants solely from one setting, for example prisons, and many of the samples consisted of mainly Caucasian females. The frequent use of self-report methodologies which are unable to be verified or checked on validity was also highlighted as being problematic. They suggested that self-report data can cause difficulties as FSO may report experiences or motives differently to benefit them or to provide justification as to why they committed the offence. Johansson-Love and Fremouw's (2006) further emphasised that research into FSO lacks quality and has made little progression since Grayston and De Luca's (1999) initial review. This jeopardises the conclusions that can be made regarding the characteristics of FSO.

Johansson-Love and Fremouw (2006) made recommendations about improving the quality of research in the future. They suggested that research should aim to use standardised measures in order to identify characteristics of FSO. The use of standardised measures for characteristics such as personality disorders and/or traits means that findings can more easily be replicated and supported using different samples. Similarly to Grayston and De Luca (1999), they concluded that typologies of FSO need to be explored further and emphasised the importance of using a

representative sample. Johansson-Love and Fremouw (2006) also suggested that future research should investigate cognitive distortions of FSO, which will support the development of appropriate treatment strategies for this type of offender.

Rousseau and Cortoni (2011) reviewed studies investigating mental health needs of FSO. Rousseau and Cortoni (2011) found that the methodology used to investigate this factor is often flawed. First, the procedure that is used to select participants was often biased. Studies recruit participants from forensic and/or mental health settings in which the rates of mental health problems would naturally be higher. They also identified that studies investigating mental health needs of FSO fail to use standardised measures, which is similar to Johansson-Love and Fremouw's (2006) findings. This flaw not only affects the quality of the study but it also makes future replications difficult. Research on FSO over the past few years appears to consistently be jeopardised by the same methodological issues, which impacts on the overall understanding of FSO.

Finally, the most recent review was conducted by Gannon and Alleyne (2013). They conducted a systematic review in order to analyse the literature investigating the offence-supportive cognitions of FSO. They identified thirteen studies that investigated the presence and/or content of offence-supportive cognitions. However, five of these studies had been conducted on adolescent FSO, which Frey (2010) highlights as a group that should be considered as different from adult FSO. They were able to conclude that FSO have frequently been found to hold offence-supportive cognitions, but there are discrepancies in the literature regarding the content of these cognitions. Some of the studies indicate that offence-supportive cognitions found in MSO are present in FSO,

whereas other studies have argued that the content of the cognitions in FSO are gender-specific.

Gannon and Alleyne (2013) suggest that the differences found between the studies are due to the methods endorsed in the majority of this literature. Often offence-supportive cognitions are researched using self-report methodology, usually in the form of interviews or psychometric measures. In regards to interview data, this form of data can be particularly open to biased interpretation which impacts on the objectivity of the analysis. Gannon and Alleyne propose that when this methodology is used, the use of non-sexual female offender controls should be considered in order to monitor how such data is interpreted. To counteract some of these issues they described two studies that had used implicit methodologies to detect biases in the way FSO interpret information. These studies identified that FSO do not appear to interpret information that would suggest they view children in a sexual way, but they often over-interpret information about males as being threatening. This conveys that FSO do appear to have gender-specific offence-supportive cognitions.

In addition, Gannon and Alleyne (2013) identified that studies have found differences between those offenders who offend on their own and the presence of offence-supportive cognitions compared with those who offend with an accomplice. These findings indicate that these two groups of FSO may have different treatment needs, and Gannon and Alleyne (2013) emphasised the importance of considering such offence characteristics in future research, which some of the studies they analysed failed to do. Overall, Gannon and Alleyne (2013) concluded that this is an area of study that is

developing and future research needs to expand upon the initial findings that they identified in their review. They recommended that future research should consider using a control group and using a measure to assess a participant's level of social desirability if self-report methodologies are used. They also highlighted the importance of future research investigating the differences between FSO and the offence-supportive cognitions that they hold.

The field of research on FSO is a developing field with many questions and gaps in the literature. Even though reviews have been conducted in the past 4 years, neither has reviewed the literature about characteristics of FSO as a whole. Therefore, this review will expand on the Johansson-Love and Fremouw (2006) review by completing an up to date analysis of studies that have investigated characteristics of FSO. It will include studies that have been conducted since 2004, which enable an assessment of how research into this area has improved and developed, but also if any other characteristics can be confirmed as being prevalent in FSO. This review will also differ from previous reviews as it will complete a quality assessment on each of the studies which will enable the reader to identify those studies which have the highest quality in relation to this topic.

2.2.1 Aims and Objectives

The aim of this systematic review is to identify the highest quality studies that investigate the characteristics and/or the typologies of adult (aged above 18 years) FSO. The objectives of this review are:

1. To identify the highest quality research studies that have investigated FSO.

2. To identify what characteristics have most frequently been reported in FSO.
3. To detect what differences can be found within the population of FSO.
4. To identify what typologies have been developed to account for the differences between FSO.

2.3 METHOD

2.3.1 *Sources of literature*

In order to identify studies that have investigated the characteristics and/or the typologies associated with FSO, online databases, reference list searches and contact with known professionals specialising within this area were conducted. *Table 1* contains details of the online databases accessed and the search terms used within each database, for more information regarding each database and the searches conducted please see Appendix 1. *Table 2* contains a list of all search terms trialled in this review.

Although the online databases identified numerous studies to be analysed, to ensure that the search was thorough and the author had identified all relevant literature, the author also searched through reference lists to find additional studies (please see Appendix 2 for a list of papers used to identify additional references).

The author also decided to contact numerous professionals who had published studies within the field of FSO to request any papers that they may have on this topic, both published and unpublished. The author contacted 21 professionals and had 16 responses. This source of information was unsuccessful and none of the professionals returned with any additional papers to the ones already obtained. However, two

professionals were able to provide copies of studies that the author was not able to access elsewhere.

The searches conducted on the online databases initially took place in March and April of 2012. These searches were re-run in June 2014 in order to ensure up to date research was included in this review.

Table 1: The online databases used to source the literature and the search strategy used within each database

Date accessed	Online database	Years searched	Search terms
08.04.12	Web of Science	All years	((female or woman or women) NEAR/3 "sex* offen*")
30.03.12	Ovid: PsychINFO	1967- March week 3 2012	"femal* sex* offen*"
30.03.12	Ovid: Medline	1946- week 3 March 2012	"femal* sex* offen*"
30.03.12	Ovid: EMBASE	1974- 2012 week 12	"femal* sex* offen*"
08.04.12	Cambridge Scientific Abstracts (CSA): Applied Social Sciences Index and Abstracts (ASSIA)	1987- April week 1 2012	all((female OR woman OR women) NEAR/3 "sex* offen*")

Table 2: The search terms that the review considered whilst searching for references

Population	Offence Type
Female, Woman, Women, Female criminals	Sex offender, Sex abuse, Sex offen*e, Paedophile, Sex assault, Child molest, Sex crime, Child sexual abuse, Sexual deviation.

2.3.2 *Study Selection*

Inclusion criteria

Population: Females aged 18 and above (no limit on upper age) who have been convicted of a sexual offence against another person.

Outcome: Studies outlining/describing/analysing clinical characteristics, situational variables and risk factors which are related to the population (FSOs).

Inclusion: Observational and experimental studies.

Exclusion: Editorials, articles and narrative reviews. Studies that investigate male perpetrators of sexual offences or female adolescent perpetrators of sexual offences, studies that do not specifically investigate the characteristics and/or the typologies of FSO, studies that investigate female offenders as a whole population, studies were not included if their sample size was below 10 participants and if the study focuses on the victims of a sexual offence. Studies were also removed if they were published prior to 1990.

Language: English only

Please see *Figure 1* for an outline of the study selection process. The inclusion/exclusion form used within this selection process is shown in Appendix 3.

2.3.3 *Quality Assessment*

After excluding studies that did not meet the inclusion criteria, studies were then assessed on quality by using a checklist constructed prior to beginning the review. The checklist criteria included:

1. A thorough description and definition of the participants included in the study and a representative sample of adult FSO.
2. A reliable method of identifying characteristics and/or typologies associated with FSO.
3. A comprehensive analysis of characteristics that may be associated with FSO and appropriate methods to identify typologies.
4. Empirically supported outcomes and conclusions.

Studies that did not meet the criteria requirements shown above were removed due to lack of quality. In order to quality assess each study a form was constructed which enabled the author to set a consistent scoring system. Studies were assessed on internal and external validity, sampling and measurement bias; please see Appendix 4 for the quality assessment form. Those studies that did not reach 55% quality during the assessment were removed from any further analysis. The quality assessment scoring system consisted of the following:

- Criteria met= 2 points
- Criteria partially met = 1 point
- Criteria not met = 0 points
- Insufficient information which could not be scored was not included in the final assessment score and was marked as unknown information.

For some of the items within the assessment the score was simply 1 = yes or 0 = no, these items are shown on the quality assessment form. Some items were also not applicable to some of the studies depending on their methodology. Therefore, for each study their score and possible total score was calculated in order to identify the studies percentage of quality.

2.3.4 *Data Extraction*

A data extraction form was constructed in order to extract consistent information from all the studies reviewed; this form was combined with the quality assessment form and can be seen in Appendix 4.

Figure 1 provides an overview of the search process, and shows details of how studies were excluded from the systematic review.

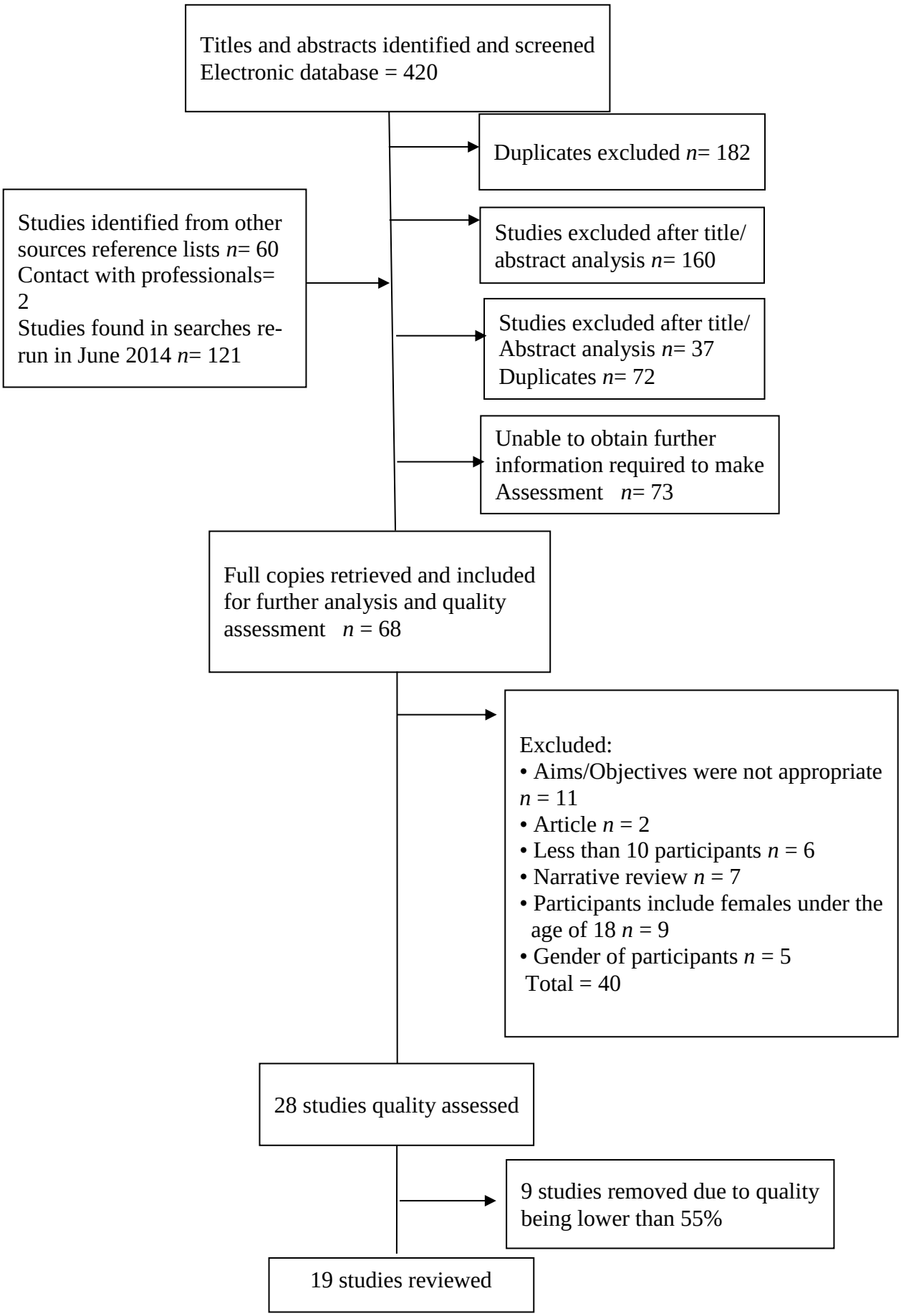

Figure 1: An overview of the reviews search process and procedures.

2.4 RESULTS

2.4.1 *Characteristics of FSO*

The study selection procedure resulted in 19 studies that specifically investigated the characteristics of FSO and which also met the studies inclusion/exclusion criteria and which all scored above 55% in the quality assessment. The final 19 studies went through a data extraction process in which key and consistent information was extracted. The data extraction form was created by the author in order to extract data which was appropriate to the aims of the review. This process involved extracting data about the studies aims/objectives, the studies inclusion/exclusive criteria, the methods used to gain data and any tools which aided this process, details about any control groups, offence factors, what factors were investigated, how the data was analysed, and the results and conclusions from the study (shown in Appendix 4). *Table 3* provides a summary of the final 19 studies, including the data that was extracted from them.

Collectively, the studies generated consistent characteristics that were prevalent in FSO; please see *Table 4* for an overview of the characteristics found.

Table 3: An overview of the studies reviewed including details about their design, participants, methodology, and findings.

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
1. Beech, Parrett, Ward & Fisher (2009)	To investigate whether male-derived implicit theories (ITs) can be found in FSO and whether there are female-specific ITs.	Case-series	Incarcerated offenders	15	N/A	Semi-structured interviews	Two raters analysed the interview data and identified whether the presence of any of the male-derived ITs were present.	They found FSO had the presence of male-derived Implicit Theories, apart from entitlement. 87% were found to have uncontrollable IT, 53% dangerous world IT, 47% child as sexual being and 20% were found to have the nature of harm IT. They acknowledged that the content of the ITs differed if a FSO offended with another perpetrator.

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
2. Christopher, Lutz-Zois, & Reinhardt (2007)	To investigate whether Borderline and Anti-social personality traits mediate the relationship between being sexually abused as a child and then becoming a perpetrator of sexual abuse in adulthood. To also see whether the nature of the abuse experienced during childhood predicts sexual abuse perpetration during adulthood.	Case-control	Incarcerated offenders	61	Incarcerated non-sexual female offenders	The Childhood Trauma Questionnaire, Levenson's Self-Report Psychopathy scale, Schizotypal Traits Questionnaire, and the Balanced Inventory of Desirable Responding	Statistical analysis	FSO experienced more frequent and longer in duration child sexual abuse. Child abuse alone predicted sexual offending; Borderline and Anti-social personality traits did not mediate this relationship.

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
3. Crawford (2012)	To investigate the experiences and attitudes of FSO and develop a theory to explain FSO.	Case-series	Incarcerated FSO	32	N/A	File analysis	Grounded theory and frequency, descriptive statistics	69% of FSO experienced childhood sexual abuse, 53% experienced childhood physical abuse and 50% experienced adult intimate partner violence. 47% had previously been diagnosed with a mental illness, 70% used drugs/alcohol and 28% blamed drugs/alcohol for their offending behaviour. They investigated offence-supportive cognitions of FSO found that FSO externalise blame for their offending behaviour (either blame their victims, co-offenders or use

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
								of substances). They also found that the rationales that FSO provide for their offending behaviour often relate to: fear of their co-offender, the need for power/control and the need for intimacy.
4. Gannon, Rose & Ward (2008)	To develop a model which will explain the offence process for FSO, including affective, cognitive, behavioural and contextual factors.	Case-series	Criminal justice system (probation and prisoners)	22	N/A	Interviews and file analysis	Grounded Theory and frequency and descriptive statistics	They identified that FSO have negative childhood experiences, experience domestic abuse and social isolation, develop maladaptive coping strategies, experience mental health problems and have aggressive or passive personalities. They also found evidence for their motivation

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
								to offend (sexual, intimacy, and revenge/humiliation) and evidence for different offence pathways in FSO.
5. Gannon, Rose & Williams (2009)	To investigate the implicit cognitive associations of female child molesters and whether like male child molesters they hold cognitive associations between child and sexual concepts.	Case-control	Criminal justice system (probation and prisoners)	17	Non-sexual female offenders	Implicit association task, and a short demographic interview	Statistical analysis	FSO did not cognitively sexualise children. 75% FSO and 47% of non-FSO experienced childhood sexual abuse

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
6. Gannon & Rose (2009)	To investigate whether Ward's (2000; Ward & Keenan, 1999) implicit schemas can explain female child molester's cognitions.	Case-control	Criminal justice system	19	Female non-sexual offenders	Implicit memory recognition paradigm	Statistical analysis	High numbers of domestic abuse in both groups. Female child molesters recognised more male threatening sentences, and this was not dependent on offending alone or with a co-offender. There was no difference between groups when recognising sexually threatening child sentences.

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
7. Gannon, Hoare, Rose & Parrett (2010)	To re-examine the presence of male-derived ITs in FSO as investigated by Beech et al. (2009), but to provide a gender-specific interpretation of the ITs.	Case-series	Incarcerated prisoners	16	N/A	Semi-structured interviews	Two raters analysed the interview data and identified whether the presence of any of the male-derived ITs were present.	Found evidence for all of the male-derived ITs. The entire sample was found to have the presence of uncontrollability and dangerous world. 81% were found to have nature of harm, 63% child as sexual being and 44% entitlement. However, they emphasised that the content of the ITs is gender-specific and different to MSO.

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
8. Gannon et al. (2014)	To examine whether the three pathways identified in the Descriptive Model of Female Sexual Offending (DMFSO) was present in a sample of North American FSO.	Case-series	Incarcerated FSO	36	N/A	Used a checklist which was based on the three pathways and included the different characteristics of the three pathways. However, qualitatively extracted from interview data.	Two raters used the checklist to analyse interview data and assign participants to a pathway: explicit-approach, directed-avoidant and implicit-disorganised	They supported the presence of the three offence pathways identified in the DMFSO. 28% were found to be Explicit-approach which is characterised by: planning, positive affect, moderate to high levels of self-regulation and various types of motivation. 22% were found to be implicit approach which is characterised by: low planning, poor self-regulation and various types of motivation. 33% were found to be directed-avoidant characterised by: low planning and positive affect, high

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
								coercion and motivation because of fear or desire to please co-offender. Explicit-approach FSO were found to have significantly more years of education than directed-avoidant, directed-avoidant had significantly more victims than explicit-approach and explicit-approach and implicit-disorganised had a higher number of previous non-sexual convictions than directed-avoidant.

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
9. Kaplan and Green (1995)	To investigate the similarities and differences of self-reported sexual histories of incarcerated female sexual and non-sexual offenders.	Case-control	Incarcerated offenders	11	Non-sexual female offenders	Prison records, interviews, SCID, the Harvard Upjohn Post-traumatic stress Disorder Interview, and the Wyatt Sexual History Questionnaire	Frequency	Both groups had a high frequency of depression, substance abuse, and PTSD. The FSO had more Avoidant and Dependent personality disorders, and more psychiatric impairment. FSO had experienced more sexual abuse within the family, more physical and emotional abuse which was more severe than the non-FSO. Many of the FSO displayed cognitive distortions (minimisation) and sexual fantasies relating to their offending behaviour.

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
10. Miller, Turner and Henderson (2009)	To investigate the differences between FSO and MSO in relation to psychopathology.	Case-control	Incarcerated offenders	128	Incarcerated male sexual offenders	PAI, Static-99 and archival data.	Descriptive statistics	Females scored higher on all of the scales within the PAI, in particular their highest scores were on the borderline features, anxiety-related disorders, drug problems and depression scales. Males were older and had higher scores on the Static-99.
11. Muskens, Bogaerts, Van Casteren, & Labrijn (2011)	To investigate personality pathology in a sample of female sex offenders. To also investigate what factors predict recidivism of any type of offence.	Case-control	In-patient or out-patient referrals for psychological and/or psychiatric assessment	60	Compares solo FSO against FSO who offended with a co-offender.	File analysis	Statistical analysis	No difference between groups in average number of victims or in their previous convictions. Solo offenders more likely to commit offences against males who were not related to them. Solo offenders were

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
								more likely to suffer from a DSM-IV Axis I disorder. Co-offenders were more likely to have a higher mean number of DSM- IV personality disorder/traits. Solo offenders were more likely to recidivate.
12. Pflugradt & Allen (2010)	To investigate neuropsychological functioning in FSO, and to see if there are differences in executive functioning between female sexual offender typologies.	Case-control	Incarcerated offenders	35	Compares functioning between typologies	SOAR, file analysis, the trail making test, and the stroop test.	Statistical analysis	FSO have average neuropsychological functioning. There were no differences found between typologies and there level of neuropsychological functioning.

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
13. Sandler & Freeman (2007)	To partially replicate Vandiver's and Kercher's (2004) study. They developed typologies of FSO using victim and offence characteristics.	Case-control	Criminal Justice System- all FSO on sex offenders register in New York	390	N/A	File analysis	Statistical Analysis	Those who offended against children aged between 0-11 were less likely to have previously been arrested for a sexual assault, especially if they offended against children aged 0-5. Those victims that were aged between 6 and11 were most likely to have been victimised by the older offenders, aged 33-83. Younger offenders were most likely to choose victims aged between 12 and 17. Victims aged between 0 and 11 were more likely to be females, whereas victims aged between 12 and 17

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
								were most likely to be males. Typologies will be described in a later section.
14. Sandler & Freeman (2009)	To investigate whether demographic and criminal history variables differ between convicted female sex offenders who sexually recidivated and those who did not, and to identify which demographic and criminal history variables predicted sexual recidivism.	Case control	Criminal justice system	1466	Compares recidivists against non-recidivists	File analysis	Statistical analysis	29.5% were rearrested for any crime, 13.9% were rearrested for a felony, 6.3% were rearrested for a violent (including violent sexual) felony, and 2.2% were rearrested for a sexual offence (1.9% of these were convicted). Those who recidivated were more likely to have a previous misdemeanour, drug or felony conviction. Sexual recidivism was predicted by more prior child victim

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
								convictions, more prior misdemeanour convictions, and increased offender age (not predictive when offence of promoting prostitution was taken out of analysis).
15. Strickland (2008)	To investigate the differences between females who commit sexual offenders and those who commit non-sexual offences using standardised, valid and reliable measures.	Case-control	Incarcerated offenders	60	Non- sexual female offenders	The Multi-phasic Sex Inventory- II female version, the Substance Abuse Subtle Screening Inventory- 3 and the Childhood Trauma Questionnaire (the brief version)	Statistical analysis	FSO had higher rates of childhood trauma, emotion, physical abuse and neglect and sexual abuse. FSO had higher levels of Borderline personality disorder. FSO had more social and sexual inadequacies. Both groups scored highly on having emotional immaturity and feelings of being

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
								victimised throughout their lives, and both groups had a victim-stance response style.
16. Turner, Miller & Henderson (2008)	To investigate psychopathology in FSO, and to see if FSO can be categorised based on offence characteristics and psychopathology.	Case-series	Incarcerated offenders	90	N/A	File analysis, PAI, Trauma Symptoms Inventory, and the Static-99	Statistical analysis	68% had a previous arrest, 69% were sexually abused in childhood, and 57% were physically abused. The FSO could not be categorised in relation to offence characteristics, but 3 groups were developed in relation to personality traits.

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
17. Vandiver (2006)	To investigate the difference between FSO who offend alone compared with those who co-offend.	Case-control	Criminal justice system	207	Compares solo offenders with co-offenders	File analysis	Statistical analysis	Solo offenders were more likely to commit rape. Co-offenders more likely to have other non-sexual offences at the time of arrest. Co-offenders were more likely to have a greater number of victims with less preference for gender; solo offenders were more likely to offend against male victims. Co-offenders were also more likely to be related to their victims.

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
18. Vandiver & Kercher (2004)	To investigate FSO, specifically the relationship between victim and offender characteristics.	Case-series	Criminal justice system	471	N/A	File analysis	Statistical analysis	Younger offenders were most likely to victimise victims between the ages of 12-17 (whether related or not). The oldest group of offenders who were not related to their victims were likely to victimise children under the age of 6.
19. Wijkman, Bijleveld & Hendriks (2010)	To identify the characteristics of FSO, their offences, and their victims. To investigate whether there are any differences between solo and co-offenders and to see if FSO can be categorised into sub-groups.	Case-control/ case-series	Criminal justice system	111	Compared solo FSO with co-offenders	File analysis	Frequency	Average or lower intellectual functioning. The most common educational level was elementary school. 54% came from intact families, and one third reported being emotionally and/or educationally neglected. One third reported being

Author and Date of Publication	Aims/ Objectives of study	Design	Source of Participants	Number of FSO	Control Group	Data Collection	Data Analysis	Results
								sexually abused which on average started was around the age of 8 and lasted for around 7 years. A third of women had a previous violent partner and a quarter of women had a current violent partner. 44 of women had a psychiatric syndrome. 47 women had a personality disorder, mainly borderline and dependent traits. Co-offenders had more intra-familial victims, and were more likely to have an Axis II disorder.

Table 4: An overview of characteristics researched by the studies included in this review

Characteristics	Studies
Childhood sexual abuse	Christopher, Lutz-Zois, & Reinhardt (2009)** Crawford (2012)* Gannon, Rose & Ward (2008)* Kaplan & Green (1995)** Strickland (2008)** Turner, Miller & Henderson (2008)** Wijkman, Bijleveld & Hendriks (2010)*
Negative childhood experiences	Crawford (2012)* Gannon et al. (2008)* Kaplan & Green (1995)** Strickland (2008)** Turner et al. (2008)**
Adult experiences of abuse	Crawford (2012)* Gannon et al. (2008)* Turner et al. (2008)** Wijkman et al. (2010)*
Personality disorders and/or traits	Kaplan & Green (1995)** Miller, Turner & Henderson (2009)* Muskens, Bogaerts, Van Casteren, & Labrijn (2011)** Strickland (2008)** Turner et al. (2008)** Wijkman et al. (2010)*
Depression	Kaplan & Green (1995)** Miller et al. (2009)* Turner et al. (2008)** Wijkman et al. (2010)*
Anxiety	Miller et al. (2009)* Turner et al. (2008)** Wijkman et al. (2010)*
Post-traumatic Stress Disorder	Kaplan & Green (1995)** Muskens et al. (2011)** Wijkman et al. (2010)*
DSM-IV Axis I disorders	Crawford (2012)* Miller et al. (2009)* Muskens et al. (2011)** Turner et al. (2008)**
Drug- Use	Crawford (2012)* Miller et al. (2009)* Muskens et al. (2011)** Turner et al. (2008)** Wijkman et al. (2010)*

Characteristics	Studies
Alcohol- Use	Crawford (2012)* Miller et al. (2009)* Turner et al. (2008)** Strickland (2008)**
Cognitions	Beech et al. (2009)* Gannon et al. (2010)* Crawford (2012)* Gannon et al. (2009)* Gannon & Rose (2009)* Kaplan & Green (1995)** Strickland (2008)**
IQ	Wijkman et al. (2010)*
Neuropsychological functioning	Pflugradt & Allen (2010)*
Previous convictions	Gannon et al. (2008)* Gannon et al. (2014)* Muskens et al. (2011)** Sandler & Freeman (2009)* Turner et al. (2008)** Vandiver (2006)*

* Studies that scored between 55-69% on the quality assessment

** Studies that scored 70% and above on the quality assessment

2.4.1.1 *Childhood Experiences*

One of the most researched and prevalent characteristics was experiencing childhood sexual abuse, seven out of the nineteen studies recognised this factor as being important (Christopher, Lutz-Zois & Reinhardt, 2007; Crawford, 2012; Gannon et al., 2008; Kaplan & Green, 1995; Turner, Miller & Henderson, 2008; Strickland, 2008; Wijkman, Bijleveld & Hendriks, 2010). Christopher et al. (2007) investigated this characteristic by comparing female incarcerated sexual offenders to incarcerated non-FSO using the Childhood Trauma Questionnaire (CTQ; Bernstein, Fink, Handelsman, & Foote, 1994). This is a reliable tool that measures various aspects of childhood abuse. They also used measures to identify whether Anti-social and Borderline personality traits mediated the relationship between childhood sexual abuse and being the perpetrator of a sexual

offence. Both the FSO and the control group were matched on age, and the variables which varied between groups were controlled for in the statistical analysis. Christopher et al. (2007) used the ANCOVA statistical test and found that FSO significantly reported more frequent instances of sexual abuse [F (1,123) = 4.7, $p < .05$; M= 16.4, SD = 7.2] than the control group (M= 12.2, SD = 7.7). Childhood sexual abuse significantly predicted perpetrating sexual abuse, even when Borderline and Anti-social personality traits were controlled for [F (1,116) = 9.9, $p < .01$]. To expand upon these results Christopher et al. (2007) again using an ANCOVA found that FSO suffered significantly longer periods of abuse (M= 27.8, SD = 20.5) than the control group (M= 16.6, SD = 10.4), [F (1, 32) = 4.6, $p < .05$]. Thus, Christopher et al. concluded that FSO experienced more severe levels of childhood sexual abuse.

