An exploration of intimate partner violence, stalking and image-based sexual abuse in intimate relationships

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Thesis Abstract

This thesis provides an original contribution to the literature by exploring the intersection between intimate partner violence (IPV), stalking and image-based sexual abuse (IBSA). The overall aim is to improve the current understanding and knowledge of the relationship between these behaviours and likely characteristics of such perpetrators as the overlap between IPV, stalking and IBSA is yet to be adequately understood. Considering the risk of individuals engaging in multiple types of abusive or controlling behaviours in intimate relationships, it is important to understand the characteristics and factors that underpin the perpetration of these offences. This insight could contribute to how practitioners understand and manage such perpetrators through assessment and intervention. A range of methods were used, including a systematic review, two empirical research studies and a psychometric critique.

Following an introduction in Chapter One which provides a general overview of the literature and aims of the thesis, Chapter Two contains a systematic review of the literature on the prevalence and characteristics of co-occurring IPV and stalking perpetration. The results of this review indicate that there are variables which differentiate perpetrators who engage in co-occurring IPV and stalking perpetration from IPV-only or stalking-only perpetrators. However, these findings are impacted upon by definitional and methodological problems which highlights the need for further high-quality research.

Chapter Three examines whether there is an association between the propensity to engage in IPV, stalking and IBSA. The results provide support for the association between these three behaviours. Chapter Four investigates whether a number of identified variables (aversive and general personality traits, attachment style and moral disengagement) are associated with IBSA proclivity.

The results highlighted that Machiavellianism, openness to experience, moral disengagement and attachment anxiety were significant predictors of greater IBSA proclivity.

Chapter Five evaluates the reliability and validity of the Propensity for Abusiveness Scale (PAS, Dutton, 1995), which was used as a measure in Chapter Three. The outcome of this critique was that the PAS is a highly reliable and valid tool for assessing the propensity towards IPV perpetration, due to its focus on reducing socially desirable responding and validation across a wide range of populations. Finally, Chapter Six draws together the findings from each chapter, and discusses the overall implications of the thesis for research and practice, along with recommendations for future research.

Authorship Declaration

Research included in this thesis has been presented at the following conferences:

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Chapter One: Introduction

1.0 Introduction

This thesis provides an original contribution to the literature by exploring the intersection between intimate partner violence (IPV), stalking and image-based sexual abuse (IBSA). The overall aim is to improve the current understanding and knowledge of the relationship between these behaviours and likely characteristics of such perpetrators as the overlap between IPV, stalking and IBSA is yet to be adequately understood. This chapter provides a general introduction to the research explored by this thesis, including an overview of IPV, stalking and IBSA. This includes issues concerning definitions, prevalence rates, theoretical frameworks and typologies. The rationale and aims of the thesis are then explained, in addition to summarising the structure of chapters within the thesis.

1.1 Intimate partner violence

IPV has been recognised as a societal issue of significant magnitude since the mid-1970's in the context of the feminist movement which sought to address inequality towards women (Dobash & Dobash, 1979; Straus, Gelles & Steinmetz, 1981). Since then, the extent of literature regarding IPV victimisation and perpetration has grown exponentially. Several terms are used interchangeably across the literature to describe IPV, including domestic violence and domestic abuse. Consequently, there has been a lack of consensus regarding what behaviours comprise IPV, which has resulted in a lack of consistent terminology in the literature to describe abusive behaviours (Dixon & Graham-Kevan, 2011). Whereas domestic violence refers to any form of violence that occurs within the

family, the focus of this thesis is violence towards intimate partners. There are numerous existing definitions of IPV which address the range of abusive behaviours that comprise IPV, including the presence of physical violence, sexual aggression, psychological abuse and controlling behaviours by a current or former partner (Dixon & Bowen, 2012).

Clarification about the true prevalence of IPV remains difficult as a result of the heterogenous definitions and methodologies across studies. According to the Crime Survey for England and Wales (CSEW; 2018/2019), it was estimated that 5.7% (2.4 million) of adults between 16 and 74 years old (1.6 million females and 786,000 males) experienced domestic abuse in the year prior (Office for National Statistics; ONS, 2019). However, these figures cover a range of offences and victim types that constitute domestic violence, and does not clarify what percentage of these cases occurred within the context of an intimate relationship, as opposed to within the family home.

The CSEW reported that an estimated 8.9 million adults aged 16 to 74 years had experienced domestic abuse since the age of 16. Although this equates to a prevalence rate of roughly 21 in 100 adults, in terms of abuse specifically within intimate relationships, 17.6% of adults reported experiencing partner abuse since the age of 16, including physical violence, emotional/financial abuse, threats, sexual assault or stalking (ONS, 2019). A strength of these figures are that they include incidents that are not reported to the police which reflects a more reliable estimate of the actual prevalence of IPV incidents. This is due to the high rates of incidents which remain undetected by criminal justice agencies as a result of underreporting by victims (Bowen, 2011).

A further issue in reported rates of IPV is that many nationally representative samples are employed in study designs that adopt a feminist

perspective of IPV and therefore focus on male perpetration and female victimisation, which overlooks the rates of abuse perpetrated against male victims (Dixon & Bowen, 2012). It is also possible that males are less likely to view their experiences of victimisation as aggressive or violent, which may also impact on the accuracy of reporting (Povey, Coleman, Kaiza, Hoare & Jansson, 2008). Regardless, the magnitude of reported IPV incidents highlights the extent of it as a social problem that needs addressing in order to reduce rates of prevalence.

Throughout this thesis, IPV is defined as '…any form of aggression and/or controlling behaviours used against a current or past intimate partner of any gender or relationship status' (Dixon & Graham-Kevan, 2011, p. 1). This definition encompasses a range of abusive and threatening behaviours and specifies the relationship context, which is important as the focus of this thesis is of IPV behaviours (including physical violence, sexual aggression, emotional abuse, psychological abuse and controlling behaviours) in the context of current or previous partners in a current or previous intimate relationship.

In recent years, greater consideration has been given to coercive and controlling behaviours within a continuum of IPV. Coercive control is a concept developed by Stark (2007) to explain how perpetrators use a pattern of behaviour and tactics over time to dominate an intimate partner through violence, isolation, intimidation and subordination. The concept of coercive and controlling behaviour highlights the intrusive and hidden aspects of IPV that have largely been overlooked within the legal context. It recognises a wide range of abusive behaviours that are repeated and long-term, asides from physical violence, which can impact on a victim's daily life (Walklate & Fitz-Gibbon, 2019). The intention of such behaviours are to undermine an individual's sense of independence and

autonomy by exploiting them, isolating them from support networks and regulating their daily behaviour.

In 2013, the Home Office extended the definition of IPV to include the concept of coercive control (UK Home Office, 2013). The new definition stated that coercive control included "Any incident or pattern of incidents of controlling, coercive or threatening behaviour, violence or abuse between those aged 16 or over who are or have been intimate partners or family members regardless of gender or sexuality" (UK Home Office, 2013). This led to England and Wales introducing coercive or controlling behaviour in an intimate or family relationship as a new criminal offence in 2015, through Section 76 of the Serious Crime Act 2015 (Stark, 2016). This revised definition and new legislation recognises the multidimensional nature of IPV, which is better understood as involving a pattern of behaviours occurring over time instead of being an isolated incident (Stark, 2007).

The significance of this development in the legal and criminal justice system (CJS) is that it does not exclude the multiple non-physical forms of abuse that often occur alongside the physical or more visible forms of violence within intimate relationships (Wangmann, 2020). This signifies a positive shift in closing the gap between the traditional response of the CJS and how IPV is experienced by victims, by better capturing the context, range and harms of IPV behaviours. For instance, Dichter, Thomas, Crits-Christoph, Ogden and Rhodes (2018) found that coercive control was associated with higher rates of physical, psychological and sexual violence victimisation. This highlights the seriousness of this form of IPV, irrespective of whether victims experience other types of IPV, and the need for coercive and controlling behaviours to be taken into account when working with both perpetrators and victims of IPV. However, as the changes in the way that

IPV is understood and legislated are relatively recent, our understanding of the occurrence and context of coercive and controlling behaviours are more limited in comparison to the current knowledge around physical and sexual violence (Sleath, Walker & Tramontano, 2018).

In considering the intersection between IPV and stalking it may be helpful to consider both IPV and stalking typologies, as there could be overlapping constructs between the two behaviours which are not captured across typologies that explain only one of the behaviours. Typologies have been developed to classify types of IPV and stalking perpetration depending on the differences and similarities in patterns of behaviours, motivations and characteristics of perpetrators. Although the application of the typologies have thus far been limited to IPV and stalking, it is possible that features of IBSA perpetration could also be accounted for using these typologies. This will be considered in Chapter Six of the thesis.