Kaplan and Green (1995) also suggested that FSO suffer severer levels of abuse than non-sexual female offenders. They also compared FSO to non-sexual female offenders who were both incarcerated. These groups were matched on age, ethnicity, socioeconomic status and level of prison security (low, medium, and maximum). Kaplan and Green obtained data by using the Wyatt Sexual History Questionnaire (Wyatt, 1982), the Harvard Upjohn Post-traumatic Stress Disorder interview, and the Structured Clinical interview for the DSM-IIIR for non-patients (Spitzer, Williams, Gibbon & First, 1992). Kaplan and Green did not use statistical analysis, but they found that 82% of women in the FSO group compared with 45% in the control group had been sexually abused in childhood, within the FSO the abuse always took place within the family and was associated with severer levels of abuse.

Wijkman et al. (2010) supported these results by conducting a file analysis on 111 FSO. Although they did not specifically recruit a control group they made comparisons between those offenders who offended with a co-offender and those who offended alone. They used court files which included psychiatric or/and psychological reports detailing information about the participant's IQ and personality profiles. On their analysis of the participants as a whole group they used frequency counts to identify the prevalence of variables within the files. They found that out of all of the females included in their study 31% had been sexually abused when they were younger, and two thirds of these women were abused by a family member. The abuse started on average around 8 years old and lasted on average for around 7 years. Therefore, this study also conveys that FSO are often severely abused during childhood.

Other studies that have supported a presence of sexual abuse during childhood include Gannon et al. (2008). Like Wijkman et al. (2010), Gannon et al. (2008) did not use a control group within their study, they recruited FSO from one probation service and five prisons in the UK. They collected data from files and conducted interviews. They analysed this data using qualitative analysis (grounded theory). They found that out of the 22 FSO included within the study 8 (36%) had experienced sexual abuse during adolescence or childhood.

Strickland (2008) was able to further support this characteristic as being important in FSO. They compared 60 incarcerated FSO to incarcerated non-FSO using standardised, valid and reliable tools. These tools included The Multiphasic Sex Inventory–II Female version (MSI-II; Nichols & Molinder, 1996), The Substance Abuse Subtle Screening

Inventory–3 (SASSI-3; Miller, 1985) and the Childhood Trauma Questionnaire–Brief Version (CTQ; Bernstein et al., 2003). To investigate whether FSO scored higher on the sexual abuse scale of the CTQ Strickland conducted t-tests on the data. The t-tests revealed that FSO scored significantly higher on this scale than the control group (t = 2.88, df = 128, $p < .005$). Strickland thus concluded that experiencing sexual abuse during childhood is a risk factor for later sexual offending in FSO.

In addition, the Turner et al. (2008) study aimed to investigate the psychopathology of FSO who had been incarcerated in a correctional facility. This study did not use a control group, but used reliable and valid measures to study 90 FSO. These measures included the Personality Assessment Inventory (PAI; Morey, 1991), the Trauma Symptom Inventory (TSI; Briere, Elliott & Harris, 1995) and the Static- 99 (Hanson & Thornton, 2000). These measures were completed as part of the offender's referral to a sex offender treatment programme, and the researchers also completed file analysis to identify demographic, index offence, offence history, family history information and the results of the psychological tests. Although, Turner et al. (2008) did not use statistical analysis, they found that 69% of the offenders had experienced some form of sexual abuse when they were a child.

Finally, Crawford (2012) also investigated the victimisation histories of 32 FSO. In contrast to the above studies Crawford used qualitative analysis to examine the attitudes and experiences of FSO and to develop a theory of FSO. This involved her analysing the files of FSO provided by the Florida Department Corrections research department. She used grounded theory to analyse the files and identify key themes that were

consistent throughout the data. Whilst completing this analysis she was also able to identify the prevalence of characteristics including: demographic information, history of deviant behaviour (anti-social and drug-related), history of victimisation and history of mental illness. In her sample of 32 FSO, 22 (69%) had experienced sexual abuse as a child. Her descriptions of their abusive experiences indicated that the abuse was extensive, often continuing over a long period of time and by individuals within their family.

Crawford (2012) also found that FSO often experience other abusive experiences within their childhood. Within her sample she identified that 53% of FSO had experienced physical abuse. In addition, Gannon et al. (2008), Kaplan and Green (1995), Strickland (2008), and Turner et al. (2008) also provide support for FSO experiencing other negative childhood experiences.

Gannon et al. (2008) identified that out of the 22 FSO in their study 14 (64%) reported experiencing unjustified and prolonged punishment during childhood, 9 (41%) experienced emotional abuse in the form of bullying, and overall 50% of females described experiencing more than one type of abuse. Kaplan and Green (1995) provided further support for this when they found that in their sample of FSO 73% experienced physical abuse. However, the control group (incarcerated non-sexual female offenders) also experienced similar frequencies of abuse, and thus they could not be differentiated. Physical abuse in childhood may not be a unique characteristic of FSO, but one that is common to female criminals.

Strickland (2008) investigated this characteristic further with a larger sample size and statistically analysed the data. Strickland (2008) found that when comparing FSO to non-sexual female offenders, FSO experienced significantly higher rates of childhood trauma than the control group ($t = 2.89$, $df = 128$, $p < .004$). FSO also experienced significantly more emotional abuse ($t = 2.42$, $df = 128$, $p < .017$), physical abuse ($t = 2.52$, $df = 128$, $p < .013$), and physical neglect ($t = 2.05$, $df = 128$, $p < .043$). Furthermore, Turner et al. (2008) in their sample of 90 FSO, reported that 57% of FSO experienced physical abuse during childhood.

Sexual abuse and negative experiences during childhood are characteristics supported in FSO by a variety of studies. The studies have supported these characteristics when using a control group and statistical analysis. These characteristics are also supported by studies that have used self-report measures or standardised tools as a means of obtaining data. The evidence that has been described for these characteristics suggests that in a variety of ways FSO do not have positive experiences during childhood, and their childhood is often filled with trauma and stress.

As well as experiencing negative experiences during childhood Crawford (2012), Gannon et al. (2008), Turner et al. (2008), and Wijkman et al. (2010), have also provided evidence to suggest that these experiences continue into adulthood. All of these studies suggest that FSO experience abusive relationships during adulthood. Crawford found that 50% of FSO in their sample had experienced intimate partner violence during their adulthood. Wijkman et al. (2010) identified that a quarter of the women in their sample described previously experiencing a partner who physically abused them, and a third described having a current violent partner. Gannon et al.

(2008) described that FSO often experience major life stressors in their adulthood and 91% of their sample were found to have stressors relating to their personal relationships, experiencing domestic abuse in the form of physical and/or emotional abuse.

Turner et al. (2008) was also able to provide support for this characteristic with the use of standardised measures and found that 25% of the women in their sample experienced sexual abuse in adulthood and 33% experienced physical abuse. Although none of these studies provided statistical support or compared their samples of FSO with a control group, their results are consistent and provide evidence that further victimisation during adulthood is a prevalent characteristic in FSO.

2.4.1.2 *Mental Health*

Another characteristic that was prevalent in the studies is the presence of personality disorders and/or traits. Six out of the fourteen studies found this to be an important feature of FSO (Kaplan & Green, 1995; Miller, Turner & Henderson, 2009; Muskens, Bogaerts, Van Casteren & Labrijn, 2011; Strickland, 2008; Turner et al., 2008; Wijkman et al., 2010).

Firstly, Kaplan and Green (1995) compared FSO to non-sexual female offenders and found a high prevalence of Axis II Personality Disorders in both groups. However, a higher number was found per subject in the FSO group who had a mean of 3.6 Personality Disorders compared to 2.4 Personality Disorders per subject in the control group. There were also differences in the type of personality traits displayed in each group. Within the FSO group, 64% FSO suffered from Avoidant personality traits and

45% suffered from Dependent personality traits. In the control group, 73% were diagnosed with an Anti-Social Personality Disorder.

Wijkman et al's (2010) study which was also described above, support Kaplan and Green's (1995) results. Out of the women that they had psychological and/or psychiatric reports for, 47 personality disorders were identified. They found that 6 were said to have a diagnosis for a Dependent Personality Disorder, 6 also had a Borderline Personality Disorder diagnosis, and 26 were diagnosed with an Unspecified Personality Disorder with Borderline and/or Anti-Social and/or Dependent traits. Turner et al. (2008) found support for Borderline personality features in FSO and used the Personality Assessment Inventory (PAI; Morey, 1991). They used a Latent Profile Analysis (LPA) to distinguish personality differences between 90 FSO. In two out of the three classes that were identified in the LPA, two of the classes had Borderline personality features. In the moderate psychopathology class (39 FSO) the borderline scale was at the 'at risk' level, and in the extensive psychopathology (10 FSO) class the level reached clinical significance. This study provides evidence that Borderline personality features are consistent throughout a sample of FSO.

Miller et al. (2009) expanded upon Turner et al's study and investigated 128 FSO who again had been incarcerated and referred to a sex offender treatment programme and compared them against a MSO population. Like Turner et al. (2008), they completed file analysis on the referrals to the treatment programme which contained results for measures on the PAI and the Static-99. They supported Turner et al's results by conveying that FSO average mean (66.8) on the borderline scales of the PAI were

higher than the MSO (52.8). However, they did not complete statistical analysis on these results nor do they explain on average what level of severity the average score for FSO or the comparison group had obtained. Miller et al. (2009) also reported that the mean for FSO on the anti-social features scale was 59.4 which was higher than the mean for MSO (57.5). However, they again failed to conduct statistical analysis or express what level the scores for this scale reached. Again like Turner et al. they used a LPA to identify differences between FSO and MSO by statistically investigating how affiliation to a class could be determined by psychopathology (level of severity on the PAI scales). Their results were consistent with Turner et al. as they found that FSO were more likely to be classified in the extensive psychopathology class, which represented individuals that scored to a clinically significant level on a variety of the PAI scales.

Strickland (2008) also used a standardised tool to investigate personality traits in FSO. She used the MSI-II personality subscale which produces a profile of personality disorders based on the DSM-IV diagnostic criteria. She found that when compared to non-sexual female offenders, 39% of the FSO group did not have the presence of Personality Disorder indicators whereas 25% of the control group did not, however Strickland did not statistically support this. In addition, the FSO who did have personality disorder indicators were found to have more Schizoid, Borderline and Dependent traits, whereas the control group had more Anti-Social and Histrionic traits. These results convey that Personality Disorders may be a consistent feature in all female offenders, but their personality profile may differ depending on the offence the female has committed.

Finally, Muskens et al. (2011) investigated personality pathology in a sample of 60 FSO who had been referred for an in/out patient psychiatric and/ or a psychological assessment in the Netherlands. The study firstly compared solo FSO to those FSO who offended with a co-offender, the study then compared those who recidivated to those who did not recidivate. Muskens et al. (2011) investigated the following characteristics for both comparisons: mental health, previous convictions and victim characteristics. The data was collected using file analysis and Muskens et al. analysed the data statistically using Cohen's d effect sizes and Confidence Intervals for continuous variables. They calculated the Odds Ratio and Confidence Intervals for dichotomous variables. Muskens et al. also conducted a logistic regression to identify what variables were the best predictors of recidivism.

There was not a significant difference found between co-offenders and solo-offenders on specific DSM-IV Personality Disorders and/or traits, however the mean number of personality disorders and/or traits was significantly higher in co-offenders ($d = .37$, $p < .05$). Muskens et al. reported the frequencies of personality disorder and/or traits and 11% of co-offenders were reported as having an Anti-Social personality. There was no evidence of Anti-Social personality traits in solo offenders. In relation to Borderline personality, 32% of co-offenders and 38% of solo offenders were identified as having this type of personality. Co-offenders were found to have Avoidant personality traits (16%) and Dependent (41%) personality traits. Muskens et al. also found that when they compared recidivists to non-recidivists, non-recidivists were significantly more likely to suffer from a larger mean number of personality disorders and/or traits ($d=1.12$, $p<.05$). This is an unusual finding given that Personality Disorder has frequently been found to

be a predictor of offending behaviour and recidivism, in particular repeat imprisonment (Roberts & Coid, 2009).

Personality Disorders and their traits have been evidenced to be a consistent and prevalent characteristic in FSO. Specifically, FSO seem to have a high frequency of Borderline personality traits, but each study has described various ways in which the profile of FSO personalities can differ. The support for this characteristic has been shown using a variety of methodologies and sample selection.

As well as personality disorder, other mental health issues have been consistently found to be a problem in FSO, this includes depression (Kaplan & Green, 1995; Miller et al., 2009; Turner et al., 2008; Wijkman et al., 2010), anxiety (Miller et al., 2009; Turner et al., 2008; Wijkman et al., 2010), PTSD (Kaplan & Green, 1995; Muskens et al., 2011; Wijkman et al., 2010) and Axis I disorders (Clinical Disorders/Syndromes) and related symptoms (Miller et al., 2990; Muskens et al., 2011; Turner et al., 2008). When Kaplan and Green (1995) compared FSO to non-sexual female offenders they found consistent levels of depression in both groups, with 89% of the control group reported as having previously suffered an episode of major depression.

Miller et al. (2009) also investigated the prevalence of depression in FSO by comparing their results on the PAI to MSO results. They found that FSO mean (64.3) on the depression scale was higher than the MSO (51.7). However, they did not use statistical analysis to support whether this result was significant. Turner et al. (2008) also used the PAI when investigating depression, and as described above the main aim of Turner et

al's study was to investigate whether FSO could be classified based on personality characteristics. Therefore, like with the Borderline scale the moderate psychopathology class scored on average a mean that reached the 'at risk' level (66.05) on the depression scale and the extensive psychopathology class scored on the clinically significant level of the scale (87.39). Therefore, over half the sample of the FSO in Turners study had depressive symptoms and some were to a significant level.

Finally, Wijkman et al. (2010) reported 40 FSO were identified as having depression or depression with suicidal thoughts. However, Wijkman did not report how many files of the participants had psychological and/or psychiatric reports available to be analysed, so the prevalence of this characteristic in this sample is not clear.

The same issue arises in Wijkman et al's study when the frequency of anxiety disorders was investigated. It was reported that an anxiety disorder diagnosis was identified in their sample of FSO. However, they did not report the frequency or prevalence of this. Turner et al. (2008) was also unable to statistically support the presence of anxiety disorders in FSO but like depression and Borderline personality traits, in his moderate psychopathology class of FSO the average mean of the anxiety-related disorders scale (66.81) and the anxiety scale (66.61) was at the 'at risk' level and in the extensive psychopathology group both scales reached the clinically significant level (78.43/78.65). Lastly, again Miller et al. (2009) could not provide statistical significance for anxiety, but they were able to show that FSO have greater average mean scores on the anxiety-related disorders (65.1) and the anxiety scale (63.3) on the PAI than MSO (52.2/ 49.8).

Similar difficulties also occur when investigating whether PTSD is a consistent factor in FSO. Muskens et al. (2011) statistically compared solo and co-offenders, and recidivists and non-recidivists on this factor using psychological and/or psychiatric assessments available in the files they analysed. They found that in both comparisons there was not a significant difference in the presence of PTSD, and overall there was only a small presence of the disorder with 8% in both the solo and co-offender group, and 6% present in the non-recidivist group.

Wijkman et al. (2010) was also unable to provide evidence that PTSD is an important factor in FSO, again like with anxiety, they did not report the frequency of the disorder, they merely stated that it was reported in the files they analysed. However, Kaplan and Green (1995) when investigating PTSD using a structured measure (the SCID) found that there was not a difference between FSO and the control group. PTSD was present in 89% of the FSO group and 64% of the comparison group. The extensive difference in prevalence found between Muskens et al. (2011) and Kaplan and Green's (1995) studies perhaps relate to the different approaches used to identify the presence of PTSD. Kaplan and Green (1995) used a more in-depth structured assessment, which can be considered as a more sophisticated method of identifying PTSD in comparison to retrospectively analysing the presence of PTSD in file information. Kaplan and Green's (1995) study emphasises that PTSD is an important characteristic for not only FSO but female offenders in general.

Depression, anxiety and PTSD have all been considered as important when researching FSO. Although depression has been more frequently researched, like anxiety and PTSD it has not been supported as being statistically significant and relevant for FSO.

In addition, another mental health characteristic that has been researched is the presence of DSM-IV Axis I disorders and related symptoms. Muskens et al. (2011) compared solo and co-offenders, and recidivists and non-recidivists to see whether they differed on the presence of DSM-IV Axis I disorders. The mean number of diagnosis' in solo offenders was significantly higher than within co-offenders ($d=-.56$, $p<.05$). However, it was found to be prevalent in both groups, 42% of the co-offenders had a diagnosis, whereas 89% of the solo offenders had a diagnosis. There was not a significant difference found between recidivists and non-recidivists in the number of diagnoses, but again in both groups there was a high prevalence, 33% of non-recidivists and 50% of recidivists had a diagnosis of an Axis I disorder. It is important to acknowledge that the sample that Muskens et al. used were all FSO who had been referred for an inpatient or outpatient psychological/psychiatric assessment, so the prevalence in this sample would be expected to be higher.

Turner et al. (2008) and Miller et al. (2009) both investigated psychotic symptoms using the PAI. Again, similar to other characteristics described above, Turner et al. found that in the moderate psychopathology class of FSO they reached the 'at risk' level on the paranoia and schizophrenia scales, and in the extensive psychopathology class the level on the same scales reached clinical significance. Miller et al. (2009) found that FSO scored on average higher on both the paranoia (62.1) and the schizophrenia (62.6) scales

than MSO (53.5/50.7). Finally, Crawford (2012) in her analysis of 32 FSO criminal files identified that 47% of her sample had a previous diagnosis of a mental illness. However, she did not specify what the previous diagnoses were.

Mental health problems/disorders have been shown to be prevalent in FSO. The presence of personality disorders have been more thoroughly supported, but the other factors described can also be considered as factors that are important in FSO.

2.4.1.3 *Substance use*

Studies investigating what characteristics may be prevalent in FSO have also focused on the use of substances, including both drugs (Crawford, 2012; Miller et al., 2009; Turner et al., 2008; Muskens et al., 2011; Strickland, 2008; Wijkman et al., 2010) and alcohol (Crawford, 2012; Strickland, 2008; Turner et al., 2008; Miller et al., 2009). Miller et al. (2009) and Turner et al. (2008) both used the PAI to measure drug and alcohol problems. As described above, Turner et al. used the results from the PAI to classify their sample of FSO into groups based on their personality profile. Turner et al. found that within two out of the three classes of FSO the drug and alcohol scales were on average both reaching the 'at risk' level, and within the third class the drug scale reached the clinical significance level. This suggests that most of FSO appear to have problems with alcohol and with drugs. Miller et al. (2009) compared FSO to MSO on the PAI, and found that the females had a higher average mean for the drug scale (64.5) than males (59.5), but that the males had a slightly higher average mean on the alcohol scale (59.6) than the females (57). These studies suggest that perhaps drugs are slightly more of an issue for FSO, but this has not been statistically supported.

Strickland (2008) investigated drug and alcohol problems using the SASSI-3. She compared FSO to non-sexual female offenders on this measure and found that the two groups did not significantly differ on both scales. However, she did find that the FSO had a higher average mean score (n = 56, M = 11.21, SD = 11.16) than the comparison group on the alcohol scale (n = 70, M = 9.26, SD = 8.73). Although, on the drug scale the comparison group scored higher (n = 70, M =15.17, SD =14.09) than the FSO (n = 56, M = 11.36, SD = 14.04). Strickland's results suggest that substance misuse may not be a unique characteristic for FSO, and along with Miller et al's research it appears to be an issue that affects all female criminals and MSO.

Muskens et al. (2011) supported the prevalence of substance abuse issues in FSO when they compared co-offenders to solo offenders and recidivists to non-recidivists. There was not a significant difference found between solo and co-offenders in relation to substance-related disorders; 33% of the solo group and 15% of co-offenders were found to have a substance-related disorder. There was also not a significant difference found between recidivists and non-recidivists, but 25% of recidivists and 13% of non-recidivists had a substance-related disorder. Wijkman et al. (2010) found that in their sample of 111 FSO slightly more than one in eight had ever used drugs. However, Crawford (2012) found the presence of drug/alcohol use to be high in her sample of FSO, with 70% found to use substances. She also identified that 28% of her sample blamed their offending behaviour on the use of these substances.

The support for drug and alcohol use problems as being a consistent characteristic in FSO is mixed. It appears to present to a similar degree in MSO and non-sexual female

offenders. In the studies that have been reviewed none of them have statistically supported its presence in FSO, which indicates that this characteristic needs to be further investigated.

2.4.1.4 *Cognitions*

Research into the cognitions of FSO has developed in the past few years and the understanding of various aspects of this characteristic are still very much growing. Six studies in this review have specifically considered investigating FSO offence-related cognitions (Beech et al., 2009; Crawford, 2012; Gannon et al., 2009; Gannon & Rose, 2009; Gannon et al., 2010; Strickland, 2008).

Gannon et al. (2009) investigated whether female child molesters (FCM) could be distinguished from non-molesting female offenders on a test of implicit cognitive associations investigating adult or child associations with sexual and non-sexual concepts. This study's methodology is a particular strength as it does not rely on self-reports from the FCM. The Implicit Association Test (IAT) is described as avoiding the weaknesses of self-report measures including social desirability bias (Gannon et al., 2009). Gannon et al. recruited females from the CJS in the UK from both prison and probation settings. Participants were required to complete a control condition and an experimental condition of an IAT which were appropriately counterbalanced. The reaction times from each condition were changed into effect sizes. Gannon et al. (2009) used a two-way ANOVA to analyse the results and found that both groups performed faster on the usual belief task (adults paired with sexual concepts) than the unusual belief task (child paired with sexual concepts), and they did not significantly differ (*F*

(1, 30) = .79, *ns*). Gannon et al. then removed those offenders who abused older children to see whether those offenders who abused pre-pubescent children would be more likely to associate children with sexual concepts. However, the results remained the same, and this was the case when Gannon et al. also controlled for the effects of IQ and age. Thus, Gannon et al. concluded that FSO do not have cognitions that sexualise children. It is important to note that 65% of Gannon et al's sample were females who had co-offended, and Gannon et al. failed to separate these offenders from solo offenders. Therefore, the results may not be reflective of offenders who have been self-motivated within their sexual offending behaviour who may be more likely to have cognitions that sexualise children.

Gannon and Rose (2009) also used the same recruitment procedure as in Gannon et al. (2009) to investigate FCM offence-related cognitions in comparison to female non-sexual offenders. Gannon used an implicit memory paradigm, which has similar strengths to the Gannon et al. (2009) methodology to investigate whether FSO hold implicit schemas about males being threatening and whether they have implicit schemas which sexualise children. Gannon and Rose (2009) used an ANOVA to statistically analyse the results and a bonferroni-corrected comparison showed that FCM recognised significantly more threatening male sentences than the control group (FCM, M =76.84 vs. FC, M = 63.33, p = .046; one-tailed). This result remained significant when those females who had co-offended with a male were removed from the data. A three-way ANOVA conducted on the child related sentences revealed that there was not a significant three way interaction (F (1, 35) = 1.57, ns). This result remained the same when offending with a co-offender or solely was taken into account (F (2, 18) <1, ns). Therefore, the results convey that FSO have cognitions that interpret males in a

threatening way, even if they have offended on their own or with an accomplice. However, Gannon and Rose (2009) could not provide a definite conclusion on how this would affect why a female would sexually offend alone or with a co-offender. Gannon and Rose's (2009) results also support Gannon et al. (2009) results that FSO do not have cognitions that sexualise children.

Strickland (2008) also investigated the cognitions of FSO by using the Cognitive Distortions and Immaturity scale of the MSI-II, which is able to measure an individual's general thinking patterns and the errors that occur within them. Strickland (2008) compared FSO to non-sexual female offenders in order to highlight any unique cognitions that FSO may have. The FSO were found to score slightly higher on the emotional neediness scale (n = 54, M = 8.89, SD = 4.98) than the control group (n = 63, M = 8.22, SD = 4.30), although a t-test revealed that this result was not significantly different. The means for both groups on this factor reached a level that indicated that loneliness and neediness was evident, which suggests that both groups had an inner need for love and affection and a need to suppress feelings of loneliness and separation. Both groups also scored in the highest level on the Cognitive Distortions and Immaturity scale, and again the groups did not differ significantly. The mean scores for both the FSO (n = 54, M = 7.72, SD = 4.42) and the control group (n =63, M = 7.62, SD = 3.87) were above 7 which indicates marked accountability and a blaming outlook. They can be found to have cognitions that indicate emotional immaturity and believing they have been mistreated and victimised throughout life. Thus, Strickland concluded that these women have a tendency to blame others and take a victim-stance response style. Strickland (2008) has been able to statistically support that FSO cognitions do not

differ from other female criminals. However, Strickland has used self-report measures which may be susceptible to social desirability bias. Strickland did not report whether all subjects results on the MSI-II could be considered as valid, but indicated that on the CTQ validity sub-scale non-sexual offenders appeared to present themselves in a more favourable light than FSO. Another issue with Strickland's methodology is that she used the MSI-II, which is a male-derived assessment tool that may not be appropriate to identify characteristics of FSO.

In addition, the presence of offence-supportive cognitions has been researched qualitatively (Beech et al., 2009; Crawford, 2014; Gannon et al., 2010). Although, the results from these studies are not as objective and reliable as using Implicit tests or standardised measures they are still able to provide an insight into the offence-supportive cognitions found in FSO. Both Beech et al. (2009) and Gannon et al. (2010) used the same semi-structured interview procedure to identify the presence of male-derived Implicit Theories (ITs) in FSO. ITs were first identified by Ward (2000) and can be described as structures that an individual uses to understand and process information. They can also be understood as cognitions that have been influential in an individual's offending behaviour (offence-supportive cognitions). Ward has identified five ITs found in MSO: *Children as Sexual* (views that children can be sexual beings who are able to consent); *Dangerous world* (the world is a dangerous and threatening place); *Nature of Harm* (views that some sexual behaviour is acceptable and minimising the harm that their offending behaviour has caused); *Uncontrollability* (views of the world being uncontrollable and believing that things can just occur); and *Entitlement* (believing that people are entitled to have their needs met by less superior others).