1.2 IPV typologies

Empirical research has identified typologies of IPV offenders which highlights the importance of heterogeneity when it comes to understanding, assessing and managing IPV offenders (Walsh *et al*., 2010). Holtzworth-Munroe and Stuart (1994) proposed a three-dimension approach for differentiating between IPV perpetrators, based on severity of violence, generality of violence and psychopathology. From this Holtzworth-Munroe and Stuart (1994) identified three types of IPV perpetrators: family only, generally violent/antisocial and dysphoric/borderline. These typologies were proposed to account for 50%, 25% and 25% of IPV perpetrators in the community, respectively (Dixon & Bowen, 2012).

The family only perpetrator tends to limit their violence to family members and engages in the least severe acts of IPV, with these perpetrators being least likely to engage in violence outside the home or experience psychopathology. Use of violence is usually associated with dependency on a partner, mild impulsivity, substance misuse, poor communication skills with partner and some exposure to family violence in childhood (Dixon & Bowen, 2012). Family only perpetrators are thought to be the least likely to engage in psychological and sexual abuse (Holtzworth-Munroe & Stuart, 1994).

The generally violent/antisocial perpetrator engages in moderate to severe violence towards victims, and possess multiple risk factors that increase their propensity to violence within and outside the family (Holtzworth-Munroe & Stuart, 1994). They are believed to have an extensive history of criminal behaviour, exposure to violence in childhood, substance misuse, low levels of empathy and psychological distress, moderate anger, dismissive attachment styles, poor conflict resolution skills, antisocial personality disorder or psychopathy (Dixon & Bowen, 2012). Generally violent/antisocial perpetrators are likely to use IPV as a strategy for maintaining or regaining control in situations where they feel rejected or disrespected.

The dysphoric/borderline perpetrator tend to also engage in moderate to severe violence towards victims, including psychological and sexual abuse. Their violence is primarily acted out against the family but there may be some evidence of violence and criminality outside the family (Holtzworth-Munroe & Stuart, 1994). This subgroup of perpetrators tends to experience the highest levels of psychopathology, including depression, psychological distress, emotional volatility, anger, substance misuse, borderline personality traits and fearful or preoccupied attachment styles (Dixon & Bowen, 2012). It is also suggested that

they have experienced violence in childhood, involvement with deviant peers, impulsivity, pro-violence attitudes, hostility towards women and low communication skills with partners. Thus, they will likely engage in IPV when feeling angry in the context of perceived slights, rejection or abandonment (Dixon & Bowen, 2012). Ruptures in the relationship or threats of separation could lead to this subgroup of perpetrators progressing to stalking or harassment as a means of maintaining or re-establishing the relationship. Indeed, this group of IPV perpetrators are considered to be most alike stalkers who engage in stalking behaviours against intimate partners (Douglas & Dutton, 2001).

Holtzworth-Munroe *et al*. (2000) later added a fourth category to this typology: low-level antisocial. This subgroup of perpetrators tends to exhibit less violence but higher levels of antisocial personality features.

The typologies proposed by Holtzworth-Munroe and Stuart (1994) have received empirical support and validation in male IPV offenders (Boyle, O'Leary, Rosenbaum & Hassett-Walker, 2008; Holtzworth-Munroe & Meehan, 2004; Huss & Langhinirichsen-Rohling, 2006). Although there has been less attention given to the applicability of these typologies to female IPV offenders, some research has provided tentative support for these subgroups in relation to female IPV offenders (Babcock, Miller & Siard, 2003; Walsh *et al*., 2010).

An alternative influential IPV typology was proposed by Johnson (2006) which conceptualises IPV heterogeneity into four categories: situational couple violence, mutual violent control, intimate terrorism, and violent resistance. The differentiation between each category is the frequency and nature of control associated with the use of violence by either one or both intimate partners (Nybergh, Enander & Krantz, 2016).

Situational couple violence is driven by a perpetrator having a physical reaction to frustration or anger, rather than control (Gulliver & Fanslow, 2015). Such violence usually occurs in the context of arguments and conflict between partners. Mutual violent control occurs when both partners are violent and controlling towards one another. Intimate terrorism occurs when the predominant perpetrator engages in IPV to gain control over their partner (Johnson, 2006). This type of violence is often severe, more frequent and escalates over time (Kelly & Johnson, 2008). Violent resistance refers to the victim of violence responding to intimate terrorism with violence in order to protect themselves from an abusive partner (Gulliver & Fanslow, 2015).

Previous research (Cavanaugh & Gelles, 2005; Johnson, 2006) has explored the overlap between Holtzworth-Munroe and Stuart's (1994) typology with Johnson's (2006) typology, and found similarities between the family only subgroup and situational couple violence subgroup, as well as between the generally violent/antisocial subgroup and the dysphoric/borderline subgroup with the intimate terrorism subgroup. The empirical basis behind the typologies supports the notion that IPV perpetrators vary across subgroups. Considering typologies allows for a more individualised and nuanced approach to the management of IPV perpetrators. As a result, the identification of different types of perpetrators enables better identification, assessment and treatment of perpetrators; which comes with positive consequences for predicting and reducing risk, along with protecting victims at risk of future violence (Meier, 2015).

Despite the theoretical understanding of IPV typologies, their practical application has been brought into question with regards to the classification of abuse into different subgroups. Concerns have been raised that most of the typologies predominantly focus on physical violence and overlook the relevance of

other types of abusive behaviours (Ali, Dhingra & McGarry, 2016). This is certainly the case for Johnson's (2006) IPV typology, which only mentions physical violence and coercive control in each subgroup. Therefore, difficulties may arise when attempting to classify IPV behaviours that do not align with descriptions of defined subgroups of perpetrators. Further, it may be difficult to differentiate between different subgroups, such as the borderline/dysphoric and generally violent/antisocial perpetrators (Holtzworth-Munroe *et al*., 2003).

1.3 Stalking

In comparison to IPV, stalking is a more recent phenomenon that has received increasing research and legislative attention in the literature. Stalking was first recognised as a specific offence in 2012 after amendments were made to the Protection from Harassment Act 1997. However, various terms are used synonymously to describe stalking, such as harassment, obsessional harassment and obsessional following, which refer to a broad range of behaviours that are characteristic of stalking. Although a variety of legal and clinical definitions exist, Meloy and Gothard (1995) defined stalking as 'the wilful, malicious, and repeated following and harassing of another person that threatens his or her safety' (p. 258). Such a definition emphasises stalking behaviours being repeated and distressing for victims. Pathé, Mackenzie and Mullen (2004) described stalking to be pattern-based offence rather than incident-based. An isolated stalking incident might seem harmless, however, victims' distress and fear will likely accumulate over time with repetitive incidents (Logan & Walker, 2015).

An important differentiation between stalking and IPV is the presence or absence of an intimate relationship at the time of the stalking behaviour, to prevent surveillance behaviour during a relationship being classified as stalking

(McEwan, personal communication, 2019). Making a distinction between stalking of ex-intimate partners and IPV is problematic due to the clear similarities between the behaviours, as both may involve surveillance, monitoring, verbal and physical aggression (McEwan, Shea, Nazarewicz & Senkans, 2017b). However, many definitions of IPV classify ex-intimate partner stalking as a continuation of coercive control that began when the relationship was intact (Logan & Walker, 2009). Such definitions can be problematic as they integrate different relationships circumstances where the triggers for abuse and relevant management strategies might differ (McEwan *et al*., 2017b). Behaviours should be classified as stalking when there is a discrepancy in the level of contact desired between the perpetrator and victim, with the perpetrator wishing for more contact than the victim (White, Kowalski, Lyndon & Valentine, 2001). Therefore, any abusive or controlling behaviours that take place whilst the relationship is intact should be considered as IPV, with stalking being conceptualised as occurring only after the termination of a relationship (McEwan *et al*., 2017b).

There is an issue in the literature whereby definitions and studies fail to distinguish between surveillance by a current partner and stalking by an ex-partner (McEwan, personal communication, 2019). This presents a problem when trying to differentiate between IPV and stalking in order to examine the similarities and differences between the two behaviours. Further, much of existing literature has utilised clinical samples of stalkers, whereas White *et al.* (2001) emphasised the need to focus on non-clinical samples when examining perpetration.

Douglas and Dutton (2001) highlighted that the available literature suggests that a high proportion of victims are stalked by ex-intimate partners and that a large extent of stalkers perpetrate violence towards their victims. Indeed, Spitzberg, Cupach and Ciceraro (2010) stated that stalking that occurs following

the termination of an intimate relationship makes up 45% of all stalking cases. A higher rate comes from the National Institute of Justice (1996), who reported that 80% of stalking cases occur within intimate relationships. It has been proposed that stalking often occurs in the context of relationships that have consisted of abuse and violence (Cupach & Spitzberg, 2004). This has led researchers to suggest that stalking is an extension of the violence that occurred during the relationship (Burgess *et al.*, 1997; Walker & Meloy, 1998). The National Violence Against Women Survey (Tjaden & Thoennes, 1998) found that 81% of female victims who experienced stalking by a current or ex-partner had also experienced physical abuse by that partner.

In 2018/2019, the CSEW reported that 21.2% of female and 9.5% of male respondents between the ages of 16 and 74 reported that they have experienced stalking since the age of 16. These prevalence rates are supported by Spitzberg's (2002) meta-analysis of 103 studies which concluded that stalking is experienced over a two-year period on average by 23.5% of females and 10.5% of males. However, it is noted that only 49% of participants experienced stalking in the context of an intimate relationship.

Considering the damaging effects of stalking on victims, stalking is recognised as a serious concern both as a stand-alone offence but also in the context of a continuation of aggressive and harassing behaviours following on from the termination of an abusive relationship (Douglas & Dutton, 2001). Stalking committed by ex-intimate partners can escalate the severity and frequency of threats and physical violence against victims (Rosenfeld, 2004). For instance, stalking is considered a risk factor for intimate partner homicide, with McFarlane *et al.* (1999) finding that 76% of intimate partner homicide victims were stalked before being killed.

1.4 Stalking typologies

Similar to IPV, various stalking typologies have been proposed for the classification of stalkers in order to support the assessment and management of stalking perpetrators. Zona, Palarea and Lane's (1998) stalker-victim typology suggest that stalking perpetrators can be classified into three subgroups: erotomanic, simple obsessional and love obsessional.

There is usually no prior relationship between the perpetrator and victim in the erotomanic subgroup, however, the perpetrator develops delusional beliefs that the victim loves them, despite the victim being unattainable. Stalking behaviours for erotomanic stalkers are employed as an attention-seeking strategy to make the victim aware of them (Dixon & Bowen, 2012).

Simple obsessional stalking usually occurs within the context of an intimate relationship or non-intimate relationship. Stalking behaviours for this subgroup tend to be driven by revenge for perceived slights or rejection, or as an attempt to maintain or rekindle an intimate relationship (Zona *et al*., 1998). This subgroup of stalking perpetrators often presents with difficulties associated with substance misuse and personality disorder.

Love obsessional stalking occurs when the perpetrator and victim are strangers who have no prior intimate relationship, however, the stalker expresses passionate love towards the victim. This subgroup become attracted to victims to the extent that they believe victims will reciprocate their adoration if they make themselves known. It is believed that this subgroup often presents with a mental disorder and have misinterpreted interactions as confirmation of a relationship (Dixon & Bowen, 2012).

Mullen, Pathé, Purcell and Stuart's (1999) five stalker typology is the stalker classification system which is most renowned and used across both literature and

practice. Mullen *et al.* (1999) identified five subgroups of stalkers based on their differing personality traits, motivations and relationship with the victim: rejected, intimacy-seeking, incompetent, resentful and predatory.

The rejected stalker pursues a victim with whom they have had an intimate relationship with, in response to rejection or the relationship being terminated. Stalking behaviours for this subgroup are characterised by a desire for reconciliation, revenge or both.

Intimacy-seeking stalkers tend to not have an established relationship with the victim, but instead desire a relationship with the victim in response to being convinced the victim feels affection towards them or will reciprocate their love (Youngs, Ioannou & Straszewicz, 2013).

Incompetent stalkers tend to stalk strangers or acquaintances as a result of either lust or loneliness. This subgroup of stalkers are often driven by a desire for a date or sexual encounter, although tend to be socially incompetent or intellectually limited and experience rejection (Mullen *et al.,* 1999).

Resentful stalkers are known to harass their victims with the intention of causing fear and anxiety, usually in response to actual or perceived transgressions and humiliation. These stalkers are driven by a desire for revenge and regaining power and control (Youngs *et al*., 2013).

Predatory stalkers are motivated by sexual gratification and tend to exhibit stalking behaviours for the purposes of gathering information (i.e. vulnerabilities of victims) or in preparation for an attack. Stalking behaviours for this subgroup are often covert to prevent the victim becoming aware of threat or danger, however, some predatory stalkers experience pleasure when the victim is aware of being stalked but their anonymity is maintained (Youngs *et al*., 2013).

Although stalking typologies have value in providing insight into the diversity of stalkers and possible different aetiologies to guide intervention, these typologies do not provide explanations or theories of stalking (Spitzberg & Cupach, 2007). Further, stalking typologies have largely emerged from research with small clinical or forensic samples which consisted of personality disorder and major mental illness (Spitzberg & Cupach, 2007). For instance, Mullen *et al*.'s (1999) stalker typology was established using participants who were engaged in forensic mental health treatment. Therefore, these typologies may not be generalisable to the broad range of stalking perpetrators, including those who do not experience personality disorder or mental illness, and those who are not involved with forensic or clinical services (Mohandie, Meloy, McGowan & Williams, 2006).

The typologies that have been described for IPV and stalking appear to closely overlap in their constructs. Stalking that is perpetrated by individuals who are also abusive in intimate relationships has been associated with Holtzworth-Munroe and Stuart's (1994) dysphoric/borderline subgroup of IPV perpetrators (Dutton & Kerry, 1999). Norris, Huss and Palarea (2011) proposed that this subgroup of IPV perpetrators present with similar psychopathology and emotional dysregulation to those who stalk ex-intimate partners.

1.5 Image-based sexual abuse

Developments in technology have facilitated online communication through internet platforms and mobile phones. However, with this comes increased opportunities to create and disseminate pornographic images without the consent of the person depicted (Sirianni & Vishwanath, 2016). The term 'revenge pornography' is often used to describe a growing phenomenon involving vengeful ex-partners disseminating private sexually explicit intimate images without their

former partner's consent (Citron & Franks, 2014). Sexually explicit images might initially be shared consensually between intimate partners, however, an individual might later share these private images with others using online platforms, without the consent of the victim, possibly in response to provocation or conflict within the relationship (Bothamley & Tully, 2018).

Research interest in revenge pornography has increased as a result of the media attention and criminalisation of it as an offence in England and Wales under the Criminal Justice and Crime Act 2015, which can now result in a prison sentence of up to two years. However, the term 'revenge pornography' is largely rejected by researchers within the field as it fails to take into account alternative motivations for engaging in revenge pornography, including coercion, spitefulness, social status building, sexual gratification, entertainment, misogyny, notoriety or financial gain (Franks, 2014; Powell, Scott, Flynn & Henry, 2020). Furthermore, using the word 'revenge' assumes that victims have committed a wrongdoing for which the perpetrator is owed retribution, and implies that victims are to blame for perpetrators wanting to seek revenge. This shifts the focus away from the harm caused to victims (McGlynn & Rackley, 2017). There are also negative connotations with the term 'pornography' being used, as this implies that the perpetrator is engaging in this behaviour for the purposes of sexual gratification. This language also fails to focus on the harms of this behaviour by inappropriately suggesting that there is a sense of legitimacy and choice when considering the dissemination of sexually explicit images without consent (McGlynn & Rackley, 2017).

As such, there are now a range of terms that are used interchangeably to describe revenge pornography, including: non-consensual pornography (Dawkins, 2015); technology-facilitated sexual violence (Henry & Powell, 2015b); and IBSA

(McGlynn & Rackley, 2017). IBSA is defined as "the non-consensual creation and/or distribution of private, sexual images" (McGlynn & Rackley, 2017, p. 3). Henry, Powell and Flynn (2017) use this revised term to highlight the element of control, coercion, and humiliation that these acts often entail. Therefore, the term 'IBSA' will be used throughout this thesis as it is considered to better reflect the nature of this behaviour, the extent of the mental and physical harms suffered by victims, as well as the broader array of perpetrator motivations extending beyond revenge by ex-intimate partners (Yar & Drew, 2019). IBSA also offers a more inclusive and accurate terminology for the dissemination of non-consensual intimate images, given that IBSA is considered as on a continuum with other forms of sexual violence (McGlynn, Rackley and Houghton, 2017). Although IBSA encompasses a broader range of non-consensual behaviours, such as upskirting, cyberstalking, hacked images, online sexual harassment, and image-based sexual exploitation (Henry & Powell, 2018); the focus of this thesis is on the distribution of sexually explicit images of a current or former intimate partner without their consent (commonly known as IBSA).

Existing literature has employed inconsistent terminology and measures regarding IBSA, which poses a problem in being able to fully understand patterns of IBSA (Walker & Sleath, 2017). For instance, studies have previously examined IBSA in the context of sexting or cyber dating violence, but few have considered IBSA in itself (Trendell, 2019). This affects the ability to accurately establish prevalence rates for IBSA.

Ruvalcaba and Eaton (2019) investigated over 3000 adult social media users in the United States and found that 1 in 12 participants reported having been a victim of IBSA at least once in their lifetime, with 1 in 20 disclosing that they have perpetrated IBSA. This study also reported higher rates of male

perpetration and female victimisation, suggesting that IBSA is a gendered phenomenon (Ruvalcaba & Eaton, 2019). Indeed, research has proposed that IBSA is a form of gender-based sexual violence (Eaton & McGlynn, 2020).