Beech et al. initially investigated the presence of ITs with 15 FSO and Gannon et al. (2010) later replicated this study with 16 FSO. Both studies in their data analysis used two coders and were able to convey the reliability of the coding statistically. This increases the reliability of their results.

Beech et al. (2009) did not find the presence of the entitlement IT, but found evidence for the other four ITs in their sample. The most prevalent IT was *uncontrollability* which was found in 87% of their sample. The *dangerous world* IT was found in 53% of their sample, *children as sexual being* in 47% of their sample and *nature of harm* was found in 20% of their sample. They also found evidence for aspects of the *subjugation* schema identified by Young (1990), that described an individual who surrenders control to others in order to meet other's needs. In addition, Beech et al. (2009) emphasised that the content of the ITs differed in those who offended with an accomplice. These FSO incorporated distortions about their co-offender which included believing that their co-offender had full control over the situation, believing that if they participated it would reduce the harm caused to the victim and perceiving their co-offender as dangerous and threatening. These results suggest that it is important to consider the heterogeneity within FSO, especially between solo and co-offenders.

The Gannon et al. (2010) findings differed to Beech et al. (2009), even though 6 of the participants in their study were the same participants used in the Beech et al. (2009) study. Gannon et al. (2009) found the presence of all five ITs in their sample of FSO. However, what was particularly crucial in their findings was that the content of the ITs were different to those found in MSO and were found to be female-specific. The entire

sample conveyed evidence of the *dangerous world* and *uncontrollability* ITs, but within the *dangerous world* IT the content mainly related to viewing males as dangerous. They found three main themes within the *uncontrollability* IT. The sample felt the situation was uncontrollable due to: 1) their victim, 2) substance use, or 3) their co-offender. They found 63% of their sample conveyed views that suggested they viewed their victim as sexual (*child as sexual* IT) and 81% had the presence of the *nature of harm* IT. Again with the *nature of harm* IT Gannon et al. (2010) found that the content of this was often female-specific, as the FSO had views that indicated they viewed female-perpetrated abuse as less harmful than male-perpetrated abuse. Finally, 44% of the sample endorsed the *entitlement* IT, but again of importance was the female-specific content to this IT. The FSO in this sample often conveyed views about men (mainly the co-offender) being entitled to sexually abuse and get their needs met. This study highlights the importance of taking a gender-specific approach when working with or researching FSO.

Crawford (2012) retrospectively analysed FSO criminal files in order to identify the presence of offence-related cognitions. Although this methodology is limited she was able to provide an indication of the thinking styles found in FSO. An overall finding in her study was that FSO often externalised blame for their offending behaviour. This finding is consistent with Beech et al. (2009) and Gannon et al. (2010) finding that the *uncontrollability* IT can be identified in FSO. Like Gannon et al. (2010) the same three objects of blame were found in their sample. Firstly, 19% of their sample blamed their victim for their behaviour which included feeling as if the victim was responsible for their behaviour, perceiving their contact with the victim as an ‘intimate relationship’ or

believing the victim tricked them into thinking they were older. In addition, 28% blamed drugs/alcohol and out of the 10 participants in her study that offended with a co-offender, 90% blamed their co-offender.

Crawford (2012) also identified cognitions in the FSO that conveyed how they had justified their offending behaviour. Many of the FSO who had co-offenders (amount not specified) conveyed rationales for their behaviour relating to being fearful of their co-offender and viewing them as threatening. This result is consistent with Beech et al. (2009), Gannon et al. (2009), Gannon and Rose (2009) and Gannon et al's (2010) studies that also found cognitions that perceive males, and specifically their co-offenders, as threatening. Another rationale related to the FSO feeling powerful and in control. 13% of the sample identified that the victims respected them and that they were teaching their victims and 16% found they felt more comfortable with children than adult men. This conveys that FSO can form emotional congruence with children and use their contact with the victim as a 'pseudo-relationship'. This rationale can also be considered as similar to the uncontrollable IT described above, in which FSO view the world as uncontrollable and use their offending behaviour as a means to gain some control within their environment. The final rationale described by Crawford (2012) appears to be consistent with the entitlement IT. Crawford explains that the FSO were found to have thoughts about being entitled to have intimacy and their personal needs met, as it was easier to be intimate with a child than be lonely. It will be important to replicate these results further due to their methodological limitations.

Finally, Kaplan and Green (1995) investigated the sexual fantasies of FSO using interview methods and compared them with non-sexual female offenders. They reported that two of the sexual offenders reported atypical sexual fantasies with one reporting fantasies about her child victims. Whereas in the comparison group, 5 reported atypical fantasies which mainly related to exhibitionism. These results convey FSO may not be sexually motivated to offend. However, like with Strickland (2008) self-report measures may not convey an accurate interpretation of reality.

The cognitions of FSO are an area that is still under-developed. It is difficult to make firm conclusions about what offence- related distortions are important for FSO, but the studies described can provide some indication of what cognitions should be explored further. They also highlight two factors that need to be considered when approaching research, assessment and treatment of FSO in the future: 1) taking a gender-specific approach, and 2) considering the differences between solo and co-offenders. It will be important for future research to investigate offence-supportive cognitions using a variety of control groups and using statistical analysis to provide empirical support for their findings.

2.4.1.5 *Capabilities*

Two of the studies in this review investigated how FSO function and their capabilities. Firstly, Wijkman et al. (2010) was able to get an indicator of FSO level of intelligence. Eighty two participants in his sample had psychiatric and/or psychological assessments completed in which the Wechsler Adult Intelligence Scale (WAIS; edition not specified in paper) had been administered. Wijkman found that 33% of the women had borderline

intellectual functioning, 35% had lower than average intelligence, 26% had average intelligence, and only 6% had above average intelligence. This suggests that most FSO have below average IQ level, this may be due to a lack of education or there could be an organic cause.

Pflugradt and Allen (2010) investigated the neuropsychological functioning (specifically frontal temporal lobe functioning) of 35 FSO who were all incarcerated and had been referred to a sex offender treatment programme. The study collected data by using file analysis and three tools including: Sexual Offender Assessment Report (SOAR; reference not specified in paper), the Stroop (Golden & Freshwater, 2002) and Trail Making Test (Reitan, 2004). The Stroop test is able to provide an indicator of an individual's ability to inhibit responses and their impulsivity. The Trail Making Test is able to measure an individual's ability to switch between tasks and attention flexibility. The aim of this study was to see whether neuropsychological functioning would differ between typologies found by Sandler and Freeman (2007), these results will be described in the typologies section of the review. Overall, the FSO scored within the average range for both the Trail Making test and the Stroop test. FSO have been shown to have average neuropsychological functioning rather than the executive functioning deficiencies that have often been identified in MSO. However, they recognised that this result should be tested further.

2.4.1.6 *Previous Convictions*

Five studies have also investigated whether FSO have previous criminal convictions for both sexual and general offences (Gannon et al., 2008; Muskens et al., 2011; Sandler &

Freeman, 2009; Turner et al., 2008; Vandiver, 2006). This information can support our understanding of why a female has sexually offended and the possible pathways to their offending behaviour. If FSO are found to have previous sexual convictions it may indicate that their behaviour is sexually motivated, whereas those with other non-sexual convictions may sexually offend as part of their anti-social pattern of behaviour. Vandiver's (2006) study investigated the differences between solo and co-offenders using a large sample size (123 solo offenders, 104 co-offenders). Vandiver (2006) analysed variables that included information about the offenders, the victims and the offence. They obtained data from the FBI database which contained a vast amount of information about all of the crimes reported to them. In order to investigate the differences between the two groups the data was analysed using chi-square tests for categorical data, and t-tests for non-categorical data. Vandiver (2006) assessed the number of non-sexual offences listed at the time the offender was arrested and found that co-offenders were significantly more likely to have a non-sexual offence ($x^2 = 35.437$, $p < .001$). This suggests that co-offenders are perhaps more likely to be generally anti-social.

Turner et al. (2008) described the prevalence of previous arrest rates in their sample of 90 FSO, and reported that 68% of their sample had been previously arrested. They failed to specify what the arrests were for, and they did not separate co-offenders and solo offenders to see if the prevalence differed. Gannon et al. (2008) and Gannon et al. (2010) both describe that in their samples none of the FSO had a previous sexual conviction. Beech et al. (2009) also reported that in their sample of incarcerated FSO

there were no previous sexual convictions, but 27% had previous non-sexual, non-violent conviction.

Muskens et al. (2011) compared solo offenders with co-offenders, and recidivists to non-recidivists. Muskens et al. found that solo and co-offenders did not significantly differ in relation to their previous convictions (sexual, violent or any), 4% of co-offenders had a previous sexual conviction, but none of the solo offenders in their sample did. In relation to previous violent convictions, 6% of co-offenders and 8% of solo offenders had a violent conviction and for any previous conviction 31% of co-offenders and 42% of solo offenders had any previous conviction. Muskens et al. also found that statistically recidivists did not significantly differ from non-recidivists in relation to sexual, violent or any previous convictions. However, overall 75% of recidivists were found to have any previous conviction compared to 29% of non-recidivists. Muskens et al's research suggests that having a previous sexual conviction is not a factor that will predict FSO, nor will it increase the risk of recidivism, but other types of convictions may be important considerations in the risk assessment of FSO.

Sandler and Freeman (2009) used the largest sample of FSO out of all of the studies reviewed. They investigated 1466 FSO who had been convicted of a sexual offence in the state of New York. They collected data using file analysis which contained information about their criminal history. All previous convictions for the FSO including violence, drug offences, child victim offences, and weapon-related offences prior to the first sexual offence were all on average below 1 in occurrences. Using a chi-square statistical test Sandler and Freeman (2009) investigated whether having a previous

conviction predicted recidivism. They found that those who sexually recidivated were significantly more like to have a prior misdemeanour conviction (x^2 (1, N = 1,466) = 15.5, $p \leq .001$), a previous drug conviction (x^2 (1, N = 1,466) = 25.5, $p \leq .001$), and a previous felony conviction (x^2 (1, N =1,466) = 21.5, $p \leq .001$). Therefore, even though the likelihood of a FSO having a previous conviction is low, a previous conviction has been found to be a risk factor for future sexual re-offending. This result is supported by a large sample size and statistical evidence. In the future, this result needs to be replicated and research completed in order to confirm if having previous convictions are important risk factors for FSO.

2.4.1.7 *Recidivism and Prevalence*

Although this review did not aim specifically to examine recidivism and prevalence rates of FSO, if a study already included in this review addressed these factors they were considered in this section.

Two of the studies in this review investigated recidivism rates and factors that predict recidivism in FSO. Sandler and Freeman (2009) investigated recidivism by using a large scale empirical analysis of 1466 FSO. They analysed the criminal history of every FSO registered as a sex offender from January 1986 until December 2006 in the state of New York. A FSO was identified as a recidivist if they were re-arrested for any offence. They found that 29.5% of the FSO were re-arrested for any offence, 13.9% were re-arrested for a felony offence, 6.3% were arrested for a violent offence which included sexually violent offences, and 2.2% were re-arrested for a sexual offence. However,

when convictions rather than just an arrest were taken into account, only 1.9% of the FSO were re-convicted of a sexual offence.

To identify the differences between recidivists and non-recidivists Sandler and Freeman used t-tests and chi-square statistical tests. In addition, they also used a logistic regression to measure which variables related to recidivism. A significant difference was found in relation to the type of first convicted sexual offence, (x^2 (6, N = 1,466) = 45.8, $p \leq .001$). Of those that sexually recidivated, 31% had committed promoting or patronising prostitution of a child as their first sexual offence, and all of these were re-arrested for a similar offence. The logistic regression found that only three variables significantly contributed to sexual re-arrest. For every child victim offence committed prior to the individuals first arrest for a sexual offence, this increased the likelihood of recidivism by 144%, for every additional prior misdemeanour offence this increased an individual's odds of sexually recidivating by 14%, and each year the offender was older at her first arrest for a sexual offence the odds increased by 4%. Therefore, Sandler and Freeman (2009) concluded that those FSO who recidivate are more likely to be regular offenders who sexually offend because they are motivated financially.

Muskens et al. (2011) also measured recidivism in the Netherlands by using data from the Judicial Documentation register of the Ministry of Justice. Fifty-eight FSO were followed up from their date of conviction until April 2010, the follow-up time for each FSO varied but on average follow-up was around 69.5 months. Muskens et al. (2011) found that there was no sexual recidivism among any of the offenders, the violence recidivism was 1.9% and the recidivism rate for any offence was 7.7%. There were no

significant differences between non-recidivists and recidivists on the average number of previous victims, any of the victim characteristics and on the number or type of DSM-IV Axis I disorders. The mean number of DSM-IV personality disorders and/or traits was larger in non-recidivists and this was found to be significantly different to recidivists ($d=1.12$, $P<.05$). All of the comparisons were measured using Cohen's d analysis. Muskens et al. then conducted a logistic regression to see what factors predicted recidivism. Muskens et al. found that offender type predicted recidivism with the odds of a solo offender recidivating being 13.00 times more likely than co-offenders ($p<.0.05$). They found that unlike Sandler and Freeman (2009) age was not predictive of recidivism.

Both of these studies investigated different variables in relation to recidivism, so it is difficult to conclude what factors consistently predict re-offending. Both studies also began their follow-up periods from arrest or conviction date which means this period differed for each participant. This also means that confounding variables such as sentence received, probation supervision and the offender's actual availability to re-offend were not accounted for.

Prevalence

Two of the studies in this review also reported the prevalence of female sexual offending. Firstly, Sandler and Freeman (2009) reported that of all the sexual offenders registered on the sex offender register in the state of New York from January 1986 until December 2006, FSO represented 1.8% of all the sexual convictions. Vandiver and Kercher (2004) found that of all the sex offenders on the Texas sex offender register as

of April 2001, females made up 1.6% of the total. Both studies have produced similar figures and suggest that females make up less than 2% of all sexual offenders.

2.4.1.8 *Methodological considerations*

Table 5 provides information about the quality of each study including the scores they gained and their strengths and weaknesses. The studies that scored the highest in the quality assessment were studies that had large sample sizes, which represented a wide range of ages and ethnicities, thus improving the external validity of the results. Other factors that reflected quality were studies which used standardised tools in their methodology. These studies avoided subjective interpretation of data and increased the internal validity of the results. However, those studies that used file analysis within their methodology still maintained quality if they considered inter-rater reliability and supported this statistically. Although most of the tools used within this study required the sample to self-report, using these tools improves the reliability of the data and will allow and improve future replications of results.

Gannon et al. (2009) and Gannon and Rose (2009) have introduced experimental methodologies when researching offence-supportive cognitions of FSO. These types of methods allow us to research FSO without relying on the individuals self-reports and the results have provided an insight into FSO implicit cognitions. However, these studies will need to be expanded upon and replicated further, as they used small sample sizes, which affects the generalisability of the results.

Overall, the quality of the studies reviewed in this paper would be improved if they selected a sample which could represent and be generalised to the overall population of FSO. The studies reviewed in this paper were restricted, as many of them only recruited participants from one particular setting, for example prisons which does not reflect those participants in the community or in mental health settings. Many of the studies did not have both solo and co-offenders similarly represented, and had a high percentage of co-offenders making up their sample. Similar issues also arose in relation to the offences the FSO had committed. Many studies focused on the most serious sexual offences and excluded non-contact offences, which are important in developing understanding about the heterogeneity of FSO.

Table 5: The quality assessment scores and the strengths and weaknesses of each study reviewed

Study	Quality Assessment Score (Number of unclear items)	Strengths (+) and Weaknesses (-)
Beech at al. (2009)	58%	- Under 50 participants - All incarcerated FSO - No control group - No use of a standardised tool to collect data - Method lacks objectivity - No statistical analysis + Considers offence characteristics + Statistically supports inter-rater reliability + The sample represents a large range of ages
Christopher, Lutz-Zois, & Reinhardt (2007)	73% (2)	- All sample selected from one prison - The study did not consider offence characteristics + The sample consisted of a variety of ethnicities + The sample contained over 50 participants + Standardised tools to collect data + A control group + Method is objective + Statistically accounted for possible confounding variables in data + Statistical analysis used to analyse data
Crawford (2012)	56%	- Less than 50 participants - No use of a control group - Lack of statistical support for interrater reliability - Method lacks objectivity - No statistical analysis - No use of a standardised tool to collect data + The sample represents a large range of ages + The sample consisted of a variety of

Study	Quality Assessment Score (Number of unclear items)	Strengths (+) and Weaknesses (-)
		ethnicities + Range of solo and co-offenders in sample + Considers offence characteristics
Gannon, Rose & Ward (2008)	57% (2)	- Mostly co-offenders - Less than 50 participants - No control group - Lack of statistical support for inter-rater reliability - Method lacks objectivity - No statistical analysis - The sample lacks diverse ethnicities - No use of a standardised tool to collect data + The sample represents a large range of ages + Considers offence characteristics
Gannon, Rose & Williams (2009)	69% (4)	- Mostly co-offenders - Less than 50 participants + Quasi-experiment + Tools used to collect data + Considers offence characteristics + Control group + Method is objective + Statistical analysis
Gannon & Rose (2009)	63% (3)	- Less than 50 participants - Mostly co-offenders - Lack of offence characteristics considered + Tools used to collect data + Quasi-experiment + Control group + Method is objective + Statistical analysis
Gannon et al. (2010)	58%	- Under 50 participants - Method lacks objectivity - No control group - No statistical analysis - No use of a standardised tool to collect data + The sample represents a large range

Study	Quality Assessment Score (Number of unclear items)	Strengths (+) and Weaknesses (-)
		of ages + Sample recruited from a variety of settings + Considers offence characteristics + Statistically supports inter-rater reliability
Gannon et al. (2014)	63% (2)	- Less than 50 participants - No control group - All incarcerated offenders - Inclusion of adult victims - Method lacks objectivity - No use of a standardised tool to collect data -/+ Aspects of the study uses statistical analysis to compare differences between pathways + The sample represents a large range of ages + Solo and co-offenders + Statistically supports inter-rater reliability
Kaplan and Green (1995)	72%	- Mental health staff responsible for study recruitment - Less than 50 participants - All incarcerated prisoners - No statistical analysis - Sample represents a large range of ages, diverse ethnicities, and types of sexual offences + Used a variety of methods to collect data including standardised tools + Considers offence characteristics + Control group + Statistically supports inter-rater reliability
Miller, Turner and Henderson (2009)	60 % (2)	- All incarcerated prisoners - All participants had been referred for a sex offender treatment programme - Lacks statistical analysis - Does not consider offence

Study	Quality Assessment Score (Number of unclear items)	Strengths (+) and Weaknesses (-)
		characteristics + Over 50 participants + Sample represents diverse ethnicities + Use of standardised tools + Control group
Muskens, Bogaerts, Van Casteren, & Labrijn (2011)	72% (1)	- Mostly co-offenders - All participants had been referred for a psychological and/or psychiatric assessment - File analysis + Community and incarcerated offenders + The sample represents a variety of sexual offences + Considers offence characteristics + Control group + Statistically supports inter-rater reliability + Statistical analysis
Pflugradt & Allen (2010)	61% (1)	- Less than 50 participants - All participants referred for a sex offender treatment programme - All incarcerated offenders -/+ Some aspects of the analysis supported statistically + Sample represents a large range of ages + Uses a variety of methods to collect data including tools + Control group
Sandler & Freeman (2007)	66%	- No control group - Does not consider a variety of characteristics. Categorises FSO based on offence and victim variables. + Large sample size + Sample represents a variety of ethnicities + The sample represents a variety of sexual offences + Selected all known FSO in New York.

Study	Quality Assessment Score (Number of unclear items)	Strengths (+) and Weaknesses (-)
		+Statistically combines alike FSO.
Sandler & Freeman (2009)	69% (2)	- File analysis, lack of tools to collect data - Does not consider a variety of offence characteristics - Does not consider inter-rater reliability + Large sample size + Sample represents a variety of ethnicities + The sample represents a variety of sexual offences + The study investigates the whole population of FSO in the New York state + Control group + Statistical analysis
Strickland (2008)	82%	- All incarcerated offenders - The study does not consider offence characteristics - The sample only considers hands-on offenders + The study has over 50 participants + The sample represents a large range of ages + Sample represents a variety of ethnicities + The study uses a variety of standardised tools to collect data + Control group + Statistical analysis
Turner, Miller & Henderson (2008)	77% (1)	- All participants had been referred for a sex offender treatment programme - All incarcerated prisoners - No control group + The study has over 50 participants + Sample represents a variety of ethnicities + The study uses a variety of standardised tools to collect data + Considers offence characteristics + Statistical analysis
Vandiver (2006)	60% (1)	- The sample only considers contact

Study	Quality Assessment Score (Number of unclear items)	Strengths (+) and Weaknesses (-)
		offences - File analysis, lack of tools to collect data - Does not consider inter-rater reliability + The sample has over 50 participants + The sample represents a large range of ages + Considers offence characteristics + Control group + Statistical analysis
Vandiver & Kercher (2004)	65%	- File analysis, lack of tools to collect data - No control group - Does not consider inter-rater reliability + Studied all FSO on the Texas sex offender register + The sample has over 50 participants + The sample represents a large range of ages + The sample represents a variety of sexual offences + Considers offence characteristics + Statistical analysis
Wijkman, Bijleveld & Hendriks (2010)	64% (4)	- The sample only considers contact offences - Mostly co-offenders - File analysis, some use of tools to collect data - Lack of statistical support for inter-rater reliability - No statistical analysis + The sample has over 50 participants + Considers offence characteristics + Control group

2.4.2 *Typologies*

Table 6 identifies the studies that have investigated heterogeneity between FSO and suggested that there should be categories or groups of FSO. It is been suggested that co-offenders and solo offenders differ in the types of offences they commit, their victim preference, their offending history and offence-supportive cognitions (Beech et al., 2009; Muskens et al., 2010; Vandiver, 2006). These differences suggest that the motivations and reasons for committing a sexual offence will depend on whether a female committed an offence on her own or with another perpetrator. In addition to these differences, studies have attempted to investigate whether FSO can be categorised further. Some studies have used statistical analysis to categorise variables into groups of FSO (Sandler & Freeman, 2007; Vandiver & Kercher, 2004), whereas others have used qualitative methods to identify typologies (Gannon et al., 2008; Gannon et al., 2014; Pflugradt & Allen, 2010).

Vandiver and Kercher (2004) used the largest sample size out of all of the studies investigating typologies and used Hierarchical Loglinear Modeling and cluster analysis which identified 6 different categories of FSO (please refer to table 6 for further details of these typologies). This suggests that FSO can be categorised into more groups than solo or co-offenders. However, even though Vandiver and Kercher (2004) used a large sample size they were only able to categorise offenders using variables associated with the offence/offending behaviours. Sandler and Freeman (2007) attempted to replicate Vandiver and Kercher's (2004) study as much as possible by using the same statistical analysis and matching their sample to Vandiver and Kercher's (2004) sample of FSO. Unfortunately, they were unable to match the sample based on victim gender and were

required to remove victim-offender relationships from the analysis due to missing data. These were aspects that were different to the methodology in Vandiver and Kercher's (2004) study. However, they identified two categories that were similar to the groups reported in Vandiver and Kercher's (2004) study. They found that heterosexual nurturers and young adult exploiters were similar to the criminally limited hebephiles and young adult child molesters in Vandiver and Kercher's study. However, the other categories were found to differ significantly. This suggests that offence-characteristics may not be enough to consistently understand the differences between FSO. Furthermore, although it is beneficial to understand how FSO may differ based on offence characteristics it does not provide an indication of how treatment can be approached for each category. It is important that a broader range of characteristics are investigated. This will provide information that will support professionals working practically with these types of offenders.

In an attempt to investigate whether the categories identified by Sandler and Freeman (2007) would show significant differences when compared against other characteristics Pflugradt and Allen (2011) compared these typologies in relation to the levels of neuropsychological functioning. They manually categorised all 35 FSO in their sample into one of the six categories identified by Sandler and Freeman (2007) and then compared their results from the Stroop and Trail Making Test. They did not find any significant differences between the groups and their results on these tests. This indicates that these categories do not have different levels of neuropsychological functioning. This does not invalidate Sandler and Freeman's (2007) results, but conveys the importance of continuing to test whether their categorisation of FSO is adequate in

explaining their differences. Further studies should replicate Sandler and Freeman's results and test the categories using characteristics other than offence/victim factors.

Other studies have begun to use other characteristics as categorising factors. Turner et al. (2008) was able to classify FSO based on psychopathology using FSO responses on scales from the PAI. Turner et al. (2008) demonstrated that the extent of FSO psychopathology could be used to classify FSO using LPA. Latent Profile Analysis is a statistical method that is used to investigate the probability that an individual belongs to several classes without pre-specifying sub-groups within the data. The LPA identified three classes of FSO that differed depending on relevance of scales from the PAI and the level of psychopathology. The first class only obtained a clinically significant on drug and alcohol scales, another class had moderate (at risk levels) of psychopathology on a variety of scales and the final class had extensive (clinically significant) psychopathology on a variety of scales. They identified that these classifications are more informative than typologies based on offence characteristics. They not only indicate how treatment should be focused, but also the amount of treatment/input that should be provided based on the severity of the problems, which they described as relating to the risk, need and responsivity (RNR) framework (Andrews, Bonta & Wormith, 2006).

Wijkman et al. (2010) used both offence and personal characteristics to categorise FSO. They identified 4 different typologies: Young Assaulters, Rapists, Psychologically Disturbed Co-offenders and Passive Mothers. They were able to expand on the differences found between solo and co-offenders and further categorise them based on

offending behaviour and personal characteristics. For example, they highlighted that rapists were more likely to sexually assault their victim and to have experienced extra-familial abuse in their childhood. They also identified differences between co-offenders and whether they played an active role in the abuse (psychologically-disturbed co-offenders) or not (passive mothers). Those co-offenders that did play an active role appeared to have experienced mental health difficulties. This study is able to provide an indication of the differences within solo and co-offenders, which has important treatment implications. However, unlike Vandiver and Kercher (2004) their sample size was much smaller, so it will be essential to replicate these findings with more participants.

Gannon et al. (2008) aimed to develop a descriptive model of the offence process of FSO. In their study they were able to identify key characteristics of FSO (as described above), as well as identify three different pathways to offending. 23% were found to follow an avoidant offence pathway. These individual's plan to offend were directed by a male co-offender, their goals to offend were due to fear or to gain intimacy with their co-offender and their offending often exhibited negative affect. 41% of the FSO were found to follow an approach pathway, in which they explicitly planned their offending behaviour, their goals to offend were focused on gaining sexual gratification and their behaviour often evoked positive affect. The approach pathway often related to solo offenders. The final pathway, disorganised approach, was found in 23% of FSO. It describes FSO who convey elements of implicit planning, but their behaviour could be considered as impulsive, they also had a broad range of goals and differing affects.