Between 2015-2018 the total number of IBSA offences recorded in England and Wales amounted to 7806, with an increased rate in cases reported to the police every year (North Yorkshire Police, Fire and Crime Commissioner, 2018). Therefore, official figures are unlikely to represent the overall magnitude of the problem, likely due to lack of reporting by victims, high attrition rates and embarrassment experienced by victims at criminal justice professionals having to view and analyse the images (Bothamley & Tully, 2018). There is also the possibility that many individuals are unaware that they are victims of IBSA. A report by cyber-security company McAfee stated that one in ten of their adult customers (*N*=1182) who participated in an online interview reported having experienced ex-intimate partners threaten to release intimate photos, with almost 60% of these threats being acted upon (Eichorn, 2013). This suggests that a high proportion of threats of IBSA are carried out by perpetrators.

This highlights the need for a multifaceted response to IBSA in order to prevent both victimisation and perpetration. Although legislation for IBSA now exists in the United Kingdom and cases of IBSA are publicised in the media, it is possible that many people in society will be unaware that it is a crime. Therefore, providing education on IBSA (e.g. safer sexual image practices, impact on victims, attitudes that justify IBSA, legal and psychological consequences) in schools, workplaces and to the public more generally may help to prevent IBSA by increasing awareness about pathways to victimisation (Pina *et al*., 2017). Empirical research should also support with prevention by continuing to examine potential factors associated with IBSA in order to identify individuals most at risk

of IBSA perpetration and victimisation. Academics can provide the foundations needed for developing primary interventions to prevent IBSA occurrence, in addition to secondary or tertiary treatments for existing IBSA victims or perpetrators (Walker & Sleath, 2017). The provision of relevant treatment from clinicians and practitioners is imperative to reduce recidivism rates of IBSA (Bothamley & Tully, 2018). Similarly, research that focuses on victim impact would allow practitioners, criminal justice agencies and support services to be more informed and responsive regarding the needs of victims through receiving on-going training (Pina *et al.*, 2017). As things stand, IBSA victims are able to access discussion forums and helplines to explore the impact of their experience. One example includes the Revenge Porn Helpline which provides emotional support and guidance for reporting explicit images to social media sites, as well as how to report an offence to the police (Yar & Drew, 2019).

IBSA is considered to be another tactic for perpetrators to exert power and control over victims, and research has found that digital technology is being increasingly used by perpetrators (Douglas, Harris & Dragiewicz, 2019; Woodlock, 2017). This is consistent with research by Henry and Powell (2015a) who reported that sexually explicit images of current or ex-intimate partners are being increasingly used to harass, threaten or control victims in IPV and stalking cases. This places IBSA within a continuum of adverse behaviours that occur in intimate relationships, where technology extends the range of abusive behaviours against victims (Citron & Franks, 2014; Walker & Sleath, 2017). The literature has framed IBSA within intimate relationships as a type of IPV (Powell & Henry, 2017).

As highlighted earlier, IPV behaviours are defined as occurring when an intimate relationship is intact, whereas stalking behaviours are described as occurring following the termination of a relationship. However, IBSA can be used

as a tool in relationships either during the relationship or after the relationship has ended. Indeed, stalking and IBSA are considered to be continuations and extensions of abuse and control in intimate relationships.

Research (Bates, 2016; Citron & Franks, 2014; Walker & Sleath, 2017) has found that victims of IBSA are likely to experience serious consequences, including distress, reduced self-esteem, anxiety, suicidal ideation and post-traumatic stress symptoms. Much is known about the damaging consequences of IBSA for victims, however, the picture is less clear when it comes to understanding the profiles of IBSA perpetrators. Bothamley and Tully (2018) stated that research identifying perpetrator characteristics is valuable in considering the needs of such offenders, which in turn, will benefit relevant agencies in developing and providing effective intervention and management to reduce perpetrators' likelihood of IBSA recidivism.

1.6 Overview of theories

Over the years, several theoretical models have been developed which seek to understand and explain offending within intimate relationships. O'Leary, Smith Slep and O'Leary (2007) proposed that researchers can account for the diversity in the aetiology of abusive and controlling behaviours by drawing upon several theories to allow for an integrated approach to understanding these phenomena, as opposed to considering one single theory. This thesis draws on existing theoretical frameworks to understand why individuals might engage in IPV, stalking and IBSA behaviours. Attachment theory (Bowlby, 1969), control balance theory (Tittle, 1995), the nested ecological theory of IPV (Dutton, 1988) and the integrative developmental model of stalking (White & Kowalski, 1998) are theoretical frameworks that are considered to offer a useful framework and

therefore guide this thesis. It is believed that the principles of these theories can be applied to understand IPV, stalking and IBSA. The following theoretical frameworks are proposed to help understand how these behaviours might relate to each other, and create theoretical links between the theories and interpretation of findings. The aforementioned typologies and subsequent theories will be used for interpreting and discussing the overall findings of the thesis in Chapter Six.

1.7 Attachment theory

Attachment theory (Bowlby, 1969) is a highly influential theoretical framework regarding the impact of the bonding experience between infants and primary caregivers on functioning in both childhood and adulthood. Infants with secure attachments developed security from primary caregivers who were responsive and accessible, while infants with insecure attachments experienced abandonment, rejection or indifference from primary caregivers (Spitzberg & Cupach, 2007). Those with insecure attachment styles in childhood are either: 1) anxious/ambivalent and want comfort from their caregiver but instead received inconsistent parenting which generated fear about not receiving comfort, or 2) avoidant by detaching from their primary caregivers who were emotionally unavailable or unresponsive.

Attachment theory proposes that insecure attachments formed in childhood can cause difficulties in intimate relationships in adulthood (Hazan & Shaver, 1987). Researchers (Brennan, Clark & Shaver, 1998; Simpson, Rholes & Phillips, 1996) have suggested that attachment styles be assessed using two dimensions: anxiety and avoidance. The avoidance dimension refers to the tendency for individuals to feel uncomfortable with intimacy and avoid closeness in

relationships. On the other hand, the anxiety dimension indicates the desire to seek reassurance from others and fears abandonment.

An advantage of using attachment theory to understand adverse behaviours in intimate relationships is that it does not infer the gender of victims or perpetrators, which is the case with feminist theories (Dixon & Bowen, 2012). Feminist theories have predominantly driven perspectives around IPV in proposing that IPV is largely perpetrated by males against their female partners as a result of male dominance in a patriarchal society (Dobash & Dobash, 1979). However, a gender inclusive perspective enables a range of theoretical frameworks to integrate in order to provide a holistic understanding of perpetration. Stith, Smith, Penn, Ward and Tritt (2004) completed a meta-analysis to identify risk factors related to IPV perpetration, which supported the use of a multi-factorial perspective as opposed to a single factor for the explanation of IPV perpetration through broadening the range of factors considered. Further support for this comes from Dixon and Graham-Kevan (2011) who stressed that the multi-factorial approaches hold significant value in the explanation of IPV.

1.8 Nested ecological theory of IPV

Dutton's (1988) nested ecological theory of IPV is a conceptual framework that considers the interaction between various individual, sociocultural, environmental factors which shape an individual. This model classifies risk factors for IPV perpetration into macrosystem, exosystem, microsystem and ontogenetic levels; all of which interact with one another. This model emphasises the importance of individual differences in the aetiology and function of perpetrators' behaviour, based on the interaction between complex factors (Dixon & Graham-Kevan, 2011).

The macrosystem level incorporates cultural values and beliefs and considers how societal factors may impact perpetrators. The exosystem level refers to the informal and formal social structures of the perpetrator's life which includes friendships, family, work environment, support networks and other institutions that perpetrators come into contact with (Spencer, Stith & Cafferky, 2019). The microsystem level relates to characteristics in the direct setting where the individual perpetrates abuse, including the interpersonal difficulties, family dynamics, history of abuse, triggers and consequences of abuse. The ontogenetic level focuses on developmental factors and internal influences relevant to the perpetrator which impact on their responses to factors that occur at the exosystem and microsystem levels, such as personality or mental health difficulties, substance misuse, attitudes and emotional dysregulation (Stith *et al*., 2004). Research (O'Leary *et al*., 2007; Stith *et al*., 2004) has supported Dutton's (1988) nested ecological theory after establishing that multiple factors that comprise the four ecological levels interact to predict IPV perpetration.

1.9 Integrative developmental model of stalking

There are parallels between Dutton's (1988) nested ecological theory and the integrative developmental model of stalking (White & Kowalski, 1998), which also provides a multi-factorial perspective regarding stalking. White and Kowalski's (1998) theory also claims that the onset of stalking behaviours are a result of the interaction between sociocultural (historical influences and cultural values), interpersonal (social networks and institutions), dyadic (nature of the relationship between perpetrator and victim), situational (timing, location and social disinhibitors or inhibitors) and intrapersonal (individual motives, attitudes or characteristics) factors (White, Kowalski, Lyndon & Valentine, 2001). An

advantage of the integrative developmental model of stalking is that it incorporates multiple factors that likely interact which might contribute to stalking perpetration at various levels and highlights the need to not focus purely on one level of analysis (White *et al*., 2001).