These pathways were further expanded upon in Gannon, Rose and Ward (2010) and Gannon et al. (2014). Gannon et al. (2014) investigated the presence of these pathways in a different sample to the original study. They conducted the same semi-structured interview schedule as in Gannon et al. (2008) on a sample of 36 FSO. They supported the presence of the three pathways in their sample. They added to the understanding of the pathways and identified that in the explicit-approach pathway, motivations to offend are often related to revenge, intimacy, sexual gratification and financial gain. They also found that these offenders had moderate to high levels of self-regulation. The directed-avoidant pathway were found to be motivated to offend due to fear and desire to please their co-offender, whereas the implicit-disorganised pathway were found to have poor levels of self-regulation and be motivated to offend out of revenge, humiliation and intimacy. These studies have provided an insight into the different offence-processes of FSO. They have used qualitative methods to identify and replicate the pathways, but have supported their results by statistically analysing the reliability between raters. In order to further support the presence of these pathways it will be important to use standardised tools to measure the characteristics identified in each pathway, e.g. self-regulation. This will provide the pathways with objective support, and will enable statistical analysis of the data, further supporting the differences between the FSO in the different pathways.

FSO can be acknowledged as a diverse group of offenders, who have differences in their offence characteristics, offence processes and personal characteristics. However, there are discrepancies between some studies and it is important to look beyond offence characteristics when categorising FSO. Studies should attempt to expand on the results

reported above and replicate them. This will provide greater empirical support for typologies of FSO.

Table 6: An overview of the studies that have investigated differences between FSO

Study	Variables	Method	Typologies
1. Gannon et al. (2008)	Offence process variables	Grounded theory used to analyse interview data.	Identified three pathways in the offence process for FSO: 23% **Avoidant offence pathway**: Their offending behaviour was directed by a male co-offender, their motivation to offend was due to fear or desire to please co-offender and they often displayed negative affect around the time of the offending behaviour. 41% **Approach pathway**: explicitly planned offending behaviour, evidence of sexual motivation and their behaviour evoked positive affect. 23% **Disorganised pathway**: Implicit planning, impulsive behaviours, various motivations and affects evoked.
2. Gannon et al. (2014)	Demographic information and offence process variables (level of planning, coercion, self-regulation, positive affect and motivation types).	Analysis of interview data and two raters manually extracting information to make a decision about pathway type.	28% explicit-approach, 22% implicit-disorganised and 33% directed-avoidant. Qualitative differences found between the three pathways on offence

Study	Variables	Method	Typologies
			process variables. Statistical differences found between groups in relation to years in education, amount of victims and previous non-sexual convictions.
3. Muskens et al. (2011)	Demographic, offence and victim characteristics, mental health (DSM-IV Axis I, DSM-IV personality disorders and/or traits)	Statistically measured the group differences between solo and co-offenders using effect sizes. Cohen's D and odds ratios were used to statistically analyse the differences.	Solo offenders significantly more likely to offend against a male victim and less likely to have offended against a related victim. Solo offenders had a higher number of DSM- IV Axis I disorders, co-offenders had a higher number of DSM-IV personality disorders and/or traits).

Study	Variables	Method	Typologies
4. Pflugradt & Allen (2010)	Neuropsychological functioning	Manually assigned participants based on Sandler and Freeman (2007) typologies. Non-parametric tests were used to statistically analyse the differences between the typologies on the Stroop and Trail Making Test.	- Criminally limited hebephiles; Criminally prone hebephiles; Young adult child molesters; High risk chronic offenders; Older nonhabitual offenders; Homosexual child molesters. The groups did not differ significantly on the neuropsychological tests.
5. Sandler & Freeman (2007)	Offence and victim characteristics	Variables were statistically analysed using Hierarchical Loglinear Modeling which assessed the relationship between offender and victim characteristics. A cluster analysis was then used to identify categories of female sex offendeFSOrs. Mann U Whitney and Kruskal Wallis were used to investigate the differences between the clusters.	Six clusters: - **Criminally limited hebephiles**: older offenders who preferred young adolescent victims, low number of previous any type of arrest and low likelihood of re-arrest and most of the victims were male. - **Clinically prone hebephiles**: similar to above except offender age was slightly younger. This group were more likely than 1) to have previous arrests and re-arrests. - **Young adult child molesters**: youngest average offender and victim ages. Most like number 1) except differs on victim and offender age (both younger).

Study	Variables	Method	Typologies
			- **High risk chronic offenders**: Highest number of re-arrests and arrests prior to being on the sex offenders register. More likely to target females, with an average victim age of 5. - **Older non-habitual offenders**: Little criminality outside registration, oldest average age offender. - **Homosexual child molesters**: 91% of victim's females, similar to 5) but more arrests and re-arrests, and younger offender and victim age.
6. Turner et al. (2008)	Offence characteristics, PAI profiles, demographic factors, TSI scores, abuse history and the PAI treatment and interpersonal supplementary scales	A latent profile analysis (LPA) was used to classify FSO, firstly it was conducted using offence characteristics and then used PAI profiles. Multivariate multinomial logistic regression was conducted to see if the significant variables from the LPA significantly predicted class membership.	The LPA was able to classify the sample into three groups using PAI profiles: 1) **Elevated drug and alcohol** (low scores on all clinical apart from the drug and alcohol scales). Higher scores on dominance and warmth class 2). 2) **Moderate psychopathology** (scored on the at risk range on the following scales: anxiety and anxiety-related disorders, depression, paranoia, schizophrenia, and Borderline personality

Study	Variables	Method	Typologies
			disorder). The females in this group were more likely to be married and have been sexually abused in adulthood than in class 1). Hostile, aggressive, angry and had low dominance and warmth. 3) **Extensive psychopathology** (clinically significant scores on the following scales: somatization, anxiety and anxiety-related disorders, depression, paranoia, schizophrenia, and Borderline personality disorder).
7. Vandiver (2006)	Offender, co-offender and victim demographics and characteristics, and characteristics of the abuse.	Statistically measured the group differences between solo and co-offenders using t-tests and chi-square statistical tests. A logistic regression was then used to see what variables predicted group membership.	Variables that predicted group membership: solo offenders were more likely to be arrested for forcible fondling and to have male victims. Co-offenders, therefore, were more likely to have nonsexual arrests and to be related to the victim.
8. Vandiver & Kercher (2004)	Offence, offenders age, victim age, victim sex and relationship with the victim	Variables were statistically analysed using Hierarchical Loglinear Modeling which assessed the relationship between offender and victim characteristics. A	Six categories of FSO: - **Heterosexual nurturers** (n=146): average age 30, male victims, victim average age 12. - **Noncriminal homosexual offenders** (n=114):

Study	Variables	Method	Typologies
		cluster analysis was then used to identify categories of FSO.	least likely to commit sexual assault, lowest number of total arrests, female victims, average victim age 13. - **Female sexual predators** (n=112): were likely to have a re-arrest, high average number of offences and younger at first arrest. Mainly male victims, average age of victim was 11. - **Young adult child exploiters** (n=50): least number of arrests, youngest at the time of arrest, and most likely to commit a sexual assault. Average age of victim was 7. -**Homosexual criminals** (n=22): highest average number of total arrests, most likely to be re-arrested. Victims were mostly females with an average age of 11. No arrests of sexual assault, more crimes relating to prostitution. -**Aggressive homosexual offenders** (n=17): average age of offenders was older than in the other groups, most likely to commit sexual

Study	Variables	Method	Typologies
			assault against females, the victim's average age was 31.
9. Wijkman et al. (2010)	Age at the time of the offence, type of sexual act, abuse of drugs, perpetrator sexually abused in childhood and disorders (psychological, psychiatric or mental)	Statistical analysis was used to distinguish sub-groups by using a multiple correspondence analysis (MCA)	Four prototypes: - **Young assaulters**: aged between 18-24, male victims, no mental disturbances, usually commits offences in babysitting situations, commits acts such as fondling and oral sex, victim is related and they use physical violence. - **Rapists**: more serious offences like sexual assault, no preference for sex of victim, unrelated victim, sexually abused during childhood by an extra-familial perpetrator. - **Psychologically disturbed co-offender**: mental disorders present, commit offences with others, abuse and relationship with victim varies, and they have no preference for victim sex. - **Passive mothers**: oldest age group, no active role in abuse, abuse of their own children who are young (aged 7-11), and has no preference for victim sex.

2.5 DISCUSSION

The most consistent FSO characteristic found within this review was childhood experience of sexual abuse. This characteristic was found in seven out of the nineteen studies and four of these studies gained at least 70% in quality (Christopher et al., 2009; Crawford, 2012; Gannon et al., 2008; Kaplan & Green, 1995; Strickland, 2008; Turner et al., 2008; Wijkman et al., 2010). FSO were found to experience sexual abuse during their childhood which was more severe and frequent than comparison groups. This characteristic is both supported statistically and has been measured using standardised tools. This conveys that since both the Grayston and De Luca (1999) and Johansson-Love and Fremouw (2006) reviews the methods of measuring this characteristic has improved and quality has increased. Other negative experiences in childhood (Crawford, 2012; Gannon et al., 2008; Kaplan & Green, 1995; Strickland, 2008; Turner et al., 2008) and adulthood (Crawford, 2012; Gannon et al., 2008; Turner et al., 2008; Wijkman et al., 2010) have also been supported by high quality studies as being characteristics of FSO, but these factors have generally been investigated less than childhood experiences of sexual abuse.

The prevalence of personality disorders and/or traits has also been a characteristic that has been consistently supported in FSO research (Kaplan & Green, 1995; Miller et al., 2009; Muskens et al., 2011; Strickland, 2008; Turner et al., 2008; Wijkman et al., 2010), by high quality studies (Kaplan & Green, 1995; Muskens et al., 2011; Strickland, 2008; Turner et., 2008). The most common personality disorder/trait appears to be Borderline. However, Dependent traits have also been found to be a consistent trait in FSO. Three of the six studies that investigated this characteristic used standardised

measures (Miller et al., 2009; Strickland, 2008; Turner et al., 2008), which is what Johansson- Love and Fremouw (2006) and Rousseau and Cortoni (2011) recommended in their reviews. This again conveys that research investigating FSO is developing and improving. However, it is still difficult to confirm the consistency of this characteristic, as it has not been continuously investigated using statistical analysis. Therefore, until the research into this characteristic improves it cannot be concluded that it is a characteristic unique and particularly prevalent in FSO than other types of offenders.

Similarly, it is difficult to make conclusions about the presence of other mental health problems such as depression, anxiety, DSM-IV Axis I disorders, and drug and alcohol misuse. These factors are not supported by statistical analysis, but have generally been assessed using standardised measures. Therefore, it is important that studies continue to measure these factors using replicable methodologies in the future.

In recent years research investigating cognitive distortions in FSO has begun to develop. The research and implicit approaches to measure offence-supportive distortions conducted by Gannon et al. (2009) and Gannon and Rose (2009) shows promising prospects within this area. They have used experimental methodologies and tests that avoid the weaknesses of self-report data and identified that FSO perceive male information as threatening. Other studies such as Beech et al. (2009) and Gannon et al. (2010) have used qualitative methodologies (interviews) to investigate offence-supportive cognitions. Although, these methods are not as reliable as the implicit tests used in other studies, they have identified important considerations for the offence-supportive cognitions of FSO. This includes the emphasis of a gender-specific approach

and the acknowledgement of differences between solo and co-offenders. Their findings have also been supported by Crawford (2012) who also used qualitative methods to analyse data in files. Johansson-Love and Fremouw (2006) suggested self-report methods may not be accurate, as FSO may have alternative motives for reporting various problems or experiences. It is important to continue to maintain the standards that Gannon et al. (2009) and Gannon and Rose (2009) have set and to investigate the cognitive distortions of FSO with larger sample sizes. It is also essential that findings in the studies using qualitative and self-report methodologies are further studied and replicated.

Another factor which needs to be investigated further is recidivism rates in FSO. Two studies in this review investigated recidivism (Sandler & Freeman, 2009; Muskens et al., 2011). Overall, the sexual recidivism rate was found to be below 2% and recidivism for other offence types was also found to be small. Both of these studies identified different factors that related to recidivism, which suggests that future research should investigate these factors further. It will also be beneficial to consider other characteristics in addition to demographic and offence characteristics as possible predictors of future re-offending. Like with the offence-supportive cognitions research, studies investigating recidivism have made developments and should be expanded upon in the future.

This review is able to confirm that FSO are a heterogeneous group, and differences between solo and co-offenders have been statistically supported by three studies (Muskens et al., 2011; Vandiver, 2006; Wijkman et al., 2010) and are recognised in

offence-supportive cognitions (Beech et al., 2009) and pathways to offending research (Gannon et al., 2008; Gannon et al., 2014). Unlike Grayston and De Luca (1999) and Johansson-Love and Fremouw (2006) this review focused more specifically on personal characteristics rather than offence/victim characteristics of FSO. The results of this review suggest that solo offenders can be motivated sexually, whereas co-offenders are more likely to be coerced, and their motivation is related to fear and believing their co-offender is a threat. Wijkman et al. (2010) also identified differences between co-offenders in relation to whether they were active or passive in the sexual abuse. This is an area that should be considered further, as it will support the development of effective treatment strategies for different types of FSO. This review arrives at similar conclusions that Grayston and De Luca (1999) and Johansson-Love and Fremouw (2006) found which recommended typologies of FSO need to be further validated and expanded.

The studies included in this review have been found to have made methodological improvements since both Grayston and De Luca (1999) and Johansson-Love and Fremouw (2006) reviews. However, there have still been consistent limitations identified within them in relation to their sample selection, size and diversity. Rousseau and Cortoni (2011) suggested that often the most serious offenders who have committed contact offences are selected in research of FSO. Therefore, it is essential that in the future, studies include samples that are representative of FSO and can be generalised.

2.5.1 Strengths and Weaknesses

A limitation of this review relates to the inclusion/exclusion criteria. This review only included studies that investigated FSO above the age of 18 and any studies that included females under this age were excluded. This meant that many studies that researched FSO were excluded. However, although these studies could have provided extensive information about FSO, it is important to acknowledge how adult FSO and adolescent FSO can be different. This review is also jeopardised by the amount of studies that were unable to be analysed due to accessibility. Seventy-three studies were excluded because of this issue. This also included studies that were described in book chapters, which were often reported in other research papers, but due to accessibility the author was unable to conduct a thorough quality assessment using the data extraction methodology. Lastly, the quality of this review would be increased if an additional reviewer was able to code a selection of the papers for quality assessment. This would have enabled an analysis of the data extraction and quality assessment methodological approach and assess whether this process was reliable.

This review only included two studies that were reported in the Johansson-Love and Fremouw (2006) review. This conveys how research into FSO has developed and improved in the past few years. This review includes quality assessment scores and specific criteria's, which are not present in the previous reviews discussed. This aspect makes it easier for readers to conclude about what characteristics are present in FSO and supports the reader to understand how the studies differ and which are higher in quality.

2.5.2 Future Research

Future research of FSO should replicate the studies identified in this review. Studies should aim to use control groups and statistical analysis to analyse their data. This methodology would provide additional verification for the characteristics identified as important. It is important that future research continues to understand the cognitions of FSO and uses similar methodologies as Gannon et al. (2009) and Gannon and Rose (2009). Offence-supportive cognitions are considered as important factors to address during treatment (Ford, 2010). Thus, future research in this area has important considerations for the treatment of FSO. These characteristics also need to be explored in order to identify differences between FSO. Research and professionals working with FSO should acknowledge the differences between solo and co-offenders and research specifically should continue to investigate the differences between active and passive co-offenders.

In addition, although difficult, cohort studies investigating FSO would be particularly important in developing understanding of this population, especially for characteristics such as childhood sexual abuse, which is often reported once the female has committed the sexual offence.

Throughout this review the importance of using standardised measures has been emphasised. However, it is essential that these measures are appropriate and have been validated on a sample of FSO. Strickland (2008) used the MSI-II to investigate the differences between FSO and non-sexual female offenders. The use of this tool with FSO will be explored and critiqued in the following chapter.

This review has provided an up to date analysis of research investigating FSO. The results from this review can be used to support the development of assessments, treatment and future research of FSO.

CHAPTER THREE: ARE ASSESSMENT TOOLS DEVELOPED FOR USE WITH MSO APPROPRIATE FOR FSO? A CRITIQUE OF THE COGNITIVE DISTORTIONS AND IMMATURITY SCALE OF THE MSI-II

Chapter Rationale

Chapter Two identified that improvements will be made to FSO research if studies incorporated the use of standardised measures to identify characteristics in FSO. The use of these measures will also support the replication of findings and thus provide greater empirical support for characteristics found in FSO. However, it is important that the tools used are appropriate for FSO. One of the tools used in a study reviewed in Chapter Two was the MSI-II, in particular the Cognitive Distortions and Immaturity (CDI) and the Emotional Neediness scales of this tool. The MSI-II is a tool that was developed using MSO, thus the applicability of this tool to FSO needs to be considered. Therefore, the aim of this chapter is to critique the properties of this tool, with a specific focus on the CDI scale. The chapter will aim to assess whether this scale is able to measure cognitive distortions as a general construct as well as assessing whether this scale is appropriate for use with FSO.

3.1 INTRODUCTION

Cortoni (2010) identified that currently the best method available for professionals who are required to assess FSO is empirically guided clinical judgement. This is due to the sparse research that has focused on developing an assessment tool that can be used with FSO. Due to these limitations professionals lack appropriate guidance when working

with these types of offenders which may therefore reduce their ability to identify appropriate treatment needs.

Due to these issues some of the professionals working practically with FSO have considered using tools developed for MSO on females (Cortoni, 2010). Cortoni (2010) and Ford (2010) have identified issues with this type of practice and why it is inappropriate: 1) FSO are found to have a much lower base rate of sexual recidivism than males, which means the use of male risk assessment methods would significantly overestimate a female's risk of re-offending; and 2) risk factors associated with male recidivism have been identified through empirical methods, currently research on FSO has not been able to make firm conclusions about what factors may relate to future sexual offending or what factors should be targeted in treatment.

One tool that was originally developed for the use of professionals working with MSO is the Multiphasic Sex Inventory- II (MSI-II; Nichols and Molinder, 2000). However, the authors of this tool have since concluded that this tool is appropriate to use with FSO (http://www.nicholsandmolinder.com/sex-offender-assessment-msi-ii-af.php). This tool has also been used for research purposes to identify characteristics of FSO (e.g. Strickland, 2008). The original MSI was developed in order to assess adult MSO sexual deviance and progress in treatment (Nichols & Molinder, 2000). It is a self-report tool (Nichols & Molinder, 2000) and focuses on identifying the psychosexual features of a sex offender (Nichols & Molinder, 1984).

The MSI-II has been developed following a decade of extensive research expanding and investigating the scales within the MSI (Nichols & Molinder, 2000). The MSI is an influential tool that has been used extensively by professionals in a variety of settings and countries (Nichols & Molinder, 2000; Craig, Browne, Beech & Stringer, 2007). Since the original MSI was developed the test has been updated. The authors updated the test with the aim of improving the standardisation, research base, validity and reliability of the original test (Nichols & Molinder, 2000).

The updates made to the overall MSI included updating the scales contained within the test (Nichols & Molinder, 2000). One of the scales updated was the *Cognitive Distortion and Immaturity* (CDI) scale. The content of this scale represents thinking processes that occur in offenders, which influence a person to commit a sexual offence. Cognitive distortions have been identified as being important factors that should be addressed in the treatment of MSO (Ward & Beech, 2006; Ward & Keenan, 1999). Researchers have also deemed cognitive distortions as important to consider in the assessment and treatment of FSO (Cortoni & Gannon, 2011; Ford, 2010).

Therefore, this critique will analyse the scientific properties of the Multiphasic Sex Inventory II by Nichols and Molinder (2000). It will investigate the development of this tool and its use with MSO, but will specifically focus on the CDI scale, the content of this scale and its applicability to FSO. The CDI scale was used in Strickland's (2008) research which investigated the differences between FSO and non-sexual female offenders.

3.2 OVERVIEW

The MSI was originally developed in 1977. Following its development it was found to be a valuable tool which assessed sexual deviance and characteristics of sexual offenders (Nichols & Molinder, 1984). Therefore, in 1983 the authors decided to complete further research on this assessment tool and updated it (Nichols & Molinder, 1984). This led to the 1984 version of the tool being constructed.

The MSI defines sexual deviance as a sexual behaviour which causes clinical, legal and cultural concerns. It includes behaviours such as: 1) rape; 2) child molestation; 3) sexual murders; and 4) exhibitionism. This definition remains relatively consistent in the MSI-II. Within their definition an actual deviant sexual behaviour towards another person needs to have taken place. They also allow for the inclusion of other sexually deviant behaviours such as: 1) sexual harassment; 2) obscene phone calling; 3) stalking; 4) voyeurism; and 5) soliciting a minor for sexual activity (Nichols & Molinder, 2000).

The MSI-II was developed based on a cognitive-behavioural model of sexual deviance and the authors subsequently proposed a theory of sexual deviance (Nichols & Molinder, 2000). An important aspect of this theory is that a sexually deviant behaviour is engaged in following a cognitive process in which a decision is made to behave in that way. The deviant arousal aspect of the author's theory describes this cognitive process and how the pattern of sexually deviant behaviour is formed. They suggest a sexual offender uses sex to meet their emotional needs. The sex offender has a distorted belief-system which leads them to believe that they will experience more gains from behaving in a sexually inappropriate way than losses. They identified that a person

requires cognitive distortions to further enhance the likelihood that they will act in a sexually deviant way. These distortions enable them to: 1) overcome cognitive dissonance; 2) to overcome the emotions that they experience as a consequence of their actions and 3) to justify and excuse their behaviour.

The newly developed theory underpins the structure of the MSI-II and drove the development of the original MSI version. They initially developed a research form of the MSI-II which contained 708 items (Nichols & Molinder, 2000). The development and construction of the final MSI-II scales were conducted in 2 stages over an eight year period (Nichols & Molinder, 2000). After these projects the authors were able to produce the final version of the MSI-II. This is a 560 item inventory which contains 40 scales and indices. This tool has developed considerably from the MSI, which contained 300 items and 20 scales and indices. The authors have suggested that the test can take between 45 minutes and 2 hours to complete. The authors have developed a comprehensive handbook which contains information about the tools construction, development, administration and interpretation (Nichols & Molinder, 2000).

The authors have identified that the MSI- II can provide valuable information about how the client may be progressing in treatment and an offender's understanding of their behaviour. Nichols and Molinder (1984) have suggested that the CDI scale can be used as a pre/post measure of treatment effectiveness.

3.2.1 Cognitive Distortions and Immaturity scale

This scale was contained in the original MSI. However, it was modified as part of the MSI-II developments in order to increase the homogeneity of items (Nichols & Molinder, 2000). This scale now contains 16 items. There are two suggested factors identified within this scale. The first factor relates to negative items that associate with being victimised. These include aspects such as: feelings of being misunderstood, being controlled by others, feeling hurt and feeling like a child in an adult body. The second factor relates to experiencing a sense of suffering. The items relate to feelings of increased suffering throughout their life, being treated unfairly and experiencing more difficulties than others (Nichols & Molinder, 2000). Overall this scale can be considered to represent a thinking style called victim set. Those who have this thinking style are quick to blame others and feel like the world is out of their control (Nichols & Molinder, 2000).

3.2.2 MSI-II: Female version

The MSI and the MSI-II were both originally developed for MSO above the age of 18. However, the authors have since suggested it can be used with FSO and adolescent males. In order to identify whether the validation of the adult male version was applicable to females Nichols and Molinder (personal communication, 2013) compared male (n= 1200) and FSO (n=200) on the scales within the tool. There were few significant differences found between FSO and MSO on the scales within the MSI-II. The authors therefore suggested that this tool is applicable to FSO. As the authors have concluded this, and this scale has previously been used in FSO research (e.g. Strickland, 2008), the critique of the CDI scale will consider its use with FSO.

3.3 CHARACTERISTICS OF THE PSYCHOMETRIC MEASURE

3.3.1 *Level of Measurement*

All of the items within the MSI-II represent statements in which a respondent is required to answer true or false. This produces dichotomous responses in which, dependent on the direction of the item, a true or false response amounts to a value of 1 or 0. This type of measurement can be quick and easy to respond to, without over-complicating a person's response. However, this test forces the choices of the respondent into two extremes, either endorsing the statement or not. This type of measurement does not account for the complexity of what is being measured. For example, a respondent may think a statement is true for them some of the time but other times it is not. Therefore, this type of measurement does not allow for variations in what is applicable to a respondent and thus may not appropriately measure the extent of the construct it is designed to measure. A more appropriate level of measurement is interval data, which Kline (1986) describes as a characteristic of a good psychological test. This type of data enables a more sufficient analysis of responses (Field, 2009).

3.3.2 *Self-report*

The MSI-II is a self-report measure. This requires the respondent to respond to a statement based on their own perception of themselves. This type of measure makes various assumptions about the respondent. It assumes that: 1) a person has self-knowledge about the construct being measured; 2) that this person can make a reliable observation of themselves and that this observation will remain consistent across time and situations; and 3) it assumes that a person will be open and will respond truthfully to the questions being asked of them

(http://www.elsevierhealth.co.uk/media/us/samplechapters/9780443100994/9780443100994.pdf).

The MSI-II is used in a variety of contexts. This includes being used as part of court proceedings and evidencing treatment change. The use of the MSI-II in such situations may lead to biases in a person's response. In particular a person may respond in an overly positive way producing a socially desirable response (SDR).

Nicholas and Molinder (1984) reported that they developed the MSI items in order to be clear and direct. This approach may enable a person to guess what is being measured and purposefully attempt to look less deviant. Nicholas and Molinder (1984) have indicated that they expect this from an offender before they have engaged in treatment, which reduces the capabilities of the tool. However, Mathie and Wakeling (2010) found that positive impression management responding in those convicted of a sexual offence may not necessarily cause a distorted opinion of the characteristics of that offender and their risk. They found that those who were found to be a low risk of sexual recidivism were found to have higher levels of impression management. Therefore, this indicates that even if a person responds in a socially desirable way it may still lead to an appropriate understanding of the offender and their risk.

Although when considering SDR and the CDI scale specifically, Beech, Bartels and Dixon (2013) identified that sexual offenders may not necessarily be honest when their cognitive distortions are assessed using self-report methods. They indicated that individual's distorted ways of thinking may not necessarily be accessible to their

consciousness and that following treatment the offenders may still have the distorted beliefs but have learnt that acknowledging these responses would not convey treatment progress. They have thus concluded that indirect measures may be more sufficient to measure thinking styles of sexual offenders.

The MSI-II has been able to account for some of the weaknesses relating to self-report measures. The tool has seven reliability and validity indices and scales which help distinguish the response patterns and indicate if the respondent has approached the test in an honest and non-defensive way. This provides some justification for the use of the MSI-II to assess cognitive distortions of sexual offenders.

In addition to the characteristics described above Kline (1986) identifies other characteristics which convey good properties of a test. A test is a deemed good measure by Kline (1986) if it has validity, reliability and has been standardised using appropriate norms and can discriminate between the presence/absence of the construct being measured. The CDI scale of the MSI-II will now be critiqued based on the additional characteristics identified by Kline (1986).

3.3.3 Reliability

3.3.3.1 *Internal Reliability*

This is the first of two types of reliability. Internal reliability measures the extent to which items within a scale are consistent with one another and thus measure the same construct. There are various models to measure this type of reliability, Nichols and Molinder (1996) used Cronbach's alpha to assess this for the CDI scale.

In order to assess the CDI scales internal reliability Nicholas and Molinder (2000) used a sample of 1951 males that represented the demographics of the general population in the United States of America. Within this sample they had 22 sub-groups which were arranged into clusters of similar characteristics. The sample had comparison non-sex offender males, as well as child sex offenders which were pre/post treatment, non-admitters, intra/extra familial offenders, who had male/female victims and represented different ethnicities. They also represented rapists with a variety of characteristics as well as other non-contact offences. In each sub-group where possible they tried to ensure that their sample size was at least 100 thus increasing the likelihood that their sample was representative of that population.

The Cronbach's co-efficient alpha for the CDI scale of the 22 sub-groups ranged from $\alpha = .79 - .87$. This type of analysis is able to identify the level of internal consistency between items on a scale (Field, 2009). This scale can therefore be identified as having a high level of internal consistency using a representative sample of MSO.

It has been difficult to access information on the female-version of the tool and the reliability and validity of the MSI-II with FSO. Strickland (2008) commented on the CDI scale of the MSI-II and reported that the Cronbach's co-efficient alpha was found to be $\alpha = .85$ when the internal reliability was investigated using a FSO sample. However, the details regarding the sample used in obtaining this figure have not been accessed. Therefore, further investigation with a sample of FSO will be needed to ensure that the CDI scale has internal reliability when applied to FSO.

3.3.3.2 *Test-Retest Reliability*

Test-retest reliability provides information about how stable a scale is across time (Kline, 1993). The CDI scale has been identified by Nicholas and Molinder (2000) as being an appropriate pre/post treatment scale. They expect offenders to show change on these scales after completing treatment. However, over a short period of time a person's score on these scales will be expected to remain relatively stable.

In order to investigate the stability of these scales Nicholas and Molinder (2000) administered the MSI-II twice to fifty male child molesters. The time period between these two administrations ranged between 5 and 30 days, with a mean of 14.78 days. A Pearson's r correlation was used to analyse the stability of the MSI-II scales. The Pearson's r correlation for the CDI scale was found to be $r = .85$. This result indicates that this scale has a good level of test-retest reliability. In order to further evidence the stability of this scale it would be important to replicate these findings with a larger sample size and with a different sample. In addition, in order to provide support for the use of this scale with FSO it will be important to also replicate these findings with a sample of FSO.

3.3.4 Validity

3.3.4.1 *Face Validity*

A test can be deemed to have face validity if the items measure what the test is aimed at measuring (Kline, 1993). There is no statistical way of measuring face validity. In order to determine face validity it requires a subjective evaluation of the items within the test (Kline, 1993). Kline (1993) reported that face validity supports a subject to answer items in an accurate way, as they understand what the test is measuring. However, face

validity can also be detrimental (Kline, 1993). If the items provide clear indication of what they are measuring it may be easier for clients to distort their responses and respond in a socially desirable manner.

In relation to the MSI-II the test can be evidenced as having face validity as Nicholas and Molinder (1984) reported that they developed the MSI items in order to be clear and direct. They reported that this approach was a more accurate way of gaining information about a person's sex life and sexuality.

However, when analysing the scales specifically, the CDI items are ambiguous and it may not be clear what these items are measuring. A lack of face validity may be a strength for this scale as it may reduce the likelihood of a person responding in a desirable way. Thus face validity does not appear to be an essential requirement of this scale.

3.3.4.2 *Concurrent Validity*

A test can be identified as having concurrent validity if it correlates highly with a test measuring the same variable (Kline, 1993). However, the test it is correlated with needs to be a criterion test which has been empirically proven to have validity (Kline, 1993). Unfortunately, there is not one specific test that has been identified as being the criterion test to measure cognitive distortions associated with sexual offending and many of the tests available are subject to similar criticisms (Beech et al., 2013). Therefore, a conclusion cannot be made about the concurrent validity of the CDI scale.

It is even more difficult for FSO as there are no previous assessment tools designed to measure cognitive distortions in these types of offenders.

3.3.4.3 *Predictive Validity*

A test can be considered as having predictive validity if it is able to predict future behaviours relating to the variable being measured. The MSI-II was designed to measure sexual deviance and treatment progress.

Craig et al. (2007) investigated the ability of the MSI to predict future sexual recidivism in MSO. Although they did not use the scales from MSI-II, their study included the CDI scale from the MSI. They found that the CDI was able to significantly discriminate between recidivists (m = 9.79) and non-recidivists (m = 6.96) in MSO over a five year follow-up period. They also found that the CDI scale had a moderate ability to predict future sexual recidivism over a two, five and ten year period. This appears to convey that the CDI scale can predict future sexual deviance.

In addition, although treatment progress has not been investigated on scales within the MSI-II, it has been researched extensively for scales within the MSI (Nichols and Molinder, 2000). Nichols and Molinder (2000) reported that three out of the four studies investigating treatment change within the CDI scale found significant decreases in distortions in MSO. This suggests that these scales are able to predict what aspects a person will show change on following treatment. However, as mentioned above the changes shown in relation to cognitive distortions may not be a true representation.

Offenders may have gained understanding of what distortions are and thus have been able to detect items that tap into these factors and respond in a socially desirable way.

In order to provide further evidence of predictive validity for the CDI scale it will be important for the above investigations to be replicated on the MSI-II version of the scale. The predictive validity of these scales has also never been assessed for the female version of the tool and on a sample of FSO. Therefore, it cannot be concluded that the predictive validity identified above can be applied to FSO.

3.3.4.4 *Content Validity*

A test can be identified as having content validity if it is able to measure all of the aspects of the construct it has been designed to measure (Kline, 1993). Nichols and Molinder (2000) have suggested that the MSI-II can be used with rapists, child molesters and other non-contact sex offenders. Therefore, this indicates the CDI scale can be applicable to a variety of sex offenders. Nichols and Molinder (2000) constructed the CDI scale from their theory of sexual deviance.

However, since their theory was proposed there have been developments in theories of sexual offending and specifically theories relating to offence-supportive cognitive distortions. An influential theory was developed by Ward and Keenan (1999) and Ward (2000). They proposed an Implicit Schema Theory to explain the cognitive distortions of child molesters. This theory was described in Chapter Two and includes five types of cognitive distortions that an offender may hold which can influence their sexual deviant

behaviour: 1) *children being sexual beings*; 2) *nature of harm*; 3) *entitlement*; 4) *dangerous world*; and 5) *uncontrollable*.

Gannon, Keown and Rose (2009) conducted a study which aimed to investigate the presence of Ward's schemas in tests designed to measure cognitive distortions of sexual offenders. One of the scales they looked at was the original CDI scale of the MSI. Although this scale has since been updated, the authors did not indicate that the updates made were related to the broad content of these items. Gannon et al. (2009) found that the CDI scale contained the least amount of items that related to Ward's implicit schemas. The CDI scale does not contain items which are consistent with modern theories of offence-supportive cognitions. The description of this scale by Nichols and Molinder (2000) convey a scale that measures external/internal locus of control, for example externalising blame and feeling as if the world is out of their control and how the offender views themselves in terms of viewing themselves as a victim who is treated unfairly. Therefore, it can be questioned whether this scale does actually measure cognitive distortions, as the evidence presented above suggests that this scale may be inappropriately labelled as measuring this construct.

In addition to these issues, the CDI scales applicability to FSO can also be questioned. Ward's schemas have been identified in FSO (Beech et al., 2009; Gannon et al., 2010). However, both Beech et al. (2009) and Gannon et al. (2010) found the content of these types have been found to be different in FSO. They have suggested these schemas should be interpreted in a gender-specific way and if the FSO has offended with a co-perpetrator the content of these schemas may also differ. Therefore, a tool designed to

assess cognitive distortions in MSO may not be appropriate for FSO. The CDI scale has been found to lack content validity and as it does not measure gender-specific distortions found in FSO or account for the possible differences in those females that offend on their own compared with those that have a co-offender, it further emphasises its lack of content validity when it is used with FSO.

3.3.4.5 *Construct Validity*

Construct validity refers to how well the test is able to measure the construct it has been developed to measure. There are two elements included in this category of validity: 1) Divergent and 2) Discriminate. These elements will be discussed in relation to the CDI scale.

Nichols and Molinder (2000) investigated discriminate validity by analysing data on 1551 pre-treatment MSO. All of these offenders completed the MSI-II and these results were correlated with demographic variables, IQ and the MMPI clinical scales (Butcher et al., 1989). As expected the correlations between the demographic variables and IQ did not reach above *r*= .2 when correlated with the CDI scale. This suggests that these variables do not impact upon this scale and the CDI scale measures a construct different to those variables, indicating discriminate validity.

It is unclear what the authors originally wanted to find when correlating the CDI scale with the clinical scales of the MMPI. They found five of the MMPI scales correlated at least to a moderate level with the CDI scale (the Infrequency scale, the Subtle Defensiveness scale, the Psychopathic Deviate scale, the Psychasthenia and the

Schizophrenia scale). Two of these scales (the Psychasthenia and the Schizophrenia scale) were found to have correlations above *r*= .6 (.65 and .70). This questions the discriminate validity of the CDI as these are unrelated constructs. The authors do not offer any explanation for these correlations. However, a possible explanation for the schizophrenia scale may be that this scale measures feelings of isolation, inadequacy and dissatisfaction which could be consistent with the CDI scale.

In order to further test the CDI scales discriminate validity it is important to investigate whether the CDI scale can discriminate between sexual offenders and controls. Nichols and Molinder (2000) did this by comparing male child molesters and 'normal' controls on their CDI scale scores. They found that child molesters scored significantly higher than controls on the CDI scale. This suggests that these scales are able to discriminate between those who have and have not engaged in sexually deviant behaviour against a child. These results provide evidence for the construct validity of the CDI scale.

A similar study was conducted by Strickland (2008) on FSO. Strickland compared 54 FSO to 63 non-sexual female offenders on numerous scales of the MSI-II including the CDI scale. The two groups were not found to have significant differences on this scale. These results suggest that the CDI scale does not measure the construct of cognitive distortions present in FSO. The CDI scale may measure general thinking styles that are relevant to a variety of offenders rather than specifically sexual offenders. This provides further evidence that this scale is not applicable to FSO.

The CDI scales construct validity may be improved if the authors developed the scale to cover cognitive distortions that relate to different types of sexual offenders. Currently, the scale contains less than twenty items and is designed to measure the cognitive distortions in a variety of contact and non-contact offenders. This makes the scale too general and limits its ability to measure cognitive distortions applicable to different types of sexual offenders. As described above this scale does not appear to be represented by items that relate to modern theories of offence-supportive cognitions. The content of these items appear to relate more so to the individual's views of control and themselves as being a victim. This scale can therefore be applied to all types of sexual offenders rather than specifically measuring offence-supportive cognitions of child molesters or rapists for example. This again limits the validity of the CDI scale as it does not appear to measure cognitive distortions.

In order to analyse the divergent validity of the CDI scale it is important to consider its relationship with other scales that aim to measure the same construct. In 2007 a new scale was developed in order to assess offence-supportive beliefs in child molesters. This scale was called the Sex with Children (SWCH; Mann, Webster, Wakeling & Marshall, 2007) scale. During the process of validating this scale correlations were made with the original CDI scale within the MSI. This research can be considered when investigating the divergent validity of the MSI-II version of the CDI scale.

The SWCH was constructed using information from Ward's Implicit Schema theory which has previously been described. The correlation between the two scales was found to be between r= .36 - .38. This suggests that there is a lack of relationship between the

scales. Again this provides further evidence that the CDI scale does not contain items consistent with cognitive distortions empirically supported in sexual offenders. However, it is important to remember that this correlation was conducted during the development stages of the SWCH.

Overall, the construct validity of the CDI scale appears to be limited. The scale is not able to differentiate between FSO and controls, nor does it appear to measure cognitive distortions of FSO.

3.4 APPROPRIATE NORMS

In order to standardise a test it must have been tested on appropriate norms (Kline, 1993). This is important as having clearly defined samples on which the test is used provides the test with psychological meaning (Kline, 1993). If a test is not standardised using appropriate norms it affects the accuracy of future interpretations of a person's scores (Kline, 1993).

The MSI-II was standardised on a representative sample of MSO. This included sexual offenders with different types of offences, different ages, ethnicities and current living environments. It also included offenders in different stages of their treatment, those who denied and admitted their offence and with variety of victim characteristics.

The authors of the MSI-II provided additional information about the MSI-II's use with FSO (personal communication, 2013). A sample of two hundred FSO who had offended against a child and had admitted their offence were compared against one thousand two

hundred male child molesters who admitted their offence. Overall, CDI scale scores were found to not be significantly different when comparing male and female scores. They concluded that the MSI-II is applicable to FSO. However, this conclusion does not have sufficient evidence. It has already been discussed above that MSO and FSO have different offence-supportive cognitions. Therefore, even though they were not found to have significant differences within this scale it does not mean that this scale is measuring the same construct in both genders.

In addition, the authors have also not provided information about the heterogeneity of their FSO sample. It appears that the aim of standardising the MSI-II on a variety of variables in MSO has not been considered for FSO. It would not be appropriate to assume FSO are a homogeneous group and factors such as victim gender or age does not impact on their MSI-II scores. In order for the MSI-II to be adequately used with FSO, further standardisation should be completed. This should include using a representative group of FSO and matched controls.

3.5 CONCLUSIONS

Overall this critique has identified that the CDI scale of the MSI-II has a good level of reliability. However, when analysing the various aspects of validity, the CDI scale does not have sufficient evidence to meet the validity criteria for a good psychological test (Kline, 1993).

Most of the research used to analyse the validity of the CDI scale has been conducted on the original CDI scale within the MSI. This includes more recent research that has been

conducted since the development of the MSI-II. In order to sufficiently assess the CDIs validity, research needs to be conducted on the updated scale. The CDI scale's validity may also be improved if the structure of the test was updated. Currently, the level of measurement used may not appropriately measure the construct of offence-supportive cognitions.

One of the overriding issues with the CDI scale is that it does not appear to measure cognitive distortions of sexual offenders and specifically the cognitive distortions of FSO. The content of these items are not consistent with modern theories of offence-supportive cognitions.

The validity of the CDI scale is further questioned when the scale is used on FSO. There is a lack of research and evidence to justify the applicability of the CDI scale and the MSI-II as a whole test for FSO. As discussed previously the content of the CDI does not appear to be appropriate for FSO which suggests that this scale would need to be adapted considerably if professionals should use it with females. In order to progress towards developing a gender-specific tool designed to measure cognitive distortions in FSO it will be important to replicate and expand upon the qualitative studies conducted by Beech et al. (2009) and Gannon et al. (2010). This will support the identification of female-specific distortions, as well as acknowledge the differences between solo and co-offenders. If studies are able to identify consistent cognitive distortions in FSO this will support the development of items that could contribute towards a female-specific tool.

The CDI scale of the MSI-II is far from meeting the scientific criteria of a good psychological test as identified by Kline (1986) for its use with FSO. This critique further highlights the inappropriateness of using tests constructed for MSO on FSO.

The following chapter will present an empirical study that uses a framework constructed using FSO to identify characteristics in FSO. Therefore, the methodology used in Chapter Four will avoid the weaknesses of using a male-derived tool such as the MSI-II with FSO.

CHAPTER FOUR: PSYCHOLOGICAL CHARACTERISTICS OF FSO: SUB-TYPES AND A COMPARISON WITH MSO

Chapter rationale

Chapter's One and Two identified that the field of research into FSO is still a developing area and it is difficult to make firm conclusions about what factors need to be targeted in assessment and treatment. There are still gaps in this field including the knowledge of how FSO may differ in relation to whether they have offended on their own or with another perpetrator and how FSO may be similar or different to MSO. Chapter Three highlighted that simply applying male-derived assessment tools to FSO may not be appropriate. It is important that male-derived tools are fully validated for use with FSO and that the construct they are designed to measure in MSO is the same in FSO. Therefore, the aim of this chapter is to provide an indication of important clinical characteristics of FSO using a framework that was constructed using FSO. It will compare solo and co-offenders to identify whether they present with different clinical characteristics and thus have different treatment needs. It will also compare solo and co-offenders to MSO, in order to provide further clarification of how FSO may be different to MSO which will expand upon and possibly provide additional support for Chapter Three's conclusions that simply applying MSO assessment tools and treatment strategies to FSO is not appropriate.

4.1 ABSTRACT

An important factor to consider when conducting research on FSO and when assessing or treating these offenders is whether they have committed their offence on their own

(solo offender) or with an accomplice (co-offender). Solo and co-offenders have been considered in previous literature as being different. In addition, professionals have often been inclined to apply male-developed tools and treatment strategies to FSO, due to the lack of knowledge about FSO. The aim of this study is to identify how solo and co-offenders differ and how solo and co-offenders differ from MSO. In the first part of this study twenty solo and twenty co-offenders were compared on a variety of clinical factors and in the second part the solo and co-offenders were compared on the same factors to forty MSO. Significant differences were found between solo and co-offenders on the following factors: environmental niche factors, offence-preceding factors and positive factors. Significant differences were also found between solo, co-offenders and MSO on the following factors: psychological dispositions, environmental niche factors, offence-preceding factors and positive factors. Post-hoc tests provided further information about how the three groups differed. The results from this study indicate that solo and co-offenders have different treatment needs and that is inappropriate to apply MSO tools and interventions to FSO.

4.2 INTRODUCTION

4.2.1 Female Sexual Offending

The field of research into MSO is well-established and professionals working with these types of offenders are guided by assessment tools and treatment strategies that have been empirically supported (Cortoni, 2010). In contrast, knowledge and research into FSO is somewhat limited and appears to have been impacted by society's lack of acknowledgement that females can commit a sexual offence (Wakefield & Underwager, 1991; West, Hatters Friedman & Dan Kim, 2011).

Research into this field has started to increase and has begun to identify what characteristics are common in FSO (Gannon & Cortoni, 2010). This has led to Colson, Boyer, Baumstarck and Loundou (2013) conducting a meta-analysis to combine results from research and increase the empirical research into FSO. Colson et al. included a total of 61 studies which were published between 1984 and 2011 and contained 6,293 FSO. Their meta-analysis focused on identifying background characteristics, victim characteristics and offence characteristics of FSO. They found that within their sample 49% had the prevalence of a psychiatric problem, 33% had the prevalence of substance abuse, 64% had previous experiences of abuse and victimisation and 61% had previous experiences of sexual abuse. Their finding that FSO have a high prevalence of previous victimisation including experiences of sexual abuse is consistent with other research (Christopher et al., 2009; Gannon et al., 2008; Kaplan & Green, 1995; Strickland, 2008; Turner et al., 2008; Wijkman et al., 2010) and appears to be the most empirically supported characteristic found in FSO.

In addition, they found that FSO equally offended against male and female victims and 33% of FSO offended with an accomplice. Although this study provides a good indication of the characteristics of FSO, their acknowledgement that 33% of their sample had offended with an accomplice suggests that these results should be viewed with caution. The context in which an offence occurs can be considerably different depending on whether an individual has offended on their own (solo offender) or with an accomplice (co-offender), for example in some cases co-offenders may be considered as being coerced into engaging in sexually deviant behaviour (Colson et al., 2013; Muskens et al., 2011). The differences within FSO have also been widely

acknowledged in previous literature and researchers have made suggestions of possible typologies of FSO (Faller, 1995; Matthews, Matthews & Speltz, 1989; Nathan & Ward, 2001; and Vandiver, 2006; Wijkman et al., 2010). In all of these typologies they have differentiated between solo and co-offenders.

4.2.2 Solo and Co-offenders

Faller (1995) categorised FSO on whether they offended within their family (intra-familial) or outside of their family (extra-familial) and then whether they had offended on their own (solo offenders) or with other perpetrators (co-offenders) and then investigated the differences between the four groups. Faller found that there were key differences between these groups. Co-offenders were found to commit more serious sexual offences and were more likely to offend outside their family than solo offenders. Intra-familial co-offenders were also more likely to have substance abuse difficulties. However, solo and co-offenders were found to have similar mental illness experiences. Faller concluded that solo offenders appear to be more likely to offend in order to meet their emotional and sexual needs. This indicates that solo and co-offenders may have differences in the presence of factors that have influenced their offending behaviour and the clinical characteristics that they present with, which the Colson et al. meta-analysis does not account for.

The differences between solo and co-offenders is recognised in Muskens et al. (2011) and Vandiver's (2006) studies. For example, Vandiver (2006) acknowledged the importance of accounting for those FSO who offended with an accomplice and used this as a categorising factor when developing typologies of FSO. They also considered the

differences between solo and co-offenders. Their findings indicated that co-offenders were significantly more likely to have a previous non-sexual conviction, offend against multiple victims, offend against both male and female victims and offend against victims within their family. They did not differ significantly on demographic characteristics such as age and race.

Muskens et al. (2011) has also provided an indication of the differences between solo and co-offenders. In contrast to Vandiver's study they found that solo and co-offenders had an equal number of victims and similar types and amounts of previous convictions. They also found that solo offenders were more likely to offend against male victims, whereas co-offenders were more likely to offend against females. Their findings identified differences between the mental health characteristics present in solo and co-offenders. Solo offenders were found to have the presence of significantly more Diagnostic and Statistical Manual for Mental Disorder version IV- TR (DSM IV- TR; American Psychiatric Association, 2000) Axis I disorders than co-offenders.

In addition, the differences between solo and co-offenders have also been considered in relation to the presence of offence-supportive cognitions (Beech et al., 2009; Gannon et al., 2010). In an attempt to expand upon work conducted on MSO, Beech et al. initially investigated the presence of implicit theories (ITs) in FSO by analysing semi-structured interviews with 15 convicted, incarcerated FSO. This study was then replicated by Gannon et al. with 16 convicted, incarcerated FSO (a third of which were the same participants in Beech et al's sample). ITs were first identified by Ward (2000) and he explains that ITs like schemas are sets of cognitions that an individual uses to process

information and explain their world around them. The five categories of ITs were explained in Chapter Two and include: *Children as Sexual*; *Dangerous World*; *Nature of Harm*; *Uncontrollability*; and *Entitlement*.

Beech et al. (2009) identified the presence of four out of the five ITs found in MSO. They did not find evidence for the entitlement IT. Both studies identified that even though evidence of the ITs were found in FSO the meaning of them changed remarkably from that of MSO. Gannon et al. (2010) identified that ITs found in FSO can be considered as gender-specific and include female-relevant offence-supportive cognitions such as: males control the actions of females; female abuse is not harmful; viewing men as threatening; and partners needs were considered as more important than the victim's needs. Beech et al. (2009) also found the content and meaning of the ITs changed depending on whether an individual perpetrated with a co-offender, as often these offenders conveyed that their offence-supportive cognitions incorporated beliefs about their co-offender. This related to believing their partner had control over the situation, believing if they participated it would cause less harm to the victim and viewing their partner as an individual who was dangerous and who could cause harm to them. Gannon and Alleyne's (2013) review of the research conducted on offence-supportive cognitions present in FSO emphasised the importance of further investigating the differences between solo and co-offenders and relevant cognitions. They also found that there are discrepancies between findings in studies as some indicate that FSO have the presence of offence-supportive cognitions found in MSO, whereas others indicate that FSO show evidence of female-specific offence-supportive

cognitions. They recommended that further research should investigate these discrepancies.

These studies highlight how solo and co-offenders differ, which can have important implications for their assessment and treatment. Currently, little is known about the clinical characteristics of these offenders and what factors should be targeted in treatment (Ford, 2010). The studies described above (e.g. Beech et al., 2009; Gannon et al., 2010; Muskens et al., 2010; & Vandiver et al., 2006), although contributing to the understanding of FSO, are limited because they often contain a small sample size, which impacts on the generalisability of their findings. In addition, the studies that have used a large sample size have not considered the clinical characteristics of solo and co-offenders that would support the development of holistic assessment methods and treatment structures. Therefore, it is important to continue to expand upon research on FSO, as it will improve the empirical basis of research in this area. It will also enable the knowledge of FSO to continue to develop towards a level that is consistent with the depth of knowledge known about MSO.

Currently, professionals working practically with FSO have a lack of empirically-based research that will guide their assessments and interventions. These limitations lead to difficulties for professionals and impact on their ability to identify what factors should be targeted in FSO treatment and how to assess FSO risk. Tools that have been validated as appropriate measures to assess a sex offender's risk of re-offending have mostly been constructed using information from MSO (Cortoni, 2010). At this moment

in time little is known about the extent to which MSO research findings can be generalised to FSO (Miller et al., 2009).

4.2.3 FSO and MSO

There have been few studies that have attempted to investigate the differences/similarities in clinical characteristics between FSO and MSO (Allen, 1991; Freeman & Sandler, 2008: Miccio-Fonseca, 2000; Miller et al., 2009; West, Friedman & Kim, 2011). West et al. (2011) retrospectively analysed the files of alleged FSO and MSO who were referred to a mid-western psychiatric clinic for a forensic assessment over a period of six years. They were able to compare offenders on 50 characteristics that clustered into 10 overall factors. This included demographic information, forensic information, legal history and history of violence, personal and family history, victimisation history, psychiatric history, substance use, sexual history and information regarding their offences and their victims.

West et al. (2011) reported the percentage of factors present and these were used to compare FSO and MSO. FSO were found to have a higher percentage of abusive experiences including childhood physical, sexual and emotional abuse as well as adult intimate partner violence. This result was also found in Allen's (1991) study, who identified that females had experienced higher levels of physical abuse and less stable backgrounds. In addition, West et al. found that females had a higher presence of psychiatric problems. This is consistent with Miccio-Fonseca's (2000) findings, she identified that FSO had higher amounts of previous suicidal attempts and psychological factors. In the West et al. study, males were more likely to have substance

abuse/dependency than FSO. Males were also found to offend more against female victims, whereas females offended equally against male and female victims implying that FSO have less sexual preference for victim gender. However, two of the twelve FSO in the West et al. study were co-offenders and the study did not differentiate between solo and co-offenders and the gender of their victims.

Although this study is able to provide some indication of the differences between MSO and FSO, there are limitations to this research which hinders the strength of their findings. The study contained a small sample size which consisted of only 12 MSO and 12 FSO, which affects the applicability of their findings to other offenders. Their sample was also represented by males and females that were alleged to have committed a sexual offence. This again limits the applicability of their findings, as individuals in their sample may have been found to be innocent of the offence they had allegedly committed.

Freeman and Sandler (2008) had a larger sample size and were able to compare 390 FSO to 390 MSO. They analysed criminal history case files of offenders on the sex offenders register through the CJS in New York. The aim of their study was to investigate and compare recidivism patterns and risk factors of FSO and MSO. They found that the differences between FSO and MSO were mainly related to their criminal histories and victim characteristics. Males were found to have significantly more previous sexual and non-sexual convictions and were more likely to sexually offend against females. Males were also more likely to be re-arrested for sexual and non-sexual offences. However, risk factors that were identified as relating to re-arrests for non-

sexual offences were found to be similar for both FSO and MSO. Unfortunately, due to the low sexual recidivism identified in FSO it was difficult to make a comparison on this type of re-arrest. However, Freeman and Sandler concluded that males and female risk factors may be similar, but acknowledged that looking at a broader range of characteristics would be useful in future research.

Miller et al's (2009) study also included a larger sample of participants than the West et al's study; 128 FSO and 136 MSO. All of the individuals in their sample had also been convicted of a sexual offence, were incarcerated and had been referred for a Sex Offender Treatment Programme in the U.S. This study used Morey's (1991) Personality Assessment Inventory (PAI) to examine the differences in psychopathology between FSO and MSO, which were completed as part of their time within treatment. Their findings indicated that females had higher presence of self-reported psychopathology than males. FSO had higher means than MSO on all of the scales within the PAI apart from *positive impression management* (a scale which analyses how an individual has approached the test) and the *alcohol problems* scale. However, this suggests that MSO may approach the test in a defensive manner and attempted to convey a positive picture of themselves. They did not statistically compare the male and female results on each scale which would indicate what scales they significantly differed on, thus what personality characteristics are more likely to be present in MSO or FSO. Instead, they used a Latent Profile Analysis (LPA) to determine whether gender would be able to classify male and females into different classes of psychopathology. They identified that FSO were more likely to be classified in an extensive psychopathology class, in which scores on the PAI reached clinical significance. MSO however, were more likely to be

in a class which represented individuals who scored highly on *positive impression management* scales and *drug/alcohol use* scales. This suggests that FSO experience more extensive mental health difficulties than MSO, which may indicate an area of need for their treatment. MSO difficulties appear to relate more greatly to drug/alcohol problems. This study provides some indication of how MSO and FSO are different and factors that may be relevant to their offending behaviour. However, this study does not indicate specific factors that differentiate MSO and FSO.