Both Dutton's (1988) nested ecological theory of IPV and White and Kowalski's (1998) integrative developmental model of stalking support the use of typologies to understand perpetrators by highlighting that there is no homogeneity among IPV and stalking perpetrators who will likely present with individual treatment needs and require different management strategies. However, theories of stalking that align with the integrative developmental model (White & Kowalski, 1998) predominantly focus on dyadic and intrapersonal factors using clinical samples of stalkers (White *et al*., 2001). Therefore, there is less empirical evidence regarding non-clinical samples and the role of sociocultural, interpersonal and situational factors in stalking perpetration.

1.10 Control balance theory

Control balance theory (Tittle, 1995) is an integrative theory of deviant or criminal behaviour which is also proposed as a theoretical framework to explain IPV, stalking and IBSA. Tittle (1995) defined deviant behaviour as any behaviour that is widely considered as unacceptable or that elicits a negative response. This theory asserts that individuals strive for autonomy and control over a range of domains in their lives, such as relationships, work and performance. A defining feature of the theory is the control ratio, which refers to the extent of control that an individual exercises in comparison to the degree of control they experience. Individuals are believed to experience three different states in life: control surplus, control equilibrium or control deficit.

Deviant behaviour is thought to be unlikely when individuals are in a state of control equilibrium. However, an imbalance in the control ratio is likely to predispose individuals to engaging in deviant behaviour in order to restore control balance (Piquero & Hickman, 1999). Individuals in a state of control surplus are likely to exercise more control than they are subjected to (Castro, Nobles & Zavala, 2017). A state of control deficit occurs when individuals experience more control than they exercise, which can lead to attempts to compensate this by engaging in deviant behaviour (Braithwaite, 1997). It is possible that engaging in IPV, stalking and IBSA in intimate relationships is an attempt to regain control in response to perceived control imbalance. This could be during periods of instability in the relationship or the ending of a relationship.

Tittle (1995) emphasised that a predisposition to deviant behaviour is in itself insufficient for the occurrence of deviance. In order for deviant behaviour to occur, two conditions must be met which enable the predisposition to amount to motivation for deviance. Firstly, individuals need to recognise the imbalance in their control ratio (i.e. control surplus or control deficit) and that this can be altered (i.e. further increase the surplus or reduce the deficit) through engaging in deviant behaviour. The second condition requires individuals to experience a negative emotion in response to provocation which warrants deviant behaviour. Deviant behaviour then occurs when individuals are motivated, have an opportunity to act and can overcome inhibitions, such as moral beliefs or fear of punishment.

A strength of the control balance theory (Tittle, 1995) is its ability to be applied to range of different offences and account for gender differences in control ratios. However, although autonomy may be relevant to an individual's motivation, control balance theory does not consider other drives or needs of

individuals. Irrespective of this, control balance theory is a promising framework for explaining the overlap between IPV, stalking and IBSA perpetration. Overall, research (Fox, Nobles, & Lane, 2014; Hughes, Antonaccio, & Botchkovar, 2015; Piquero & Hickman, 1999) supports the association between control imbalance and perpetration.

In their study of stalking victimisation and perpetration, Nobles and Fox (2013) found that male participants were more likely to report being in a state of control surplus and perpetrating stalking behaviours, after controlling for variables related to demographics, self-control, morals and peer influence. However, the cross-sectional design of the study means that it is unclear whether perceived imbalances in control occurred prior to or after the onset of stalking behaviours. Similarly, Castro *et al.*'s (2017) findings supported the control balance theory by establishing a relationship between control surpluses and deficits with IPV perpetration in their sample, however, this sample solely consisted of undergraduate students and therefore results may not be generalisable to IPV offenders.

Control balance theory may provide a basis for understanding interpersonal crimes that are characterised by submission and dominance (Nobles & Fox, 2013). The defining features of IPV, stalking and IBSA are considered to be the power and control differential between victims and perpetrators (Felson & Messner, 2000; Nobles & Fox, 2013). All three forms of abuse often allow perpetrators to feel a sense of control over their victim. Therefore, Tittle's (1995) emphasis on an individual's need for autonomy suggests that control may promote IPV perpetration. Nobles and Fox (2013) proposed that stalking perpetration is linked to imbalances in control in intimate relationships. Individuals who perceive control deficits may engage in stalking in an attempt to regain control of an intimate

relationship. Similarly, individuals with a control surplus might stalk as a means of increasing or maintaining their dominance over victims due to perceived threat. Stalking within intimate relationships might further increase perceived control imbalances as a result of the emotional attachment, intensity of emotions or the stakes involved (Nobles & Fox, 2013).

Although control balance theory has not been explicitly considered in explaining IBSA perpetration, engaging in IBSA might reduce negative emotionality associated with perceived inferiority and loss of control (Hall & Hearn, 2019), which is consistent with control balance theory in conceptualising IBSA as a strategy to restore perceived control imbalance by the perpetrator (Harper, Fido & Petronzi, n.d.; Rasmussen & Boon, 2013). Individuals with perceived control deficits might engage in IBSA in response to transgressions by intimate partners. On the other hand, someone with perceived control surplus might use IBSA as a means of coercing and increasing their control over intimate partners.

It has been argued that another important factor in control balance theory is moral beliefs which are thought to inhibit individuals engaging in deviance when there is a control imbalance (Lowry, Moody & Chatterjee, 2017). Moral beliefs are defined informal sanctions that can act as a deterrent for deviant and unethical behaviour. Lowry *et al*. (2017) found that control imbalance was a significant facilitator for engaging in deviant behaviour, whereas moral beliefs were a strong inhibiting factor.

Considered collectively, these theoretical frameworks highlight the multifaceted and complex nature of the perpetration of adverse behaviours in relationships (Dixon & Graham-Kevan, 2011). Restricting the theoretical focus of this thesis would potentially overlook significant factors that are relevant to IPV, stalking and IBSA perpetration, with the combination of multiple factors and

theories supporting a more holistic understanding of the perpetration of abuse in intimate relationships.

1.11 Justification of thesis

IPV, stalking and IBSA are three problematic and damaging behaviours which occur in intimate relationships. Previous research has found that there is a high correlation between IPV and stalking perpetration (Davis, Ace & Andra, 2000; Logan, Leukefeld & Walker, 2000). More recently, researchers have described IBSA as a form of IPV (Powell & Henry, 2017; Reed *et al*., 2016). Given these relationships, identifying the factors that contribute to the perpetration of these offences in intimate relationships is particularly important. However, despite the growing focus on understanding different forms of abuse in intimate relationships, there is a lack of evidence for how these behaviours are linked and for understanding vulnerabilities of victims and risk in perpetrators. Krebs, Breiding, Browne & Warner (2011) highlighted the need for research to explore the overlap between multiple types of abusive behaviours.

Given that the most common victims of these offences are current or ex-intimate partners (Ruvalcaba & Eaton, 2019; Tjaden & Thoennes, 1998), it is important to consider the potential for perpetrators to engage in a cycle of abusive or controlling behaviours and repeatedly offend against intimate partners. Abuse in intimate relationships is often not an isolated episode but rather a pattern of perpetrators exerting control and power over victims (Krebs *et al.,* 2011). Individuals might be predisposed to engage in a repertoire of abusive and controlling behaviours in intimate relationships. Therefore, some victims may be at higher risk of experiencing multiple forms of abusive or controlling behaviours

in intimate relationships. For instance, stalking in the context of IPV has been found to be a risk factor for intimate partner homicide (McFarlane *et al*., 1999).

Considering the risk of individuals engaging in multiple types of abusive or controlling behaviours in intimate relationships, it is important to understand the characteristics and factors that underpin the perpetration of these offences. From the point of view of perpetrators, if an individual has engaged in either IPV, stalking or IBSA then it could increase the likelihood of them engaging in another form of abuse. This is important to understand as if the behaviours are linked then it may be the case that engaging in IPV, stalking or IBSA could be a precursor to individuals expanding their abusive or controlling behaviours in intimate relationships. Indeed, Messing, Bagwell-Gray, Brown, Kappas and Durfee (2020) recommended that future research explore the intersection between IPV, stalking and technology-facilitated abuse to develop our understanding of antecedents to abusive and intrusive behaviours that occur both online and offline.

Understanding the factors which may place individuals at risk of engaging in these behaviours could provide insight into the needs of perpetrators and enhance management strategies. This insight could contribute to how practitioners understand and manage such perpetrators through assessment and intervention. By understanding the factors and characteristics associated with IPV, stalking and IBSA perpetration it is likely that practitioners and criminal justice agencies will be better equipped to work with individuals who may engage in different forms of abuse in intimate relationships.