It is important to understand how MSO and FSO differ in their experiences of psychopathology, but in order to gain a more in-depth and holistic picture of their differences, a broader range of clinical factors need to be considered and investigated. Therefore, until research has further investigated the differences between MSO and FSO these results suggest it would be inappropriate for professionals to apply male constructed assessment tools and interventions to FSO.

4.2.4 Aims and Hypotheses

Two important gaps in FSO research have been identified: 1) Understanding the differences in clinical characteristics between FSO who offend on their own (solo offenders) and those who offend with an accomplice (co-offenders); and 2) understanding how clinical characteristics of FSO are different to MSO. Therefore, this study first aims to gain an understanding of how FSO differ depending on whether they have offended on their own or with an accomplice. It will compare solo and co-offenders on characteristics that combine into five overall factors: developmental factors, psychological disposition, environmental niche factors, offence-preceding

factors and positive factors; these factor will be further defined in the methods section of this chapter. The factors also represent gender-specific characteristics that have been identified in FSO literature. Thus, it will specifically investigate Beech et al. (2009), and Gannon et al. (2010) findings, and compare the presence of gender-specific offence-supportive cognitions in solo and co-offenders.

It is hypothesised that there will be significant differences found between solo and co-offenders when comparing them on developmental factors, psychological dispositions, environmental niche factors, offence-preceding factors and positive factors and specifically when comparing them on the presence of offence-supportive cognitions.

The second aim of this study is to gain an understanding of how FSO differ from MSO in relation to their clinical characteristics. It has been hypothesised that solo and co-FSO will present with different clinical characteristics, therefore MSO will be compared to two separate groups of FSO (solo and co-offenders). They will be compared on clinical characteristics that combine into five overall factors: developmental factors, psychological disposition, environmental niche factors, offence-preceding factors and positive factors. This aspect of the study will also further expand upon Beech et al's and Gannon et al's research and quantitatively investigate whether FSO hold similar offence-supportive cognitions as MSO.

It is hypothesised that there will significant differences found between MSO and FSO (solo and co-offenders) on developmental factors, psychological dispositions,

environmental niche factors, offence-preceding factors and positive factors and specifically when comparing them on the presence of offence-supportive cognitions.

4.3 METHOD

4.3.1 Ethical approval

This research was granted ethical approval by the University of Birmingham Science, Technology, Engineering, and Mathematics (STEM) Ethical Review Committee. It adhered to ethical research requirements set by the British Psychological Society.

4.3.2 Design

This research was conducted in two parts. The first part investigated the differences between those FSO who offend on their own (solo offenders) and those who offend with a counterpart (co-offenders). The second part of the study included the collection of MSO data in order to compare MSO to solo and co- FSO.

In both parts of the study data was collected using a modified version (Version 2.0) of the Assessment Guidance Framework for use with Women who Sexually Abuse Children (Elliott, Eldridge, Ashfield, & Beech, 2010). This framework was developed using research on FSO and thus includes gender-specific items that relate to sex offending.

The framework was used to code for the presence or absence of the following clinical characteristics for each participant: (1) developmental factors; (2) psychological dispositions; (3) environmental niche factors; (4) offence-preceding factors; and (5)

positive factors. In addition, the presence of offence-supportive cognitions were coded as either present or absent for solo, co- and male, offenders. The extent to which these were present in each offender group was compared in part 1 (between solo and co-offenders), and part 2 (between solo, co and male offenders) of this study.

The framework was adjusted in the second part of this study in order to compare male and females. Female-specific items such as, 'males viewed as threatening' were removed from the analysis to ensure items could be coded as present for both males and females. Most of the female-specific items were within the offence-supportive cognitions section of the framework.

4.3.3 Participants

The sample consisted of 40 FSO and 40 MSO referred to the Lucy Faithfull Foundation (LFF), UK, through the criminal justice or child protection systems, in the UK. Participants were included if they met the following criteria: 1) aged 18 years or older at the time of their offence, 2) offended against a person or persons under the age of 16, and 3) had either been convicted of the offence in a criminal court, or had a judge's finding of fact against them in a family court, or had admitted to the offence. Female participants were categorised into two groups (solo or co-offender) based on file information that provided details of their offending behaviour. Females were categorised in the solo offender group if they had committed the sexual offence independently without the involvement of another person or persons. Females were categorised in the co-offender group if their offending behavior took place in the presence of another person or persons (above the age of 18). There were no females in

this sample that have previously acted in a way which could be considered as being in both the solo offender group and the co-offender group. Therefore, all FSO in this sample could be categorised in distinct categorises as either solo or co-offenders. In addition, all of the males included in the study were solo offenders and there was no information to suggest that any of the males had previously sexually offended with another counterpart. All of the participants in the sample were referred to LFF for assessment and/ or intervention purposes. Table 7 provides additional information about the sample including offender, victim and offence characteristics.

Additional statistical tests were conducted using the Statistical Package for Social Science (SPSS) version 20 program on the information in Table 7, to investigate if there were any differences between the three groups. The statistical tests conducted were determined by the type of demographic data, one-way ANOVAs were used for continuous data, whereas chi square tests were used for categorical data. When chi square tests were conducted, fisher's exact tests were also considered if the cell count was expected to be lower than 5. In addition, to ensure statistical analysis was possible, some categorical information contained within the table was combined, for example if the cell count was below 5. Table 7 also contains the results of this statistical analysis, and these results will be discussed in relation to the overall research results in the discussion section of this chapter.

Information from the case files indicated that 45% of those who perpetrated with a co-offender were psychologically, and/or physically coerced by their co-offender to engage in the sexual abuse of their victim. Contact offences for the current sample (both males

and females) consisted of the following: rape (6%), indecent assault (28%), buggery (3%), gross indecency (9%), unlawful sexual intercourse (6%), sexual activity with a minor (16%), incest (1%), anal rape (1%) and sexual assault (13%). Non-contact offences ranged from (but were not limited to) causing or inciting a person below the age of 16 to engage in sexual activity (5%), aiding and abetting sexual assault (4%), voyeurism (1%), possession of obscene material (4%), downloading indecent images (1%), causing a minor to watch indecent images (1%), and taking and distributing indecent images (16%).

Table 7: Demographic, offence and victim information of participants

Variable	Co-Offenders (*N* =20)	Solo Offenders (*N* =20)	Males (*N*=40)	
	M (*SD*)			*F (p)*
Age	34.83 (5.80)	33.24 (6.83)	32.43 (10.01)	.475 (*>.05)*
		%		*X² (p)*
Ethnicity				
Caucasian	45	55	48	
Black	0	0	5	.450 (*>.05)*
Unknown	55	45	48	
Sentence				
Custodial	30	30	53	
Community Order	25	20	23	
Suspended Sentence	5	5	3	4.178 (*>.05)*
Awaiting Sentencing	5	0	8	
Caution	0	0	5	
Unknown	35	45	10	
Referral Service				
Family Court	65	45	90	
Criminal Justice System	35	55	8	22.418 (*<.001)*
GP	0	0	3	
Previous Convictions				
Sexual	5	5	23	
Violent	0	0	25	18.081 (*<.001)*
Acquisitive	10	20	43	

Variable	Co-Offenders (*N* =20)	Solo Offenders (*N* =20)	Males (*N*=40)	
Drug-related	0	20	8	
Offence Type				
Contact	60	75	70	1.105
Non-contact	40	15	30	(*>.05)*
Victim Age				
Under 5	20	25	5	4.053
6-12 years	50	15	43	(*>.05)*
13 years and above	25	60	40	4.053
Unknown	5	0	13	(*>.05)*
Victim Relationship				
Intra-familial	85	40	27.5	
Extra-familial	15	60	47.5	18.081
Both	0	0	12.5	(*<.001)*
Unknown	0	0	12.5	
Number of Victims				
1	50	80	42.5	
2 or more	50	15	50	7.693
Unknown	0	5	7.5	(<.05)
Co-offender Gender				
Male	85	-	-	-
Female	5	-	-	-
Both	5	-	-	-
Co-offender Relationship				
Partner	85	-	-	-
Known Acquaintance	5	-	-	-
Stranger/ Unknown	5	-	-	-

4.3.4 Measures

The Assessment Guidance Framework for use with Women who Sexually Abuse Children: Version 2.0

This framework was originally developed by Elliott et al. (2010) as a resource to guide practitioners in their assessments of FSO. The framework has since been updated in order to include research developments in the field. The developments include, models

relating to the offending process in FSO (Gannon et al., 2008, 2010), and female-specific offence-supportive cognitions identified by Gannon et al. 2010**.** Version 2.0 of the Framework includes five main scales:

The *Developmental Factors* scale contains six subscales which assess an offender's early life experiences and the presence of negative parental relationships; negative childhood environment; experiences of early emotional, violent, or sexual abuse; other negative developmental factors.

The *Psychological Dispositions* scale contains subscales which assess an offender's psychological functioning/well-being including: interpersonal factors, self-management/self-regulation, sexual self-regulation, and sexual abuse supportive cognitions.

Within *Sexual Abuse Supportive Cognitions* subscale there are also several other subscales which represent the different categories of offence-supportive cognitive distortions identified by Ward (2000), which includes: children as sexual beings, nature of harm, entitlement, uncontrollability, dangerous world. In addition, it includes another subscale: *other directedness*. The 'other directedness' subscale was included in Version 2.0 of the framework and incorporates categories of schemas (abandonment, emotional deprivation, defectiveness/shame, and social isolation), which were identified in Young's (1990) theory of Early Maladaptive Schemas. Beech et al's (2009) findings indicated that these categories of schemas may account for aspects of FSO offence-supportive cognitions, specifically in co-offenders who report offending due to coercion

and essentially meet the needs of their co-perpetrator to avoid being emotionally deprived, abandoned and socially isolated.

In addition, subscales within *Sexual Abuse Supportive Cognitions* contain items that assess the presence of female-specific offence-supportive cognitions. These were developed from Beech et al. (2009), and Gannon et al's (2010) research, and include items such as: female abuse not as harmful as male, partner's needs greater than victims, males viewed as threatening, and men control the actions of women. As mentioned previously the female-specific items were removed from part 2 of the study when MSO were included in the analysis. The presence of items within these subscales were further analysed in order to make comparisons between solo and co-offenders, and solo, co- and male offenders. This comparison was deemed important as offence-supportive cognitions have previously been researched in FSO using qualitative methods and the Beech et al. (2009) and Gannon et al's (2010) research identified different findings. Therefore, statistically analysing the differences between the three groups was considered to be important in further understanding the presence of the different categories of offence-supportive cognitions in FSO, as well as understanding any differences between the groups.

The *Environmental Niche Factors* scale measures the presence of factors that can increase an individual's vulnerability to sexual offending without the experience of psychological difficulties (Ward & Beech, 2006). These are factors that can influence and be influenced by an individual's environment (Ward & Beech, 2006). The subscale includes items that represent distal personal factors (e.g., substance abuse and

depression), offence history, relationship problems, family problems, and proximal factors (e.g., associating with antisocial peers and being in an abusive relationship).

The *Offence-preceding Factors* scale assesses the presence of items that occurred around the time of the offending behavior. It contains a personal subscale that includes items such as: negative mood states, need for power/dominance, and need for intimacy, and an environmental subscale that includes items such as, current partners are known sex offenders, and involvement with known offenders.

The *Positive Factors* scale assesses for the presence of items that would support an individual to make positive changes and support them to avoid offending in the future. This scale includes four subscales assessing personal and contextual issues, items indicating treatment readiness, and items that assess mechanisms that may support an individual's treatment progress.

The items in this framework were coded for each participant, one was scored if an item was present and zero was scored if an item was absent. This enabled the number of present items in each scale/subscale (totals) to be calculated and used in the statistical analysis.

4.3.5 Procedure

This study collected data from anonymised case files of FSO and MSO provided by the LFF. These offenders had been referred to the organisation between 1994 and 2013 for assessment and/or intervention purposes. Although each file was anonymised,

information regarding whether an individual had offended on their own or with an accomplice was available to the researchers at the point of coding. These files remained and were stored within LFF premises throughout the entirety of data collection. Each file was coded for the presence or absence of the items contained in the framework described above. The primary researcher coded all 80 files and a secondary researcher coded 20% of the files (eight female and eight male) which was used to establish inter-rater reliability. Inter-rater reliability was determined using Intra-class Correlation Coefficients (ICC). ICC were calculated to assess consistency between the raters for the overall total of the framework (total amount of items coded as present). This enabled an assessment of the reliability of the data extraction using the entire framework. Second, ICC were calculated to measure consistency between the raters on the individual scales that were used in the statistical comparison of the three groups, as well as the *Sexual Abuse Supportive Cognitions* sub-scale. Table 8 reports the ICC figures for the first part of the study which investigated solo and co- FSO. As items were removed for the second part of the study the ICC were recalculated to account for the additional male data and decrease in female-specific items. Table 9 reports the ICC figures for the second part of the study.

The information contained within the files consistently included a clinical assessment and/or intervention report written by a LFF Therapist. Also other information contained in the files where available included a combination of the following documents: (1) a psychometric report - this would typically contain information about the client's responses on a variety of self-report psychological measures assessing an individuals, cognitive distortions, self-esteem, emotional loneliness, personality difficulties, victim

empathy, and emotional regulation; and (2) other reports written by professionals from external organisations for example, probation officers or social workers. All of this information was used by the researcher to code each item in the framework as present or absent. If it was difficult to determine whether an item was present or absent, the item was coded as absent. In addition to coding the items, demographic, offender, offence and victim information was also documented. This information is reported in Table 7.

Table 8: Intra-class Correlation Coefficients and 95% Confidence Intervals for Part One of the study (comparison of solo and co-offenders) including the overall scale and the individual sub-scales

	Number of items	ICC	95% Confidence Interval	
			Lower	Upper
Whole scale	153	.95	.76	.99
Sub-scales				
Developmental factors	24	1.00	-	-
Psychological Dispositions	49	.99	.94	1.00
Sexual Abuse Supportive Cognitions	27	.99	.95	.99
Environmental niche factors	28	.99	.94	1.00
Offence preceding factors	13	.98	.91	1.00
Positive factors	39	.95	.75	.99

Table 9: Intra-class Correlation Coefficients and 95% Confidence Intervals for Part Two of the study (comparison of solo, co-offenders and male offenders) including the overall scale and the individual sub-scales

	Number of items	ICC	95% Confidence Interval	
			Lower	Upper
Whole scale	146	.93	.78	.98
Sub-scales				
Developmental factors	23	.99	.99	1.00
Psychological Dispositions	43	.96	.87	.99
Sexual Abuse Supportive Cognitions	21	.90	.71	.97
Environmental niche factors	28	.94	.81	.98
Offence preceding factors	13	.93	.78	.97
Positive factors	39	.98	.93	.99

4.4 RESULTS

In order to investigate the aims of this study the total number of items identified as present in every sub-scale were calculated for each participant. These totals were inputted into the Statistical Package for Social Science (SPSS) version 20 program and overall six multivariate analysis' (MANOVA) for both parts of this study were conducted. Out of the six MANOVA's five of them were accounted for by the five main scales of the Framework discussed above: Developmental Factors, Psychological Dispositions, Environmental Niche Factors, Offence-preceding factors and Positive Factors. For each MANOVA the total (amount of items coded as present) of each sub-scale that were part of the overall main scale were inputted into the analysis as the

dependent variables. The final MANOVA was conducted on the Sexual Abuse Supportive Cognitions sub-scale. In this instance the totals of the sub-scales of this scale: Child as Sexual Beings, Dangerous World, Nature of Harm, Entitlement, Uncontrollability and Other Directedness were inputted as the dependent variables in this analysis.

The same method of analysis was used for both parts of this study. However, in part two gender-specific items were removed from the totals (amount of items coded as present) calculated for each sub-scale and post-hoc tests were conducted in order to further analyse the differences between solo, co- and male offenders. The *Games-Howell* procedure was used to interpret the post-hoc results. This procedure is deemed as the most powerful when it is not certain if parametric assumptions are met and when sample sizes are unequal (Field, 2009).

The following sections will provide a brief summary of the results from both parts of the study. Appendix 5 provides a more detailed description of the results, including descriptive information about the percentage of offence-supportive cognitions found in male, solo and co-offenders.

4.4.1 Study One: Investigating the Differences between Solo and Co-offenders

It was hypothesised that there would be significant differences found between solo and co-offenders on the following scales: developmental factors, psychological dispositions, environmental niche factors, offence-preceding factors and positive factors. Table 10 contains the means and standard deviations (SD) for solo and co-offenders on each of

the five main scales and sub-scales. Table 10 also contains the results of the statistical analysis (MANOVA) including *p* values and reports the partial-eta squared ($p\eta^2$) estimates of effect size, with the following figures as suggestions for use in interpretation (Cohen, 1988): small = .01, medium = .06, and large = .14.

Solo and co-offenders were only found to be significantly different on the: *Environmental Niche Factors* (Pillai's Trace = .33, F (1, 38) = 3.41, $p < .05$, $p\eta^2 = .33$); *Offence-Preceding Factors* (Pillai's Trace = .35, F (1, 38) =9.93, $p < .05$, $p\eta^2 = .35$); and *Positive Factors* (Pillai's Trace = .27, F (1, 38) = 3.16, $p < .05$, $p\eta^2 = .23$) scales. The statistical analysis found that on the *Environmental Niche Factors* scale solo offenders had significantly greater scores on the *Personal (distal)* sub-scale than co-offenders. This indicates that solo offenders were more likely to have the presence of depression and other mental health difficulties, sexual dissatisfaction and substance abuse issues.

Solo and co-offenders were also found to be significantly different on the *Offence-Preceding Factors* scale. Solo offenders were found to score significantly higher on the *Personal Factors* sub-scale, which indicates that solo offenders were more likely to experience negative mood states and the need for intimacy, power/dominance prior to their offending behaviour. In contrast, co-offenders had the presence of significantly more items on the *Environmental* sub-scale. This indicates that co-offenders were more likely to experience factors in their environment which may influence their offending behaviour, for example, associating with criminal peers.

Finally, a significant difference was also found between solo and co-offenders on the *Positive Factors* scale. Solo offenders were found to have significantly more Treatment Supportive Factors. This suggests that solo offenders are more likely to have factors in their life that would support their engagement in treatment, this includes: having a supportive family and/or partner and being in a safe/supportive environment that supports change.

Table 10: Means, Standard Deviations (SD), p values and partial-eta squared (pη²) estimates of effect size of solo and co-offenders on each main scale and sub-subscales

Scale (Number of items)	Solo Offenders (*N* =20)	Co-Offenders (*N* =20)			
	Mean (SD)		F	*p*	Partial-eta squared (pη²)
Developmental (24)	4.75 (4.63)	5.45 (3.98)	.94	*ns*	.15
Parental Relationships (4)	1.50 (1.61)	1.85 (1.63)	.47	*ns*	.01
Childhood Environments (4)	.95 (1.05)	1.00 (1.08)	.02	*ns*	.001
Emotional Abuse (3)	.60 (.82)	.75 (.77)	.34	*ns*	.009
Violent Abuse (3)	.25 (.55)	.30 (.47)	.10	*ns*	.01
Sexual Abuse (4)	.65 (.99)	.35 (.67)	1.26	*ns*	.03
Other Developmental (6)	.80 (1.15)	1.20 (1.06)	1.31	*ns*	.03
Psychological Dispositions (49)	18.70 (6.96)	16.70 (7.85)	2.27	*ns*	.21
Interpersonal factors (6)	4.25 (1.25)	3.70 (1.34)	1.80	*ns*	.45
Offence supportive cognitions (27)	8.25 (4.59)	7.55 (5.15)	.21	*ns*	.005
Self-management/regulation (6)	2.60 (1.31)	3.15 (.75)	2.65	*ns*	.07
Sexual Self-regulation (10)	3.50 (2.31)	2.30 (2.56)	2.43	*ns*	.06
Environmental Niche Factors (28)	1.80 (3.86)	11.30 (2.98)*	3.42	0.01	.33

Scale (Number of items)	Solo Offenders (*N* =20)	Co-Offenders (*N* =20)			
	Mean (SD)		F	*p*	Partial-eta squared (pη²)
Personal (Distal) (6)	3.30 (.98)	2.10 (.25)*	11.4	.002	.56
Offending History (3)	.40 (.60)	.20 (.41)	1.52	*ns*	.04
Relationship Factors (Distal) (4)	2.40 (.94)	2.80 (.62)	2.53	*ns*	.06
Family Factors (Distal) (5)	3.05 (1.47)	3.80 (.20)	3.14	*ns*	.08
Proximal Factors (9)	1.65 (1.46)	2.40 (1.70)	2.24	*ns*	.06
Offence preceding factors (13)	5.05 (1.70)	3.66 (2.52)**	9.93	<.001	.35
Personal (9)	4.05 (1.64)	2.05 (1.93)**	12.47	.001	.25
Environmental (4)	1.00 (.46)	1.60 (1.19)*	4.44	0.04	.11
Positive factors (39)	17.1 (8.53)	15.4 (9.09)*	3.16	0.02	.23
Personal (17)	6.00 (3.78)	5.80 (3.78)	.03	*ns*	.001
Contextual (14)	6.20 (3.62)	5.65 (3.95)	.21	*ns*	.01
Treatment readiness factors (3)	1.35 (1.35)	1.50 (1.50)	.20	*ns*	.01
Treatment supportive factors (5)	3.55 (1.23)	2.45 (1.50)*	6.40	.01	.14

* $p < .05$
** $p \leq .001$

It was also hypothesised that there would be a significant difference found between solo and co-offenders on their presence of offence-supportive cognitions. However, overall there were no significant differences found between solo and co-offenders on the *Sexual Abuse Supportive Cognitions* sub-scale Pillai's Trace = .11 F (1, 38) = .65, $p > .05$, pη² = .11.

4.4.2 Study 2: Investigating the Differences between Solo, Co- and Male offenders.

The results from the first part of the study indicated that on certain clinical characteristics solo and co- FSO differ. The second part of the study aimed to investigate the differences between MSO and both female solo and co-offenders. It was hypothesised that there would be significant differences between MSO and both female

solo and co-offenders on the following scales: Developmental Factors, Psychological Dispositions, Environmental Niche Factors, Offence-preceding Factors and Positive Factors. Table 11 contains the means and standard deviations (SD) for male, solo and co-offenders on each of the five main scales and sub-scales. Table 11 also contains the results of the statistical analysis including *p* values and reports the partial-eta squared ($p\eta^2$) estimates of effect size, with the following figures as suggestions for use in interpretation (Cohen, 1988): small = .01, medium = .06, and large = .14.The means and SDs for both the solo and co-offenders differ on the *Developmental, Psychological Dispositions* and *Sexual Abuse Supportive Cognitions* scales compared with part one of this study due to gender-specific items being removed from the analysis.

An overall significant difference was found between male, solo and co-offenders on the following scales: *Psychological Dispositions* (Pillai's Trace = .29 F (2, 77) = 3.161, $p < .05$, $p\eta^2 = .14$); *Environmental Niche Factors* (Pillai's Trace = .53 F (2, 77) = 5.384, $p < .001$, $p\eta^2 = .27$); *Offence-preceding Factors* (Pillai's Trace = .31 F (2, 77) = 7.128, $p < .001$, $p\eta^2 = .16$); and the *Positive Factors* (Pillai's Trace = .42 F (2, 77) = 4.905, $p < .001$, $p\eta^2 = .21$) scales.

Table 11: Means, Standard Deviations (SD), p values and partial-eta squared (pη²) estimates of effect size of solo, co-offenders and MSO on each main scale and sub-subscales

Scale (Number of items)	Male Offenders (*N*=40)	Solo Offenders (*N* =20)	Co-Offenders (*N* =20)			
		Mean (SD)		*F*	*p*	Partial-eta squared (pη²)
Developmental (23)	4.55 (3.67)	4.45 (4.56)	5.10 (3.99)	1.40	ns	.10
Parental Relationships (4)	1.98 (1.33)	1.50 (1.61)	1.85 (1.63)	.69	ns	.02
Childhood Environments (4)	.98 (1.27)	.95 (1.05)	1.00 (1.08)	.01	ns	.00
Emotional Abuse (3)	.73 (.13)	.60 (.82)	.75 (.77)	.21	ns	.01
Violent Abuse (3)	.33 (.57)	.25 (.55)	.30 (.47)	.13	ns	.003
Sexual Abuse (4)	.20 (.41)	.65 (.99)	.35 (.67)	3.10	ns	.08
Other Developmental (5)	.35 (.53)	.50 (.83)	.85 (.99)	.20	ns	.07
Psychological Dispositions (43)	16.88 (6.50)	18.20 (6.80)	15.10 (7.20)*	3.16	.002	.14
Interpersonal factors (6)	3.05 (1.58)	4.25 (1.25)	3.70 (1.34)*	4.79	0.01	.11
Offence supportive cognitions (21)	7.50 (3.48)	7.85 (4.46)	7.95 (4.30)	1.39	ns	.04
Self-management/regulation (6)	2.23 (1.33)	2.60 (1.31)	3.15 (.75)*	3.93	0.02	.09
Sexual Self-regulation (10)	4.1 (1.97)	3.50 (2.31)	2.30 (2.56)*	4.41	.01	.10
Environmental Niche Factors (28)	8.88 (3.67)	10.80 (3.86)	11.30 (2.98)**	5.38	<.001	.27
Personal (Distal) (6)	2.48 (1.36)	3.30 (.98)	2.10 (.25)*	4.95	.01	.11
Offending History (3)	.95 (.93)	.40 (.60)	.20 (.41)**	7.76	.001	.17
Relationship Factors (Distal) (4)	2.05 (1.06)	2.40 (.94)	2.80 (.62)*	4.34	.01	.10
Family Factors	2.50 (1.26)	3.05 (1.47)	3.80 (.20)*	6.73	.002	.15

Scale (Number of items)	Male Offenders (*N*=40)	Solo Offenders (*N* =20)	Co-Offenders (*N* =20)			
		Mean (SD)		*F*	*p*	Partial-eta squared ($p\eta^2$)
(Distal) (5) Proximal Factors (9)	.90 (.78)	1.65 (1.46)	2.40 (1.70)**	10.01	<.001	.21
Offence preceding factors (13)	4.93 (1.97)	5.05 (1.70)	3.66 (2.52)**	7.13	<.001	.16
Personal (9)	3.95 (1.66)	4.05 (1.64)	2.05 (1.93)**	9.42	<.001	.20
Environmental (4)	.98 (.70)	1.00 (.46)	1.60 (1.19)*	2.86	.01	.10
Positive factors (39)	24.30 (10.15)	17.1 (8.53)	15.4 (9.09)**	4.91	<.001	.21
Personal (17)	10.65 (4.68)	6.00 (3.78)	5.80 (3.78)**	12.44	<.001	.24
Contextual (14)	7.95 (4.49)	6.20 (3.62)	5.65 (3.95)	2.46	ns	.06
Treatment readiness factors (3)	2.03 (.92)	1.35 (1.35)	1.50 (1.50)*	4.79	0.01	.09
Treatment supportive factors (5)	3.68 (1.59)	3.55 (1.23)	2.45 (1.50)*	3.74	.02	.11

* $p < .05$
** $p \leq .001$

Appendix 5 contains information relating to the Post-hoc tests conducted and how the three groups differed on the sub-scales contained within the five overall scales within the framework. In summary, when considering the *Psychological Dispositions* scale, solo offenders were found to score significantly higher than males on the *Interpersonal* sub-scale. This indicates that solo offenders were more likely to have the presence of items such as: low self-esteem, low assertiveness and emotional loneliness/social isolation. Co-offenders were found to score significantly higher than males on the *Self-management/ Self-regulation* sub-scale, suggesting that co-offenders were more likely to have the presence of items that include: high levels of impulsivity and inability to

cope with negative emotions. However, male offenders scored significantly higher than co-offenders on the *Sexual Interest*/*Self-regulation* sub-scale which indicates that males have greater presence of items on this scale, such as: child viewed as ideal sexual partner and sadistic/humiliation elements to abuse.