This thesis provides an original contribution to the literature by providing new evidence through two empirical studies, as well as using different theories as a basis for interpreting and understanding the data. Although previous research has alluded to a connection between IPV, stalking and IBSA perpetration, the

nature of the relationship between the behaviours is unclear. No work to date has explored potential factors that increase the likelihood of individuals engaging in IBSA and compared the findings to existing literature on IPV and stalking perpetration; some of which may be relevant to IBSA perpetration. The empirical literature on the characteristics of IBSA perpetrators is limited in comparison to what is known about IPV and stalking perpetrators. Some of the previously identified factors for IPV and stalking perpetration may also be relevant to IBSA perpetration. However, it is possible that IBSA perpetrators might have different treatment needs than perpetrators of IPV and stalking.

The lack of exploration of how IBSA perpetration might be situated in relation to engaging in IPV and stalking limits an understanding of how online and offline behaviours interact. As a result, the overlap between IPV, stalking and IBSA is yet to be adequately understood; highlighting the need to bridge the gap between these behaviours. IBSA could contribute to a pattern of strategies that abusive or controlling partners resort to, in conjunction with other forms of in-person aggressive or intrusive behaviours (Douglas, Harris & Dragiewicz, 2019; Reed, Tolman & Ward, 2016). This highlights the importance of developing our understanding of individuals who may be at higher risk of engaging in multiple forms of abusive behaviours. This, in turn, will support researchers and practitioners to understand what factors increase the likelihood of an individual engaging in these behaviours in order to reduce perpetration and victimisation.

It is argued that the factors and characteristics underpinning IPV, stalking and IBSA perpetration share similarities, in terms of common underlying motivations or mechanisms that lead certain individuals to engage in these behaviours. Despite similarities between the behaviours, perpetrators of IPV, stalking and IBSA also likely present with diverse characteristics. Therefore, this

thesis aims to increase understanding of the potential overlap of IPV, stalking and IBSA perpetration using a range of single factor and multifactor theoretical perspectives.

The overall aim of this thesis is to build on previous research to improve the current understanding and knowledge of the relationship between these behaviours and likely characteristics of such perpetrators as the overlap between IPV, stalking and IBSA is yet to be adequately understood. This topic was chosen due to the tendency for the literature to examine aspects of these behaviours separately, rather than consider the intersection between these behaviours in intimate relationships from the standpoint of proclivity or perpetration. Exploring this within the current thesis will provide information to better inform research, assessment and intervention for IPV, stalking and IBSA offenders.

A better understanding of what factors increase the likelihood of individuals engaging in IPV, stalking and IBSA is important for advancing the knowledge of researchers and clinicians in this field. It is hoped that gaining a greater understanding into the intersection between these behaviours, which can occur independently or co-occur, will ensure appropriate intervention pathways are developed for the management of these offenders. Further, greater insight into IPV, stalking and IBSA perpetration can support preventative approaches and risk management strategies by ensuring that individuals who may be at risk receive appropriate support.

1.12 Thesis Structure

This thesis comprises six chapters which broadly examine topics related to IPV, stalking and IBSA. This is achieved through a systematic review, two empirical research studies and a critique of a psychometric measure. Although the

chapters follow in sequence to ensure a thread throughout the whole thesis, each chapter is varied enough to be read independently.

Chapter One provides an introduction to the thesis by presenting relevant background literature related to IPV, stalking and IBSA perpetration, including the overall rationale and aims of the thesis.

To explore the intersection between IPV, stalking and IBSA in intimate relationships, this thesis begins by systematically reviewing the literature on the prevalence and characteristics of co-occurring IPV and stalking perpetration in Chapter Two, given the established link in the literature. However, there is a lack of clarity in the empirical literature regarding what factors increase the likelihood that an individual will engage in both behaviours. This is of particular concern when considering the increase in risk of severe violence against stalking victims when perpetrated by partners who were previously abusive (Rosenfeld, 2004). Therefore, the review seeks to clarify the current understanding of offenders who engage in both IPV and stalking behaviours. The review amalgamates numerous studies through narrative synthesis to answer the review questions. Although tentative conclusions were drawn from the findings, recommendations were made to increase the quality of future studies regarding this topic.

Previous literature has identified an association between technology-facilitated abuse and in-person abuse, with abusive partners using technology to control and coerce victims in intimate relationships (Dragiewicz *et al.*, 2018). This suggests that IBSA may be perpetrated in conjunction with IPV and stalking behaviours. This raises the importance of increasing our insight into the relationship between IPV, stalking and IBSA. Therefore, Chapter Three presents an empirical research study which builds on the previous chapter by examining whether there is an association between the propensity to engage in IPV, stalking

and IBSA; three behaviours that are conceptually linked. The results provide an important contribution to the literature, however, further research is required to build on the initial findings.

It was also considered important to build on the limited empirical research regarding factors that increase the likelihood of engaging in IBSA. This is of particular importance when considering the similarities between the harms caused by IBSA and other forms of sexual violence for victims of these crimes, with victims describing their experiences of IBSA victimisation as a type of sexual assault (McGlynn, Rackley & Houghton, 2017). The consequences of IBSA can be severe and include psychological distress, anxiety and depression (Henry, Powell & Flynn, 2017). Therefore, Chapter Four investigates a number of identified variables (aversive and general personality traits, attachment style and moral disengagement) to determine whether these predict IBSA proclivity. Increasing an understanding of factors that influence the propensity to engage in IBSA is beneficial in determining whether certain individuals may be predisposed to perpetrate such acts. This study add to the limited literature exploring the perpetration of IBSA by identifying variables that influence IBSA proclivity in males.

Chapter five is a critical evaluation of the Propensity for Abusiveness Scale (PAS; Dutton, 1995), which was used as a measure in Chapter Three and mentioned in the systematic review. This chapter explores the reliability and validity of the measure and its applicability in assessing propensity for IPV perpetration.

Finally, Chapter Six provides a discussion of the overall findings of the thesis in relation to previous literature and the implications of these findings for research and clinical practice. The findings will be synthesised in the final chapter to further

psychological understanding about the overlap between these three behaviours. As part of this, it will be considered how the thesis findings fit into existing typologies and theories in Chapter One. This will help to develop a more theoretically coherent understanding regarding the relationship between IPV, stalking and IBSA perpetration in intimate relationships. Limitations of the thesis are discussed in addition to recommendations for future research.

To summarise, the aims of this thesis are as follows:

1. To systematically review the prevalence and characteristics of co-occurring IPV and stalking perpetration in adult offenders.
2. To explore the association between the propensity to engage in IPV, stalking and IBSA.
3. To examine the impact of aversive and general personality traits, attachment style and moral disengagement on IBSA proclivity.
4. To critically evaluate the PAS (Dutton, 1995) in terms of its psychometric properties and research uses for assessing propensity for IPV perpetration.

Chapter Two: An exploration of the prevalence and characteristics of co-occurring intimate partner violence (IPV) and stalking perpetration: A systematic review.

Abstract

Aim: This systematic review aimed to identify the prevalence and characteristics of co-occurring intimate partner violence (IPV) and stalking perpetration in adult offenders, as well as examine whether there are any gender differences in the perpetration of these two behaviours.

Methods: Seven electronic databases were searched in March 2020 to systematically identify literature relating to co-occurring IPV and stalking. Reference lists of relevant articles were hand searched and contact was made with experts in the field to identify additional studies. A total of seven studies were included in the review and all were assessed using an adapted quality assessment tool. The data was extracted from the included studies for narrative synthesis.

Results: The rate of co-occurrence ranged from 24% to 96.8%. Factors relevant to co-occurring IPV and stalking perpetration included the presence of personality disorder (particularly Cluster B personality traits), anger difficulties, alcohol and substance misuse, and prior criminal history. However, it remains unclear whether these are unique to co-occurring IPV and stalking perpetrators. Other relevant factors included sharing children with the victim and living alone.

Conclusions: The review yielded mixed findings largely due to variations in definitions and methodologies which made it difficult to make definitive conclusions. The complexity of research in this area is discussed, with reference to methodological limitations, including conceptualisation of definitions, sampling methods and the source of data. Recommendations are provided regarding the need for high-quality research.

2.0 Background

The association between intimate partner violence (IPV) and stalking is poorly understood (McEwan, Shea, Nazarewicz & Senkans, 2017b). As defined in chapter one, IPV is defined as '…any form of aggression and/or controlling behaviours used against a current or past intimate partner of any gender or relationship status' (Dixon & Graham-Kevan, 2011, p. 1). This definition encompasses a range of abusive and threatening behaviours, including physical violence, sexual aggression, psychological abuse and controlling behaviours. Stalking was also defined in chapter one as 'the wilful, malicious, and repeated following and harassing of another person that threatens his or her safety' (Meloy & Gothard, 1995, p. 258). This definition highlights the repeated and distressing nature of stalking behaviours for victims.

Although IPV and stalking are believed to have shared underlying causal mechanisms, the two constructs are assumed to be interchangeable with little empirical evidence to support such claims (McEwan *et al*., 2017b; Senkans, McEwan & Ogloff, 2017). The comorbidity of IPV and stalking is defined as an individual being stalked by a former intimate partner who was abusive when the relationship was intact (Douglas & Dutton, 2001). Although a range of factors have been found to be associated with the perpetration of IPV and stalking (Dixon & Bowen, 2012), it is unclear whether such perpetrators have unique and specific characteristics that distinguish them from perpetrators who only commit one of the behaviours (Douglas & Dutton, 2001). McEwan *et al*. (2017b) discussed how Douglas and Dutton's (2001) assertion that more research is needed to evaluate the link between IPV and stalking has not been addressed after several years.