On the *Environmental Niche Factors* scale, post-hoc tests found that solo-offenders were significantly different from both males and co-offenders on the *Personal (distal)* sub-scale. This suggests that solo-offenders have the presence of more items relating to: sexual dissatisfaction, depression and substance abuse. On the *Offending History* sub-scale males were found to be significantly different from both solo and co-offenders. This suggests that males were more likely to have a previous sexual offence or non-violent/non-sexual conviction. In addition, co-offenders were found to be significantly different from males on the *Relationship Factors*, the *Family Factors* and the *Proximal Factors* sub-scales. Co-offenders were found to have the presence of more items such as: series of unstable relationships and previous exploitive and/or abusive relationships, unstable family life, family stressors (e.g. debts), social group predominantly pro-criminal and possessive/violent partner.

On the *Offence-preceding Factors* scale, post-hoc tests found that solo and co-offenders and male and co-offenders were significantly different on the *Personal Factors* sub-scale. This indicates that solo and male offenders were more likely to have the presence of items such as: negative mood states and need for intimacy. A trend was found between co-offenders and male offenders on the *Environmental Factors* sub-scale, but this result was not significant. Co-offenders appeared to score higher on this sub-scale

indicating that they were more likely to have the presence of items such as: involvement with known offenders and others simultaneously abusing victim.

Finally, on the *Positive Factors* scale post-hoc tests found that on the *Personal Factors* sub-scale males significantly differed from both solo and co-offenders. Male offenders were found to have significantly more positive personal factors including items such as: awareness of consequences of behavior and demonstrates remorse/empathy. A trend was found between male and solo-offenders on the *Treatment Readiness* sub-scale, but this difference was not significant. It suggests that males may be more likely to have the presence of items that indicate they are treatment ready including: open about offending behavior and motivated to engage in treatment. On the *Treatment Supportive* sub-scale solo and co-offenders and male and co-offenders were found to be significantly different. Solo and male offenders were found to have the presence of more items indicating that they had factors that supported their engagement in treatment including: partner/family acceptance of treatment plan and safe/supportive environment to change.

The *Sexual Abuse Supportive Cognitions* sub-scale was explored further in order to identify whether there were any differences between the three groups on the following sub-scales (categories of offence-supportive cognitions): child as sexual being, nature of harm, entitlement, dangerous world, uncontrollable and other directedness. Please refer to Table 12 for the results of the statistical analysis. Overall, there was a significant difference found between the three groups on the *Sexual Abuse Supportive Cognitions* sub-scale Pillai's Trace = .33 F (2, 77) = 2.428, $p < .05$, $p\eta^2 = .17$. Post-hoc tests found that males and co-offenders were significantly different on the *Entitlement* sub-scale.

Males were found to have the presence of more distortions relating to the entitlement category including items such as: the child is mine/ownership over child and own needs greater than victims. In addition, solo and co-offenders and male and co-offenders were found to be significantly different on the *Dangerous World* sub-scale. Males and solo offenders were more likely to have the presence of offence-supportive cognitions relating to the dangerous world category, these include items such as: child easier/safer than adults and mistrust/others will lie/manipulate me.

Table 12: Means, standard deviations (SD), p values and partial-eta squared ($p\eta^2$) estimates of effect size of solo, co-offenders and MSO on each sub-scale of the Sexual Abuse Supportive Cognitions scale

	Mean (SD)			*F*	*P*	Partial-eta squared ($p\eta^2$)
Subscale (Number of items)	Solo Offenders (*N* = 20)	Co-Offenders (*N* = 20)	Male Offenders (*N*=40)			
Children as Sexual Beings (3)	1.70 (1.46)	1.15 (1.31)	1.58 (1.22)	1.03	*ns*	.03
Nature of Harm (5)	1.60 (1.39)	1.40 (1.47)	1.73 (1.13)	.43	*ns*	.01
Entitlement (6)	.90 (1.07)	.50 (.76)	1.3 (1.04)*	4.51	.01	.11
Dangerous World (4)	.50 (.61)	.10 (.31)	.75 (.74)**	7.18	.001	.16
Uncontrollable (4)	1.20 (.83)	1.10 (.85)	.80 (.79)	1.91	*ns*	.05
Other Directedness (5)	1.95 (1.43)	1.70 (1.49)	1.35 (1.53)	1.15	*ns*	.03

* $p < .05$
** $p \leq .001$

4.5 DISCUSSION

This study aimed to investigate the differences in clinical characteristics between those FSO who offend on their own compared with those FSO who offend with an accomplice. In addition, the study also aimed to investigate how FSO (solo and co-offenders) are different to MSO in the clinical characteristics they present with. Clinical characteristics were considered important as they have implications for how assessment and treatment is approached. It was hypothesised that differences would be found between solo and co-offenders and solo, co- and male offenders on the following factors: Developmental Factors, Psychological Dispositions, Environmental Niche Factors, Offence-preceding Factors, Positive Factors and Offence-supportive Cognitions.

In fact it was found that solo, co- and male offenders have similar developmental experiences. All three groups were found to experience difficult parental relationships, childhood environments and abusive experiences to the same degree. This finding is consistent with the results of a meta-analysis by Colson et al. (2013), which showed that FSO have often experienced victimisation and sexual abuse during their childhood. It has also been a frequent characteristic found in other research exploring the characteristics of FSO (Christopher et al., 2009; Gannon et al., 2008; Kaplan & Green, 1995; Strickland, 2008; Turner et al., 2008; Wijkman et al., 2010). However, these results do not support Allen (1991), Colson et al. (2013), and West et al's (2011), findings that females were more likely to experience abuse than males.

In addition, solo and co-offenders were found to be similar on the psychological dispositions scale, which included sub-scales that examined the presence of interpersonal factors, offence-supportive cognitions, self-regulation factors and sexual interest/sexual self-regulation. However, males were found to be significantly different from solo and co-offenders on a variety of these sub-scales. Solo offenders were found to have significantly more interpersonal difficulties than males and co-offenders were found to have significantly more self-regulation/self-management problems than males. These results highlight specific areas of difficulty for both solo and co-offenders, and suggest that while solo offenders may require support in developing positive relationships and interactions with others, interventions with co-offenders should aim to increase their resources to cope with stressors and improve their ability to emotionally regulate.

It was also found that males scored higher on items that measured their sexual interest such as whether they viewed the child to be their ideal sexual partner, the use of grooming techniques or positively reinforcing the child's sexual behaviour which suggests their sexual interest in children may be greater than co-offenders. This perhaps highlights the differences in motivation to offend and suggests that co-offenders are less likely than males to be sexually motivated in their behaviour. Solo offenders were not found to be significantly different from males or co-offenders on this sub-scale. This indicates that solo offender's motivation to offend can be similar to the sexual motivation often identified in MSO. Finkelhor's (1984) Four Pre-Conditions Model of sexual offending suggests that motivations to sexually offend among males can be a combination of having emotional congruence with children, sexual arousal to children

and being unable to meet sexual needs in other ways (blockage). If similar motivation is found in solo offenders it further highlights the possibility that solo offenders may be offending to meet their emotional and sexual needs as concluded by Allen (1991).

The Environmental Niche factors scale identified additional differences between the three groups of offenders. Solo female offenders were found to be significantly different from co-offenders and MSO on the personal sub-scale. This suggests that solo offenders are more likely to experience mental health difficulties and psychological vulnerabilities than the other two groups of offenders. This is consistent with the findings of Muskens et al. (2011) who showed that solo offenders more often experienced DSM IV Axis I disorders than co-offenders. These results also support West et al. (2011), and Miller et al's (2009), findings that FSO were more likely to have psychiatric problems/extensive psychopathology than MSO.

Another difference found between FSO and MSO was on the Offending History subscale of Environmental Niche Factors, which measures the presence of previous convictions including sexual, non-sexual/non-violent and other convictions such as drug-related convictions. Male offenders were found to have a greater number of previous convictions including sexual and non-sexual offences. This difference is also indicated by the demographic information reported in Table 7 and suggests that MSO are generally more anti-social than FSO. This is consistent with the findings of Freeman and Sandler (2008) that showed that MSO had significantly more sexual and non-sexual previous convictions and re-arrests. One of the pathways to sexual offending developed by Ward and Siegert (2002) recognises an anti-social pathway for MSO, in which their

sexual offending behaviour is part of an overall frequent offending pattern that is supported by pro-criminal attitudes and beliefs. Although, the results from this study suggest that this pathway does not appear to be present for FSO, Wijkman, Bijleveld and Hendriks (2011) identified a 'generalist' typology in FSO. Generalists were found to have a high number of previous convictions and their offending behaviour was varied. If the results from this study were investigated in relation to these typologies a sub-group of FSO in this study may be found to be 'generalists'.

In addition, co-offenders were found to be significantly different from MSO on the family, relationship and proximal sub-scales within Environmental Niche Factors. These results convey that co-offenders experience significant difficulties in their environment which include with their family, in their relationships and within the area/environment in which they live. This highlights that external factors are particularly relevant for co-offenders.

The relevance of internal/external factors for the three groups is recognised further in the Offence-preceding Factors and the Positive Factors scales. Male and solo offenders were found to be significantly different from co-offenders on the personal sub-scale of Offence-preceding Factors. This suggests that internal factors such as low mood and need for intimacy or power are influential in solo and male offenders offending behaviour. Co-offenders scored higher on the environmental sub-scale of Offence-preceding Factors than both solo and MSO and suggest they are more likely to be involved with other offenders, which further highlights the influence of external factors for co-offenders.

This finding is reinforced by the results on the Positive Factors scale. Solo and male offenders were found to be significantly different from co-offenders on the treatment supportive sub-scale of Positive Factors, with solo and male offenders having a greater amount of items on this scale. This indicates that co-offenders appear to have significantly more difficulties in their environment compared with solo and male offenders that will limit them from engaging and progressing in treatment, which includes support and acceptance from their family.

Furthermore, another difference was found between males and solo and co-offenders on the personal sub-scale of Positive Factors. This scale relates to offence-related items such as demonstrating remorse/empathy and acknowledging consequences of their behaviour, as well as self-regulation items. Male offenders were found to have more positive items relating to such areas. They were also found to have significantly more items indicating that they were treatment ready than solo offenders. However, solo-offenders were found to have more mental health difficulties than MSO which could be considered as a treatment need that takes priority over an offence-related aspect to their intervention. It is also worth noting that these findings may have been influenced by the sample of offenders used in this study. Many of the MSO had already had the opportunity to engage in some form of treatment relating to their offending behaviour, whereas the FSO had mostly been referred to LFF in order to access treatment. Therefore, the FSO were less likely to have had the opportunity to understand and reflect upon their offending behaviour prior to the LFF assessment.

Finally, the three groups were compared on the sub-scales of the Sexual Abuse Supportive Cognitions scale. In the first part of the study solo and co-offenders were compared on this sub-scale and gender-specific items were included. There were no significant differences found between the two groups on any of the sub-scales, which conveyed that solo and co-offenders develop similar amounts and types of offence-supportive cognitions that enable them to overcome internal obstacles that would usually act to prevent sexual offending.

However, the results differed in the second part of the study when gender-specific items were removed from the analysis. Males and solo offenders were found to be significantly different from co-offenders on the dangerous world sub-scale and males were found to be significantly different from co-offenders on the entitlement sub-scale. This suggests that the gender-specific items removed from the analysis may be particularly relevant for co-offenders and their distortions may often relate to males and specifically their partners. The Beech et al. (2009) and Gannon et al. (2010) studies suggested that the meaning of cognitive distortions found in MSO are different for FSO. However, this study's results identified that the difference in content appears to relate mainly to those FSO who offended with an accomplice. There were no significant differences found between solo offenders and MSO on any of the Sexual Abuse Supportive Cognitions sub-scales, which indicates that these two groups have the presence of similar types of offence-supportive cognitions. It is important to note that the methodology used in this study may have impacted on the results of the analysis conducted on the offence-supportive cognitions sub-scale. The reports contained within the files analysed did not contain assessments specifically focused on identifying the

presence of the specific categories of offence-supportive cognitions. Therefore, greater differences may have been found if for example, interviews were conducted on the three groups of offenders that asked questions to assess each category of offence-supportive cognitions specifically.

Although, this study found similarities between solo and co-offenders key differences were also found that have implications for their assessment and treatment. Important factors to consider for solo offenders relate to their internal resources and difficulties, whereas for co-offenders external factors and difficulties in their environment have been found to be particularly significant. Therefore, when considering treatment strategies for solo offenders it will beneficial to focus on increasing their internal resilience to cope with difficult experiences and reduce their psychological vulnerabilities. They may also benefit from receiving input from mental health services that will support them to manage their mental health difficulties. In contrast, co-offenders may benefit from treatment that focuses on their environment and the negative influences and factors within it. It will be useful to increase their contact with positive support mechanisms and schemes such as Circles of Support and Accountability may be particularly beneficial for them. Important risk management strategies for co-offenders will be monitoring who they are having contact and forming intimate relationships with.

4.5.1 Limitations

There are a number of limitations that impact on the results found in this research. This study used a sample of 40 males and 40 females (20 solo, 20 co-offenders), this is a relatively small sample size which may affect the statistical power of the results.

However, small sizes are a common issue found in the field of FSO research (Oliver, 2007) and as statistical significance was found between the groups in this study it indicates that the analysis was powerful. This is also supported by a G Power analysis that found this research had a power of 74%. However, in order to increase the applicability of these findings it will be important to replicate these results with other samples of FSO.

In addition, data collection was dependent on the quality and amount of information available in the files used and at times this varied. It is also important to note that the information collected was based mainly on LFF professional's clinical interviews with the offenders. Unlike Miller et al's (2009) study there was no method of understanding how the offenders were trying to present themselves and whether the information they described in the interview was accurate. At times the assessments were done as part of child custody/contact cases, so therefore it may be more than likely during these occasions the offender was trying to present themselves in a positive manner.

In addition, this study considered co-offenders as an entire group, rather than separating them into smaller categories depending on whether they had played an active part in the sexual abuse. Wijkman et al. (2010) results identified that co-offenders could be categorised into two different typologies depending on being active or passive in the abuse. Therefore, this appears to be an important distinction between co-offenders. In the future, it will be beneficial to further understand how active or passive co-offenders differ in relation to factors influencing their offending behaviour and their treatment needs.

Table 7 presented the results of statistical tests that was conducted on the demographic information of the three groups. These analyses' identified that the three groups were significantly different on the following factors: referrer to LFF, previous convictions, relationship with the victim and the number of victims. The difference between the number of previous convictions and the three groups was discussed earlier on in this section. This difference indicates that the relevant pathways to sexual offending appear to be different for FSO and MSO, and the anti-social pathway is not apparent in this sample of FSO. A significant difference was also found between the number of victims and the three groups, with co-offenders and MSO found to offend against more victims (2 or more). Solo offenders were more likely to have 1 victim. This again may relate to the relevant pathways to offending for each group, solo offenders appear to form a 'pseudo-relationship' with their victim in order to meet intimacy needs, which indicates that perhaps their offence-supportive cognitions may relate specifically to their victim. MSO were found to score significantly higher on the sexual interest sub-scale in this study, which indicates that perhaps they may have a higher amount of victims because their deviant sexual interest may be more generalised in comparison to solo offenders. The high percentage of 2 or more victims for co-offenders may be related to the *Directed-avoidant* pathway identified by Gannon et al., 2014, in which the FSO is directed and coerced to sexually offend by a male. A co-offenders offending may also be opportunistic, which is based on the amount of victims available to them, rather than them forming a 'pseudo-relationship' with their victim and choosing that victim because of them finding that victim's characteristics particularly desirable. This justification may also relate to the finding that the three groups differed significantly on the relationship with their victim factor, with co-offenders having a high percentage of

victims within their family (intra-familial). MSO and solo offenders had a high percentage of victims outside of their family (extra-familial). It will beneficial in the future to attempt to match the three groups on the victim factors that were found to be significantly different, as these differences may have confounded the significant results found in this study. Vandiver (2006) also found that co-offenders had significantly more victims than solo offenders, and co-offenders had a higher percentage of intra-familial victims than solo offenders. Therefore, these differences may be consistent features of solo and co-offenders, but it will be important to be explore these victim characteristics further in future studies investigating their differences.

The final difference identified between the three groups in Table 7 was the difference in who referred the offender to LFF. A high percentage of the MSO were referred by Family Court services, and as discussed earlier had already engaged with treatment and had progressed through the CJS. Few of the MSO were referred by Criminal Justice agencies, whereas for both solo and co-offenders they were equally referred by Family Court services and the CJS. Solo and co-offenders were more likely than MSO to be referred to LFF for treatment as part of their sentence plan. This difference may have impacted on the offender's reflection and understanding of their offending behaviour in their LFF assessment, but the LFF therapists are highly experienced professionals who use a variety of information to construct their assessment reports and understand the offender's behaviour. However, in the future it will be useful to attempt to match MSO and FSO in terms of what stage of their conviction they are at.

4.5.2 Conclusions

This study has addressed two gaps in the research of FSO. It has identified in what ways solo and co-offenders may be similar and also what factors make them different. Internal difficulties have been found to be more common in solo offenders, whereas external difficulties are more relevant for co-offenders. The study has also identified how solo and co-offenders are different to MSO. Although, all three groups were found to have similar developmental experiences including experiences of abuse and negative parenting, throughout the rest of the framework there were significant differences found between males and both solo and co-offenders. These findings indicate that it is not appropriate to apply assessment tools and treatment programmes developed for MSO to FSO. Tools and programmes that have been established for MSO would need to be adapted in order to accommodate for gender-specific factors found to be relevant for FSO.

Overall, this study's findings may contribute towards the developing field of research on FSO and could have important implications for their assessment and treatment. It will be essential that these findings are further investigated and expanded upon in order to continue to progress knowledge about FSO.

The following chapter will provide an overall discussion of the findings presented within this thesis. It will discuss the aims of the thesis in light of these findings and highlight important areas of future research that could improve the understanding of FSO and their treatment needs.

CHAPTER FIVE: DISCUSSION

This thesis has focused on gaining an up to date understanding of the characteristics present in FSO. It has specifically sought to understand the clinical characteristics common in FSO which will support the development of appropriate treatment strategies for these offenders. The acknowledgement that FSO are a heterogeneous group has been recognised throughout and understanding how FSO can differ has been an aim of this thesis. In considering how FSO can differ and how best to approach their assessment and treatment this thesis has assessed the appropriateness of using male-derived assessment tools with FSO. During this process it has aimed to provide an understanding of how FSO may be different to MSO. It has emphasised the importance of further investigating their differences and taking a gender-specific approach with FSO.

The first aim of this thesis was to investigate and assess current literature identifying the characteristics and differences of FSO. Chapter Two presented a systematic literature review which reported and quality assessed nineteen studies conducted on FSO. Overall, research into FSO quality has improved and knowledge has increased about this type of offender. The most prevalent and empirically supported characteristic found in FSO research was experiencing a negative childhood, including experiences of abuse. FSO were also found to often experience negativity in their adulthood, in terms of intimate partner violence. These characteristics were supported by high quality studies, which enabled definite conclusions about the importance of these factors for FSO. It was difficult to make other firm conclusions about common characteristics in FSO. As although other factors such as mental health difficulties including personality disorders,

depression and anxiety have been researched, inconsistencies were found between studies. Studies have often used different assessment tools and methods to identify such characteristics as present or absent and have not used statistical analysis to support their findings. This makes the importance of these characteristics difficult to determine. Currently, they appear to be a treatment need for FSO, but they do not seem to be characteristics unique to FSO.

In addition, advancements have been made in understanding offence-related treatment needs of FSO. A particular emphasis in recent literature on FSO has focused on gaining an understanding of the offence-supportive cognitions that they can hold. This is a positive progression as offence-supportive cognitions are deemed as an important treatment target for sexual offenders (Ford, 2010). The literature has identified that offence-supportive cognitions found in FSO are gender-specific (Gannon et al., 2009; Gannon & Rose, 2009; Gannon et al., 2010) and can vary depending on whether an offender is a solo or co-offender (Beech et al., 2009). These findings have important implications for the treatment of FSO, but it was recognised that these findings needed to be replicated further using control groups, larger sample sizes and statistical analysis, in order to make further advancements in the understanding of this characteristic and its importance for FSO.

Chapter Two also reviewed the literature that investigated typologies and differences found within FSO. FSO can be considered as a heterogeneous group that have different characteristics and motivations. A particular emphasis in the literature was the difference between those FSO who offend on their own compared with those FSO who

offend with another perpetrator. The acknowledgement of this difference is a requirement in research and clinical work with FSO (Ford, 2010; Gannon & Alleyne, 2013). However, the highest quality studies e.g. those that used larger sample sizes and statistical analysis, mainly focused on the offence and/or victim characteristics of FSO when investigating their differences (e.g. Vandiver & Kercher, 2004; Sandler & Freeman, 2007). This limits their findings practical utility and does not provide an understanding of how their assessment or treatment should be approached differently. Other studies (e.g. Gannon et al., 2008; Wijkman et al., 2010) have begun to address these issues and there is now an initial understanding of how the offence-process may differ for FSO including their motivation and their behaviour throughout their offending. Wijkman et al. (2010) has also looked beyond simply characterising FSO into solo and co-offenders and has identified different typologies for those co-offenders who were active or passive in the abuse. The literature investigating the differences of FSO highlights the need to consider these differences in future work with FSO. However, the knowledge about FSO differences is still developing and future replication using larger sample sizes, statistical analysis and investigating clinical characteristics will support the development of treatment approaches for the different types of FSO.

This thesis also aimed to investigate the appropriateness of using a male-derived assessment tool with FSO. It was noted that some of the research assessed in Chapter Two used tools that were developed for MSO in their research to identify characteristics of FSO. For example, Strickland (2008) used the Cognitive Distortions and Immaturity scale from the MSI-II to identify differences between FSO and non-sexual female

offenders. Ford (2010) suggested that the use of male-derived tools in FSO research hinders the progress of our knowledge about FSO. Cortoni (2010) indicated that it is not appropriate to simply apply male tools to FSO. Therefore, Chapter Three critiqued the CDI scale of the MSI-II on its use with FSO. The CDI scale was found to not be appropriately validated with FSO. It did not meet the scientific requirements of a good test for FSO as identified by Kline (1986). Research investigating the cognitive distortions of FSO has also emphasised the differences of FSO offence-supportive cognitions compared with MSO (Gannon et al., 2010). Therefore, the appropriateness of using the Cognitive Distortions and Immaturity scale or any male-derived scale on FSO is not justified until research investigates the similarities or differences between the two groups.

The final three aims of this thesis were investigated in Chapter Four. Chapter Four presented an empirical paper which compared solo and co-offenders and solo, co-offenders and MSO on a range of clinical characteristics. It made these comparisons using a framework that was developed on FSO and thus avoided the issues recognised with using male-derived tools in FSO research as presented in Chapter Three. Chapter Four firstly aimed to investigate the differences in clinical characteristics between solo and co-offenders. Overall, it identified that these two groups of FSO have similarities, but there are some key differences between their clinical characteristics which have implications for their treatment and management. The statistical comparison between the two groups revealed that their main differences related to the importance of internal or external factors. Internal factors were found to be particularly important for solo offenders. They were found to experience psychological difficulties, including mental

health problems and substance abuse issues and their offending appeared to relate to meeting their internal needs such as: the need for intimacy, the need for power/dominance and the need for revenge. Co-offenders were found to experience more difficulties in their environment. This included having a limited support network that would support them to engage in treatment, having difficulties within their family, in their relationships and associating with criminal peers. These findings highlight how FSO can be different and how aspects of their treatment may need to be approached differently.

Chapter Four also investigated the differences between FSO and MSO by comparing their clinical characteristics. MSO were compared against solo and co-offenders and statistical analysis was used in order to identify their differences and meet this aim of the thesis. It was deemed important to separate the FSO into solo or co-offenders for this comparison, as co-offenders are considered a unique offence factor in FSO (Cortoni, 2010). Therefore, it was felt that this comparison would provide a better understanding of co-offenders and characteristics important for this type of offender.

The findings from this comparison provided further support for Chapter Three's conclusions that it is inappropriate to use male-derived tools with FSO, as well as further emphasising the differences between solo and co-offenders. MSO were found to be significantly different from solo and co-offenders on a variety of scales, but often solo and co-offenders were found to be different from MSO on different scales. This comparison highlighted the importance of internal factors for solo offenders and external factors for co-offenders. A particular difference found between solo and MSO

was on the Interpersonal sub-scale. Solo offenders were found to have greater difficulties relating to forming positive relationships with others. Co-offenders were found to have greater difficulties than MSO on various Environmental Niche Factors sub-scales that relate to having difficulties with their family, in their relationships and living in a negative environment.

MSO were found to be more likely to show sexual interest in children, for example, conveying grooming behaviours in their offending behaviour. Throughout this thesis, the possibility of FSO, in particular solo offender's, sexual motivation in their offending behaviour has been questioned. The result that MSO appear to be sexually motivated and show a sexual interest in children, more so than female's is perhaps not surprising given that female's sexual arousal has been found to have greater fluidity than males (Dawson & Chivers, 2014). Female's sexual desire and arousal has also been identified as showing greater flexibility than males (Dawson & Chivers, 2014). It has also been suggested that female's sexual desire is influenced more so by external factors, such as the development of intimacy rather than internal factors such as sexual pleasure (Baumeister, Catanese & Vohs, 2001). Therefore, FSO offending behaviour may not have been initiated by sexual arousal to their victim, but more so their sexual arousal has developed as a result of them viewing the victim as meeting other needs such as intimacy. This indicates that sexual motivation may not necessarily be as relevant for FSO as it is for MSO. Males were also found to be more generally anti-social than solo and co-offenders having more previous sexual and non-sexual/non-violent convictions. This conveys the differing motivations of MSO and FSO and how their pathways to offending may differ.

However, both MSO and solo offenders were found to have more offence-preceding factors than co-offenders that relate to engaging in sexual offending in order to accommodate their internal needs such as: having a need for intimacy and power/dominance and experiencing low moods prior to the offence. MSO were also found to have more positive factors relating to their views of their offending behaviour and treatment readiness. FSO were found to be significantly different to MSO on a range of clinical characteristics. Co-offenders were found to have more significant differences to MSO than solo offenders, which convey the differing motivations and characteristics of solo and co-offenders. However, it would be important to replicate this result further with a larger sample size, which may find more significant results.

The final aim of this thesis was to investigate offence-supportive cognitions of FSO and compare these to offence-supportive cognitions in MSO. Chapter Two reported the progress that has been made in identifying offence-supportive cognitions in FSO and the importance of replicating and expanding upon the literature's results. Discrepancies were identified between Beech et al. (2009) and Gannon et al. (2010), with Beech et al. (2009) identifying that offence-supportive cognitions found in males can also be found in FSO, but that the content of these cognitions may differ if a FSO has offended with another perpetrator. Gannon et al. (2010) found that offence-supportive cognitions in FSO are gender-specific and the content of male offence-supportive cognitions cannot be applied to FSO. Chapter Four focused on further replicating both Beech et al. (2009) and Gannon et al's (2010) studies by firstly comparing solo and co-offenders on various categories of offence-supportive cognitions. The items that solo and co-offenders were

compared on included gender-specific items such as: males viewed as threatening or men control the actions of women, which account for the findings in Gannon et al. (2009), Gannon and Rose (2009) and Gannon et al's (2010) research. There were no significant differences found between solo and co-offenders on any of the sub-scales within the offence-supportive cognitions scale. This indicates that solo and co-offenders develop similar levels and types of offence-supportive cognitions that influence their offending behaviour.

However, these results differed when gender-specific items were removed for the MSO comparison. Solo and MSO were found to be significantly different from co-offenders on the Dangerous World sub-scale and were found to have higher means on this scale. This suggests that when gender-specific items were removed, co-offenders were less likely to have the presence of non-gender specific distortions. This emphasises that perhaps solo and co-offenders have different offence-supportive cognitions like Beech et al. (2009) found and it supports Gannon et al's (2010) finding that FSO offence-supportive cognitions are gender-specific, but gender-specific cognitions were found to be more relevant for co-offenders in this sample.

MSO were also found to be significantly different from co-offenders on the entitlement sub-scale. Co-offenders were less likely than MSO to have the presence of cognitions relating to them being entitled to engage in sexually abusive behaviour. The entitlement sub-scale also contained gender-specific items that were removed for this comparison such as: men are entitled to sexually abuse and partner's needs are greater than the victims. Again, this conveys that female-specific items may be more relevant for co-

offenders distortions, highlighting the importance of considering the type of FSO and taking a gender-specific approach with FSO. However, in order to clarify this further it would be important to compare the three groups item by item rather than on the overall sub-scales in the Sexual Abuse Supportive Cognitions scale. This will aid the identification of specific offence-supportive cognitions that are more relevant for solo or co-offenders.

Apart from the differences described previously no other differences were found between solo, co-offenders and MSO. The sample size used in this study may have impacted on the findings and with a larger sample size more significant differences may have been found. Chapter Four appears to present the first empirical study that has statistically compared offence-supportive cognitions in FSO and MSO. It will be important to replicate these results in the future in order to provide greater support for the differences between FSO and MSO, and to conclude about what offence-supportive cognitions may need to be targeted in FSO treatment.

This thesis has started to identify important treatment needs of FSO, and specifically solo offenders and co-offenders. However, due to the infancy of such research and lack of empirical support, until these results are further replicated and explored it will be important to take an individualised approach to the treatment of FSO. In addition, the systematic review in this thesis identified that FSO have consistently been found to suffer frequent and severe abuse (physical, emotional and sexual) during their childhood. Trauma has a significant impact on an individual's psychological functioning and mental health (Rousseau & Cortoni, 2010). Individuals who have

experienced trauma during childhood have been found to experience health difficulties in adulthood, such as depression, suicidal ideation and substance use (Carrion & Wong, 2012). Exposure to abuse/trauma during childhood has also been found to impact upon an individual's brain development, which in adulthood can affect impulse control and emotional regulation (Carrion & Wong, 2012). The experience of abuse has also been discussed in relation to FSO specifically, and these experiences have been related to difficulties functioning in the community, the development of maladaptive coping strategies, the development of the woman's sexuality and beliefs about sexual relationships and interpersonal difficulties (Ford & Cortoni, 2008; Ford, 2010).

Therefore, due to the significance of trauma for FSO, it is important for Clinicians to take an individualised approach and consider the impact of the female's abusive experiences in terms of its effect on other treatment needs and also on the development of the therapeutic relationship (Ford, 2010). Depending on the individual, it may be that initially an intervention addressing the individual's experience of trauma and victimisation may make them more amenable in the future to address other treatment needs and their offending behaviour, in particular their role as a perpetrator. It is essential that the females own victimisation is not minimised, but is incorporated into an overall intervention in which the ordering of treatment needs are considered for that individual.

5.1 LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Chapter Two highlighted numerous weaknesses of FSO research and recommended how FSO could develop and progress in the future. The weaknesses of FSO research

included: small sample sizes, lack of standardised measures to identify characteristics and few replications to increase the empirical support of findings. Unfortunately, this research contains similar weaknesses. The study used a FSO developed framework to collect data from FSO files, which Chapter Three's conclusions would suggest as more appropriate than male-derived assessment tools, but this framework is not a standardised measure and it has not been validated. Therefore, in future research it will be beneficial to expand upon the findings of this study by using standardised measures to assess the differences between solo, co-offenders and MSO. Standardised measures may also provide an indication of the severity of a problem for solo and co-offenders, for example using a tool that assesses depression will identify the level of a problem rather than simply identifying whether the problem was present or absent as in this study.

This study may have also provided a better indication of the differences between the groups if it compared the groups on individual items rather than scales/sub-scales totals. This may have identified specific differences and provided a clearer indication of offender needs to be addressed in treatment. In the future it would be useful to replicate this study with an increased sample size that would increase the statistical power of the analysis and allow for such specific comparisons.

Although, this study can be identified as having similar criticisms to other studies in FSO literature, where possible it has attempted to overcome weaknesses. For example, this study used statistical analysis to compare the differences between the three groups. The use of statistical analysis in the field of FSO was identified in Chapter Two as

lacking. Reporting descriptive data is useful in research, but it limits the findings empirical support. In addition, this study did not use a standardised measure that could be identified as being a reliable and valid tool, but assessing inter-rater reliability for the data collection indicated that the framework extracted data in a reliable and consistent manner. Replicating this study and its aims may lead to understanding assessment and treatment of FSO in the future.

Furthermore, it will be also be beneficial to categorise FSO further in order to assess whether there are other categories of FSO. This study categorised FSO into solo and co-offenders, however Wijkman et al. (2010) found evidence for four groups of FSO including an active and passive co-offender group. Accounting for the differences between co-offenders may highlight other differences between solo and co-offenders, including how the relevance of types of offence-supportive cognitions may differ.

5.2 CONCLUSIONS

This thesis has identified that the field of FSO research is a developing field that in recent years has made progress in understanding FSO. It has identified ways in which research can be improved and how the empirical support of methodologies and results can be increased. It has also attempted to address gaps in the knowledge of FSO by investigating characteristics that could support the development of treatment strategies and aid the clinical work of practitioners working with FSO.

This thesis has recognised that FSO are a heterogeneous group and that there may be important differences in the treatment needs of solo and co-offenders. In addition, this

thesis has emphasised the differences between FSO and MSO and highlighted the inappropriateness of using male-derived assessment measures and treatment approaches with FSO. It has conveyed the importance of taking a gender-specific approach when researching, assessing and when working practically with FSO.

FSO research is still substantially behind the developed field of MSO. It is important that researchers continue to target gaps in FSO research and consider investigating factors that will support professionals working practically with FSO. This thesis has attempted to add to the field of FSO and emphasises the need that this continues.

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APPENDICES

APPENDIX 1

Syntax

Psychinfo (1967-2012)

1. Exp Female Criminals/
2. ("sex* offen*" or "sex* abuse" or p?dophil* or "child* molest*" or "sex* assault").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
3. 1 and 2
4. (femal* or woman or women).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
5. 2 and 4
6. "femal* sex* offen*".mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
7. 5 and 6

Embase (1974-2012)

1. child sexual abuse/ or sexual abuse/ or sexual crime/ or sexual deviation/
2. (femal* or woman or women).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
3. 1 and 2
4. "femal* sex* offen*".mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]

Ovidmedline (1946-2012)

1. child sexual abuse/ or sexual abuse/ or sexual crime/ or sexual deviation/

2. (femal* or woman or women).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
3. 1 and 2
4. "femal* sex* offen*".mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]

Web of Science (all years)

1. Topic=((female or woman or women) NEAR/3 "sex* offen*")
   DocType=All document types; Language=All languages;
2. Topic=((female or woman or women) NEAR/3 ("sex* offen*" or "sex* abuser*" or p?deophil*))
   DocType=All document types; Language=All languages;
3. Topic=((female or woman or women) NEAR/3 ("sex* offen*" or "sex* abuse*" or p?deophil*))
   DocType=All document types; Language=All languages;
4. Topic=((female or woman or women) NEAR/3 ("sex* offen*" or "sex* assault*" or "sex* abuse*" or p?deophil*))
   DocType=All document types; Language=All languages;
5. Topic=(female NEAR/2 "sex* offen*")
   DocType=All document types; Language=All languages;
6. Topic=("female sex* offen*")
   DocType=All document types; Language=All languages;
7. Topic=((female or woman or women) NEAR/3 "sex* offen*")
   DocType=All document types; Language=All languages;

Applied Social Sciences Index and Abstracts (all years)

1. *all((female OR woman OR women) NEAR/3 "sex* offen*")*
2. ("femal* sex* offen*")
3. *all((female OR woman OR women) NEAR/3 "sex* offen*"*

APPENDIX 2

A list of references the author used to source additional FSO research:

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APPENDIX 3

Inclusion/Exclusion Form

Inclusion/Exclusion Criteria	Yes (included)	No (excluded)
Was the study published after 1989?		
Is the paper a research paper?		
Is the paper written in English?		
Is the sample size larger than 10?		
Does the study investigate FSO?		
Are all of the FSO in the sample above the age of 18? Or are the adult FSO separated from results of those aged below 18?		
If the study also includes male sex offenders within the sample, are the FSO results separated from the results of the males?		
Do the studies aims/objectives include investigating the characteristics and/or the typologies of FSO?		

APPENDIX 4

Data Extraction and Quality Assessment Form

The shaded items of the form represent those items which were used to quality assess the studies and which the studies received a score on.

Factors	**Information**	**Yes**	**No**	**Partial (if cell is shaded, partial score is not included for that item)**
1. General Information				
1.1 Reference ID				
1.3 Author				
1.4 Title				
1.5 Year				
1.6 Type of publication				
1.7 Country of origin				
2. Study Characteristics				
2.1 Aims/Objectives of the study				
2.2 Design				
2.3 Study inclusion/exclusion criteria				
2.4 Number of participants				
2.5 How has the study defined a sexual offence?				
3. Participant characteristics				
3.1 Age				

3.2 Gender				
3.3 Drop-outs/ or missing information?				
3.4a How have participants been selected?				
3.4b Did they use a reliable system to select participants, which would avoid selection bias?				
3.4c Were the participants clearly defined?				
3.4d Did they conduct a power calculation?				
4. Sample Representation				
4.1 Does the sample represent a large range of ages?				
4.2 Does the sample represent varying ethnicities?				
4.3 Has the sample been selected from a variety of settings?				
4.4 Does the sample represent a variety of sexual offences?				
5. Method				
5.1a Did the study use				

qualitative or quantitative measures?				
5.1b How did the study collect data?				
5.1c Did they analyse information from a variety of sources?				
5.2a Has the study used any tools in their design?				
5.2b Has the study justified their use of this tool?				
5.2c Is the tool reliable?				
5.3a Has the study considered offence characteristics?				
5.4 Does the study consider a diverse range of factors?				
5.5a Does the study have a comparison group?				
5.5b Is the comparison group matched to the researched group?				
5.6 Did all of the participants complete all of the assessments?				
5.7a Has the study used methods to ensure				

inter-rater reliability?				
5.7b Is inter-rater reliability statistically supported?				
5.8a Has the study identified any confounding variables or factors that may affect the results of the study?				
5.8b Has the study accounted for the confounding variables or factors that may affect the results of the study?				
5.9 Has the study investigated typologies in FSO?				
5.9a What factors has the study used to identify typologies?				
5.9b Has the study included a variety of variables to distinguish typologies?				
5.9c Have they used statistical methods to combine the data and identify typologies?				
5.10 Are the methods appropriate to meet the				

studies objectives?				
6. Results				
6.1a Has the study used an objective means to analyse the data?				
6.1b Has the study used statistics to analyse the data?				
6.2a What characteristics has the study identified?				
6.2b What typologies has the study identified?				
7. Conclusions				
7.1a What are the study's conclusions?				
7.1b Do the results justify the conclusions?				

APPENDIX 5

CHAPTER FOUR: ADDITIONAL RESULTS: POST-HOC ANALYSIS AND DESCRIPTIVE RESULTS

Study 1: Investigating the Differences between Solo and Co-offenders

It was hypothesised that there would be significant differences found between solo and co-offenders on the following scales: developmental factors, psychological dispositions, environmental niche factors, offence-preceding factors and positive factors. Table 10 which is presented in Chapter Four, contains the results of the statistical analysis.

There were no significant differences found between solo and co-offenders overall on the *Developmental Factors* and *Psychological Dispositions* scales. There were also no significant differences found between solo and co-offenders on any of the sub-scales contained within these main scales.

Table 10 highlights that there was a significant difference found between solo and co-offenders on the *Environmental Niche Factors* scale Pillai's Trace = .33, F (1, 38) = 3.41, $p < .05$, $p\eta^2 = .33$. Solo offenders were found to have significantly greater scores on the *Personal (distal)* sub-scale than co-offenders. This indicates that solo offenders were more likely to have the presence of depression and other mental health difficulties, sexual dissatisfaction and substance abuse. There were not any significant differences on the other sub-scales included within the *Environmental Niche Factors* scale.

Solo and co-offenders were also found to have significant differences on the *Offence-preceding Factors* scale Pillai's Trace = .35, F (1, 38) =9.93, $p < .05$, $p\eta^2 = .35$. Solo

offenders had the presence of significantly more items on the personal factors sub-scale. This indicates that solo offenders were more likely to experience negative mood states and the need for intimacy, power/dominance prior to their offending behaviour.

However in contrast, on the *Environmental* sub-scale co-offenders scored significantly higher. This indicates that co-offenders were more likely to experience factors in their environment which may influence their offending behaviour, for example, associating with criminal peers.

Finally, a significant difference was found between solo and co-offenders on the Positive Factors scale Pillai's Trace = .27, F (1, 38) = 3.16, $p < .05$, $p\eta^2 = .23$. Solo offenders were found to have significantly more Treatment Supportive Factors. This suggests that solo offenders are more likely to have factors in their life that would support their engagement in treatment, this includes: having a supportive family and/or partner and being in a safe/supportive environment that supports change.

It was hypothesised that there would be a significant difference found between solo and co-offenders on their presence of offence-supportive cognitions. However, overall there were no significant differences found between solo and co-offenders on the *Sexual Abuse Supportive Cognitions* sub-scale Pillai's Trace = .11 F (1, 38) = .65, $p > .05$, $p\eta^2 = .11$. There were no significant differences found between solo and co-offenders on any of the sub-scales, which suggests solo and co-offenders have similar amounts of categories of offence-supportive cognitive distortions. For descriptive information about the percentage of cognitive distortions for each category found in solo and co-offenders please refer to Table 13.

Table 13: Percentage of each sexual abuse supportive cognition found in solo and co-offenders and in the overall sample

Type of Cognition	Solo (%)	Co-offender (%)	Total (%)
Children as sexual beings			
Child able to initiate / consent to sexual contact	60	40	50
Abuse child's fault / not adult's fault	55	30	43
Child given adult characteristics	55	45	50
Nature of harm			
Abuse as 'love' or 'affection'	40	25	33
Child thought to enjoy abuse	55	40	48
Abuse not seen as sexual	10	25	18
Abuse not seen as harmful	55	50	53
Female abuse not as harmful as male	0	0	0
Entitlement			
Own needs greater than victim's	55	35	45
Partner's needs greater than victim's	0	70	35
Men are entitled to sexually abuse	0	20	10
Objectification of children	10	10	10
Child is mine/ownership over child	10	5	8
Child is part of me/enmeshment	10	5	8
Dangerous world			
Child seen as sexual threat to mother	0	10	5
Child safer / easier than adult	45	5	25

Type of Cognition	Solo (%)	Co-offender (%)	Total (%)
Males viewed as threatening	25	35	30
Mistrust/belief that others will lie/manipulate me	5	5	5
Uncontrollable			
Abusive behaviors uncontrollable	35	35	33
External factors blamed	75	75	75
Abuse is 'all I know'	10	5	8
Men control actions of women	5	35	20
Other directedness			
Abandonment/expect others will leave	15	25	20
Expect lack of emotional support	55	35	45
Defectiveness and shame/feeling that one is bad/inferior/unlovable	20	30	25
Self as victim	45	45	45
Social isolation/feeling that one is alone/does not belong	60	35	48

Study 2: Investigating the Differences between Solo, Co- and Male offenders.

The results from the first part of the study indicated that on certain clinical characteristics solo and co- FSO differ. The second part of the study aimed to investigate the differences between MSO and both female solo and co-offenders. It was hypothesised that there would be significant differences between MSO and both female solo and co-offenders on the following scales: Developmental Factors, Psychological Dispositions, Environmental Niche Factors, Offence-preceding Factors and Positive

Factors. Table 11 which is presented in Chapter Four, contains the results of the statistical analysis.

Developmental Factors

Overall, there were no significant differences found between solo, co- and MSO on the *Developmental Factors* scale Pillai's Trace = .21 F (2, 77) = 1.404, $p > .05$, $p\eta^2 = .10$. Table 11 also identifies that there were no significant differences found between any of the groups on the sub-scales included within developmental factors. Games-Howells post-hoc tests did not reveal any significant differences between the groups on any of the sub-scales.

Psychological Dispositions

On the *Psychological Dispositions* scale a significant difference was found between solo, co- and MSO Pillai's Trace = .29 F (2, 77) = 3.161, $p < .05$, $p\eta^2 = .14$. A significant difference was also found between the groups on the *Interpersonal* sub-scale, *Self- management/ Self-regulation* sub-scale and the *Sexual Interest/Self-regulation* subscale, however there was no significant difference found between the groups on the *Sexual Abuse Supportive Cognitions* sub-scale.

Games Howells post-hoc tests revealed that on the *Interpersonal* sub-scale solo and MSO (MD =1.20, 95%, CI .29 to 2.11) were significantly different ($p = .007$). Table 11 indicates that solo offenders were more likely to have the presence of items such as: low self-esteem, low assertiveness and emotional loneliness/social isolation. There were no other significant differences found between the three groups on this scale.

Games- Howells post- hoc tests did not find any significant differences between the three groups on the *Sexual Abuse Supportive Cognitions* sub-scale. However, on the *Self-management/Self-regulation* sub-scale Games-Howells post-hoc tests found that male and co-offenders (MD= .93, 95%, CI .28 to 1.57) were significantly different (p = .003). Co-offenders were more likely to have the presence of items that include: high levels of impulsivity and inability to cope with negative emotions. There were no other significant differences found between the three groups on this scale.

On the *Sexual Interest/Self-regulation* sub-scale Games Howells post-hoc tests found that male and co-offenders (MD= 1.80, 95%, CI .20 to 3.40) were significantly different (p = .025). Males were found to have greater presence of items on this scale, such as: child viewed as ideal sexual partner and sadistic/humiliation elements to abuse. There were no other significant differences found between the three groups on this scale.

Environmental Niche Factors

Table 11 identifies that overall on the *Environmental Niche Factors* scale a significant difference was found between the three groups Pillai's Trace = .53 F (2, 77) = 5.384, p < .001, $p\eta^2$ = .27. There was also a significant difference found on all five of the sub-scales: *Personal (distal), Offending history, Relationship Factors*, *Family Factors* and *Proximal Factors*.

Games-Howells post-hoc tests found that on the *Personal (distal)* sub-scale, solo and MSO (MD= .82, 95%, CI .08 to 1.57) were significantly different (p = .026). Solo and

co-offenders (MD= 1.20, 95%, CI .33 to 2.07) were also found to be significantly different (p= .005). Solo offenders were found to have the presence of more items on this scale than both males and co-offenders. This scale includes items such as: sexual dissatisfaction, depression and substance abuse. There were no significant differences found between males and co-offenders on this subscale.

On the *Offending History* sub-scale Games-Howells post-hoc tests revealed that males and solo offenders (MD= .20, 95%, CI -.20 to .60) were significantly different (p = .021) and males and co-offenders (MD= .75, 95%, CI .33 to 1.17) were significantly different (p < .001). Males had greater presence of items on this sub-scale such as: previous sexual offences and previous non-violent/non-sexual convictions. There were no other significant differences found between the three groups on this subscale.

Games-Howells post-hoc tests found that on the *Relationship Factors* sub-scale co-offenders and male offenders (MD= .75, 95%, CI .23 to 1.27) were found to be significantly different (p = .003). Co-offenders were found to have a greater presence of items on this sub-scale such as: series of unstable relationships and previous exploitive and/or abusive relationships. There were no other significant differences found between the three groups on this sub-scale.

On the *Family Factors* sub-scale Games-Howells post-hoc tests found that co-offenders and male offenders (MD= 1.30, 95%, CI .49 to 2.11) were significantly different (p = .001). Co-offenders were found to have a greater presence of items on this sub-scale which includes items such as: unstable family life and family stressors (e.g. debts). There no other significant differences found between the three groups on this scale.

On the *Proximal Factors* sub-scale Games-Howells post-hoc tests revealed that co-offenders and male offenders (MD= 1.50, 95%, CI .50 to 2.50) were significantly different (p = .003). Co-offenders had a greater presence of items on this sub-scale which include items such as: social group predominantly pro-criminal and possessive/violent partner. There were no other significant differences found between the three groups on this sub-scale.

Offence-preceding Factors

Overall on the *Offence-preceding Factors* scale a significant difference was found between the three groups Pillai's Trace = .31 F (2, 77) = 7.128, p < .001, $p\eta^2$ =.16. Table 11 also identifies that a significant difference was found between the groups on both of the sub-scales: *Personal Factors* and *Environmental Factors*.

Games-Howells post-hoc tests found that solo and co-offenders (MD= 2.00, 95%, CI .62 to 3.38) were significantly different (p= .003) on the *Personal Factors* sub-scale. Solo offenders were more likely to have the presence of items on this sub-scale such as: negative mood states and need for intimacy. The Games-Howells post-hoc tests also found that males and co-offenders (MD= 1.90, 95%, CI .66 to 3.16) were significantly different on this sub-scale. Males were more likely to have the presence of items on this sub-scale. There were no significant differences found between solo and male offenders on this sub-scale.

On the *Environmental Factors* sub-scale Games-Howells identified that there was a trend between co-offenders and male offenders (MD= .62, 95%, CI -.09 to 1.34) but this result was not significant (p= .095). Co-offenders appear to be scoring higher on this sub-scale indicating that they had the presence of items such as: involvement with

known offenders and others simultaneously abusing victim. There were no other significant differences found between the three groups on this scale.

Positive Factors

A significant difference was found between the three groups on the *Positive Factors* scale Pillai's Trace = .42 F (2, 77) = 4.905, $p < .001$, $p\eta^2 = .21$. Table 11 highlights that there was also a significant difference found on three of the sub-scales including: *Personal Factors*, *Treatment Readiness* and *Treatment Supportive*, but not on the *Contextual* sub-scale.

Games-Howells post-hoc tests found that on the *Personal Factors* sub-scale male and solo offenders (MD= 4.65, 95%, CI 1.93 to 7.37) significantly differed ($p< .001$) and male and co-offenders (MD= 4.85, 95%, CI 2.13 to 7.57) significantly differed ($p< .001$). Male offenders were found to have significantly more positive personal factors items such as: awareness of consequences of behavior and demonstrates remorse/empathy. There no significant differences found between solo and co-offenders on this scale.

Games- Howells post-hoc tests did not reveal any significant differences between any of the three groups on the *Contextual* sub-scale. However, on the *Treatment Readiness* sub-scale Games-Howells post-hoc tests found that there was a trend between male and solo offenders (MD= .68, 95%, CI -.02 to 1.37) but not a significant difference ($p= .059$). It appears that male offenders were more likely than solo offenders to have the presence of items indicating they were ready for treatment including: open about offending behavior and motivated to engage in treatment. There were no significant

differences found between male and co-offenders or solo and co-offenders on this sub-scale.

On the *Treatment Supportive* sub-scale solo and co-offenders (MD= 1.10, 95%, CI (.04 to 2.16)) were found to be significantly different (p= .041). Males and co-offenders (MD= 1.22, 95%, CI .20 to 2.25) were also found to be significantly different (p = .016). Co-offenders were less likely to have the presence of items that would indicate they had the presence of factors that would support treatment engagement such as: partner/family acceptance of treatment plan and safe/supportive environment to change. There were no significant differences found between male and solo offenders on this scale.

Sexual Abuse Supportive Cognitions

The *Sexual Abuse Supportive Cognitions* sub-scale was explored further in order to identify whether there were any differences between the three groups on the following sub-scales (categories of offence-supportive cognitions): child as sexual being, nature of harm, entitlement, dangerous world, uncontrollable and other directedness. Table 12 contains the results of the statistical analysis. For descriptive information about the percentage of cognitive distortions for each category found in male, solo and co-offenders please refer to Table 14.

Overall, there was a significant difference found between the three groups on the *Sexual Abuse Supportive Cognitions* sub-scale Pillai's Trace = .33 F (2, 77) = 2.428, $p < .05$, $p\eta^2$ =.17. A significant difference was not found between the three groups on the *Child as Sexual Being*, *Nature of Harm, Uncontrollable* and the *Other Directedness* sub-scale.

However, a significant difference was found between the three groups on the *Entitlement* and *Dangerous World* sub-scale.

Games-Howells post-hoc tests revealed that there were no significant differences between the three groups on the *Child as Sexual Being*, *Nature of Harm*, *Uncontrollable* and *Other Directedness* sub-scales. However, males and co-offenders (MD= .80, 95%, CI .23 to 1.37) were found to be significantly different (p= .004) on the *Entitlemen*t sub-scale. Males were found to have the presence of more distortions relating to the entitlement category including items such as: the child is mine/ownership over child and own needs greater than victims. There were no other significant differences found between the three groups on this sub-scale.

In addition, the Games-Howells post-hoc test found that solo and co-offenders (MD= .40, 95%, CI .02 to .78) were significantly different (p= .036) and male and co-offenders (MD= .65, 95%, CI .32 to .98) were also found to be significantly different (p<.001) on the *Dangerous World* sub-scale. There no significant differences found between males and solo offenders. Males and solo offenders were more likely to have the presence of offence-supportive cognitions relating to the dangerous world category, these include items such as: child easier/safer than adults and mistrust/others will lie/manipulate me.

Table 14: Percentage of each Sexual Abuse Supportive Cognition found in solo, co-offenders, FSO as an overall group and MSO

	Females			Males
Type of Cognition	Solo (%)	Co (%)	Total (%)	(%)
Children as sexual beings				
Child able to initiate / consent to sexual contact	60	40	50	68
Abuse child's fault / not adult's fault	55	30	43	33
Child given adult characteristics	55	45	50	58
Nature of harm				
Abuse as 'love' or 'affection'	40	25	33	20
Child thought to enjoy abuse	55	40	48	48
Abuse not seen as sexual	10	25	18	25
Abuse not seen as harmful	55	50	53	78
Entitlement				
Own needs greater than victim's	55	35	45	68
Objectification of children	10	10	10	45
Child is mine/ownership over child	10	5	8	13
Child is part of me/enmeshment	10	5	8	3
Dangerous world				
Child safer / easier than adult	45	5	25	35

	Females			Males
Type of Cognition	Solo (%)	Co (%)	Total (%)	(%)
Mistrust/belief that others will lie/manipulate me	5	5	5	40
Uncontrollable				
Abusive behaviors uncontrollable	35	30	33	23
External factors blamed	75	75	75	50
Abuse is 'all I know'	10	5	8	5
Other directedness				
Abandonment/expect others will leave	15	25	20	18
Expect lack of emotional support	55	35	45	18
Defectiveness and shame/feeling that one is bad/inferior/unlovable	20	30	25	20
Self as victim	45	45	45	38
Social isolation/feeling that one is alone/does not belong	60	35	48	38