Douglas and Dutton (2001) proposed that developing an understanding of co-occurring IPV and stalking can be achieved by exploring IPV perpetrators who

stalk former or current partners, and stalking perpetrators who have previously been abusive to their victims with whom they were in an intimate relationship with. Dixon and Bowen (2012) acknowledged the difficulty in determining the prevalence of IPV and stalking as a result of the varying methodologies employed across studies which impact on the generalisability of the results. Nonetheless, it has been estimated that between 30-65% of stalking cases with ex-intimate partners involved violence during the course of the relationship (Douglas & Dutton, 2001; McEwan *et al*., 2017b). A meta-analysis by Spitzberg and Cupach (2007) found an overlap between stalking and physical violence in intimate relationships, with 32% of stalking cases involving physical violence across 82 studies. However, it is possible that the true prevalence is higher due to reporting biases (Douglas & Dutton, 2001). Additionally, romantic partners are the perpetrators in 50% of all stalking cases (Spitzberg, 2002).

Coleman (1997) found that men who stalked their ex-intimate partners were significantly more likely to have perpetrated abuse when the relationship was established, after victims who had been stalked by former partners reported experiencing physical and verbal abuse during the relationship. However, what is less known is the characteristics of individuals who engage in both IPV and stalking behaviours against current or former partners. Stalking has previously been hypothesised to be a feature of IPV, or even a continuation of coercion in intimate relationships (Davis, Ace & Andra, 2000; Dye & Davis, 2003). However, previous studies have tended to conflate the two behaviours, obscuring potential factors that link and differentiate them (Senkans *et al*., 2017). This approach is not consistent with case law in the United Kingdom regarding stalking, which restricts stalking to behaviour outside of an ongoing relationship (McMahon & McGorrery, 2016). Controlling and coercive behaviour (including surveillance) in a current

intimate relationship should not be considered stalking or harassment as such offences are classified as involving an estranged intimate partner. Studies have been known to fail to distinguish between surveillance by a current intimate partner and stalking by an ex-intimate partner since early studies originating from the United States (Tjaden & Thoennes, 2000). Although some subsequent research (Cupach & Spitzberg, 2000; Douglas & Dutton, 2001; White *et al.*, 2000) conceptualised IPV and stalking as two separate phenomena, the literature is dominated by studies that have replicated Tjaden and Thoennes' (2000) methodology which confuses the two patterns of behaviour.

McEwan *et al.* (2017a) explored prior IPV perpetration in a sample of ex-intimate stalkers and found that a history of physical violence in the context of an intimate relationship was significantly associated with a greater level of violence during stalking incidents. Although this study used objective methods to corroborate participants self-report, it consisted of a small sample size which likely reduced the statistical significance of the results. Considering the severe consequences of co-occurring IPV and stalking victimisation, this review seeks to understand and synthesise findings that have examined the extent of overlap between these behaviours and associated characteristics of perpetrators. Indeed, Senkans *et al*. (2017) emphasised the need to better understand the characteristics that underpin co-occurring IPV and stalking perpetration.

McEwan *et al*. (2017b) highlighted that the conflation of IPV and stalking in research and range of methodological approaches poses a challenge for exploring the association between IPV and stalking. Additionally, much of the empirical research regarding IPV and stalking perpetration comprise samples of male perpetrators, due to the gendered nature of abuse in intimate relationships. As a result, this overlooks whether these findings apply to female IPV and stalking

perpetration (McEwan *et al.*, 2017b). Therefore, it has been recommended that future research explores the relationship between IPV and stalking perpetration to ascertain whether previous research findings are applicable for both genders.

To date, the evidence base regarding co-occurring IPV and stalking perpetration appears to not be as well-established as the literature regarding IPV-only or stalking-only perpetration. As a result, there remains a lack of clarity in relation to the association between co-occurring IPV and stalking perpetration. Dixon and Bowen (2012) highlighted that there is a broad range of factors associated with both IPV and stalking due to the rate of stalking that occurs in past intimate relationships where violence has occurred. Further, Stark (2007) argued that characteristics which underpin stalking and controlling behaviours share similarities that differentiate them from those who only engage in controlling behaviours.

Research investigating this topic has not been reviewed systematically which highlights that this review is therefore deemed both necessary and timely as it seeks to provide new insight into this topic. There is a need to understand adverse behaviours in intimate relationships from a holistic approach and recognise the contribution of IPV and stalking, rather than understanding one form of behaviour in isolation.

This review aims to evaluate the literature to establish what is known about the prevalence and characteristics of co-occurring IPV and stalking perpetration. The identification of characteristics specific to the co-occurrence of IPV and stalking perpetration has clear clinical and theoretical implications, particularly when considering typologies and risk assessment. An understanding of this relationship is essential for improving assessment and management of perpetrators, in addition to identifying individuals potentially at risk of

victimisation. This review will synthesise the existing literature about the association between these two behaviours, and help identify risk factors in the perpetration of both behaviours which can be targeted through intervention by considering the treatment needs of individuals who engage in both behaviours. This review can also be used to guide researchers and practitioners to key issues regarding this topic and also to establish the limitations within the literature in this area.

2.1 Aims

Specifically, the aims of this review are:

1) To establish the prevalence of the co-occurrence of IPV and stalking perpetration.
2) To identify the characteristics associated with the co-occurrence of IPV and stalking perpetration.
3) To examine whether there are gender differences between characteristics associated with co-occurring IPV and stalking perpetration.

3.0 Method

3.1 Sources of Literature

A scoping exercise was conducted on 12th July 2019 and again on 10th February 2020 using the Cochrane Database of Systematic Reviews and the Campbell Collaboration Systematic Review Databases to assess the need for and originality of the proposed review. The rationale for repeating the scoping exercise was to ensure that no systematic reviews that addressed the current review question had been published since carrying out the initial scoping exercise. No

systematic reviews exploring the prevalence or characteristics of co-occurring IPV and stalking perpetration were found. Additional preliminary scoping searches were conducted using PsycINFO to gain an understanding of the available literature.

Published experts in the IPV and stalking literature (Dr Donald Dutton, Professor Troy McEwan, Dr Louise Dixon, Dr TK Logan and Professor Erica Bowen) were contacted to determine if any relevant systematic reviews were missed during the scoping searches; three experts responded. This process was undertaken to ensure that the current review was addressing a novel question which would be a useful contribution to the literature.

After completing initial scoping searches to optimise the sensitivity of search terms, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; Moher *et al*., 2015) guidelines were employed to review and evaluate studies related to the review question. In order to identify relevant studies, a comprehensive search was undertaken on 8th and 9th March 2020 on the following electronic databases:

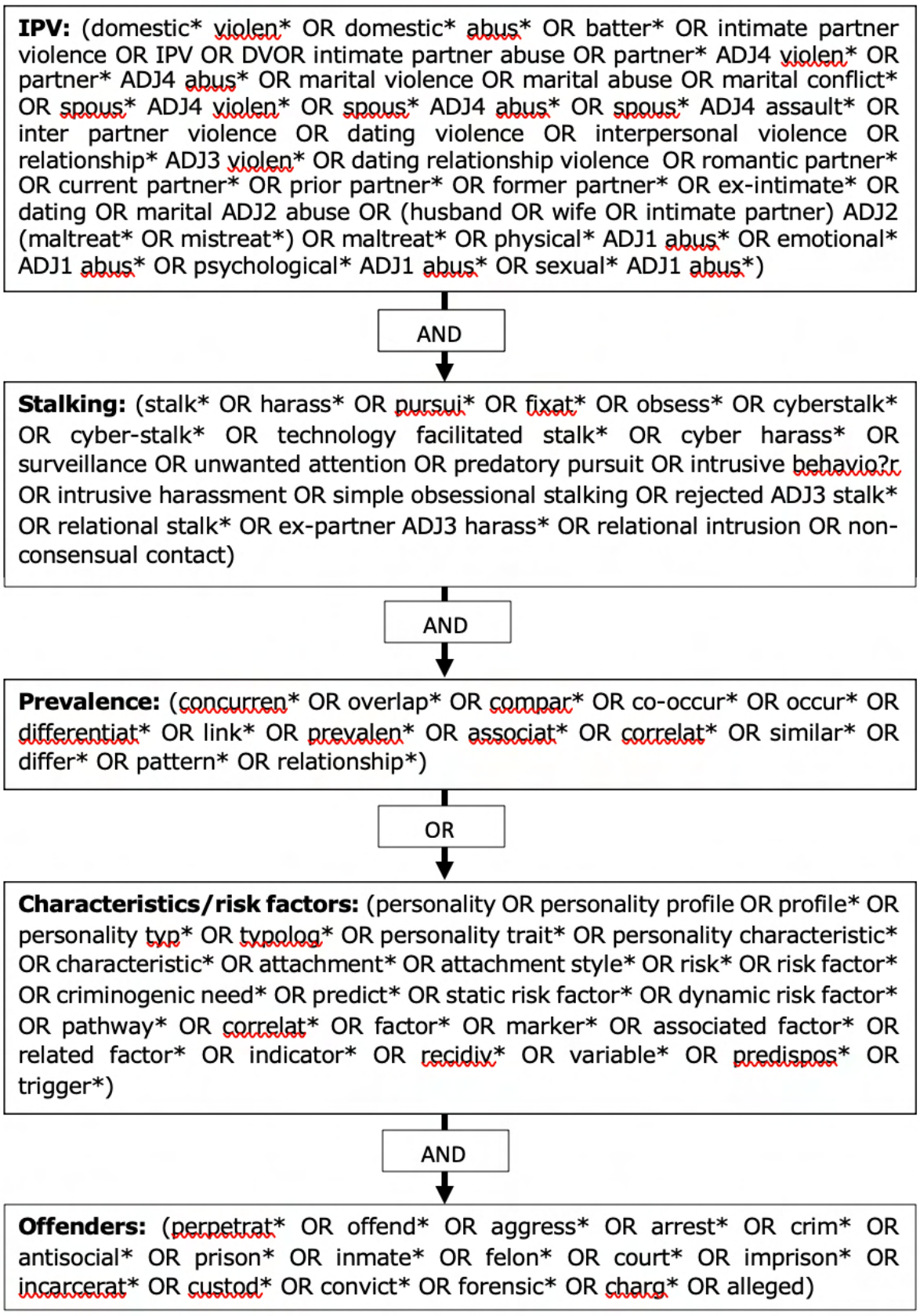
- PsycINFO (1989 to present)
- MEDLINE (1989 to present)
- EMBASE (1989 to present)
- Applied Social Sciences Index and Abstracts (ASSIA; 1989 to present)
- Criminal Justice Database (1989 to present)
- Web of Science (1989 to present)
- National Criminal Justice Reference Service (NCJRS; 1989 to present)

In order to include as many relevant articles as possible and to prevent publication bias, both published and unpublished articles were considered. To source unpublished articles in addition to those identified using electronic databases, a search was performed using Google Scholar. Only quantitative studies were included in the current review to allow a direct statistical comparison of the results. Search parameters included articles written in English and dated between 1989 and 2020, as anti-stalking laws only emerged across the United States in 1989 and there was limited empirical research prior to 1989 that addressed the review question. Articles requiring translation were excluded due to financial constraints. Other search methods included hand searching reference lists of relevant articles to identify any additional relevant studies.

3.2 Search Strategy

Relevant terms were identified, synonyms used and terms were mapped to subject headings where possible and also searched separately without mapping to subject headings, for maximum scope and inclusion. Keywords were used in order to reduce the number of potential studies that may have been lost due to incorrect coding. This ensured consistency in searching across the electronic databases for those that did not enable mapping to subject headings. Search terms that were applied to electronic databases can be found in Figure 1. Search terms were modified to meet the requirements of each database; the full search syntax can be found in Appendix 1. The below search terms were combined to ensure that only the studies most relevant to the current review would be identified.

Figure 1. Search terms



3.3 Study Selection

Initial scoping searches of the databases and reviewing previous literature in this area assisted the formulation of inclusion and exclusion criteria. Inclusion and exclusion criteria were applied to publications identified from the search using a pre-defined inclusion criteria form (Appendix 2). The inclusion and exclusion criteria within the Population, Intervention/Exposure, Comparator and Outcome (PICO) framework can be found in Table 1. These criteria were applied to all potential studies in order to assess eligibility for the current review and to reduce potential reviewer bias.

It was considered that the inclusion of studies using samples not involved with the CJS would act as a possible confounding factor, therefore they were excluded to control for this. Due to the potential differences in prevalence rates and characteristics between samples within the CJS and non-convicted samples of IPV and/or stalking, it was deemed important to critically appraise the available empirical evidence on the overlap between IPV and stalking in those who are known to have committed these offences (by being legally recognised for engaging in IPV and/or stalking behaviours). Individuals who are involved with the CJS are not representative of the general population of IPV and stalking perpetrators in that they are likely to report more elevated and severe violence perpetration (Mechanic, 2011). Further, many studies use specialised populations (e.g. clinical, criminal justice and forensic samples) with known exposure to IPV and/or stalking, which tend to assess clinical symptomology, psychopathology and other aspects related to IPV and/or stalking in greater detail about the nature and context of their behaviours, in comparison to studies that utilise general population samples (Johnson, 2006; Mechanic, 2011). As a result, it was considered that including a diverse range of samples may skew the findings due to potential difficulties in the

comparison and synthesis of studies resulting from large variability between samples.

Initial search results were saved to a reference management software (EndNote X9). A two-phase screening process was undertaken to identify potentially eligible studies. Studies were initially screened by viewing the title and abstract to remove duplicates or clearly irrelevant studies. A second screen was then carried out with the remaining studies using the PICO framework to conduct a more detailed screening of the abstracts and full-texts. Those studies failing to meet the criteria were excluded and the rationale for exclusion was documented.

Table 1. Inclusion and Exclusion Criteria

	Inclusion criteria	**Exclusion criteria**
Population	Adult males and females (18 years and above) that have perpetrated both IPV and stalking. Studies will be included if samples have previous conviction(s) or a history of IPV-only or stalking-only but have previously or are currently being assessed for perpetrating the other behaviour. All studies will include samples linked to the Criminal Justice System (i.e. arrested, charged, convicted, imprisoned, in contact with Probation) or be recognised by agencies as engaging in both IPV or stalking behaviours. No restrictions on type of setting – samples taken from both forensic, clinical, community and custody settings. Any gender, nationality and ethnicity.	Sample only includes males and females aged 17 years and younger. Study does not include sample with conviction(s) or history of IPV or stalking perpetration. Individuals not involved with the Criminal Justice System (i.e. university students, general population). Studies that focus on victims' self-report and experiences of IPV and stalking victimisation.
Intervention (exposure)	Studies assessing the prevalence and/or characteristics associated	Studies do not assess the prevalence and/or characteristics associated

	with co-occurring IPV and stalking perpetration. Studies will not be limited to any measurement method, and self-report, psychometric measures, risk assessment tools or official records of IPV and stalking will be included in the review to establish prevalence rates and/or associated characteristics.	with co-occurring IPV and stalking perpetration. Studies that focus on general violence or offending of a different nature.
Comparators	As this is a review of prevalence/characteristics, there is no comparator. Studies are likely to include a range of samples which are unlikely to include a comparator.	As this is a review of prevalence/characteristics, there is no comparator. Studies are likely to include a range of samples which are unlikely to include a comparator.
Outcomes	Prevalence of co-occurring IPV and stalking perpetration and the measures of association between these and/or related characteristics that link the perpetration of both behaviours. Studies must consider IPV and stalking perpetration in the context of intimate relationships. Studies will not be limited to any single form of IPV or stalking. Included studies can examine the perpetration of physical, sexual, psychological and emotional abuse towards their partner. Studies included will identify any form of method of stalking behaviour employed by the perpetrator (i.e. following/pursuit behaviours, harassment, threats, property damage, cyberstalking). Studies must refer to a definition of IPV or stalking. Any definition of IPV or stalking as defined by study authors will be accepted.	Studies that explore the perpetration of IPV-only or stalking-only. Studies that consider IPV and stalking perpetration in different relationship contexts outside of intimate partners (i.e. family member, stranger, celebrity). Studies do not examine the prevalence and/or characteristics or risk factors associated with co-occurring IPV and stalking perpetration. Studies that do not refer to a definition of IPV or stalking.
Study design	Any quantitative study design will be included, however studies expected to be included will be cross-sectional, cohort studies	Reviews; book chapters; commentaries; literature reviews; editorials; discussion/opinion pieces;

	(prospective or retrospective) and case-control studies. Descriptive statistics to ascertain prevalence of co-occurring IPV and stalking and/or use of inferential statistics to determine relevance of characteristics. Studies that do not conflate IPV and stalking.	case studies; qualitative studies. No use of descriptive statistics to determine the prevalence of co-occurring IPV and stalking perpetration, or no use of inferential statistics to determine relevance of characteristics associated with co-occurring IPV and stalking perpetration. Studies that conflate IPV and stalking.
Additional criteria	Studies may be conducted in any country, however, will only be included if they are available in English due to limited resources. Eligible studies may be either published or unpublished. Year of publication 1989 (to coincide with emergence of anti-stalking legislation) – 2020.	Studies not written in English.

3.4 Quality Assessment

Studies that met the inclusion criteria were assessed for methodological quality to ensure that good quality studies were included. A quality assessment tool was developed in order to critically review studies eligible for narrative synthesis by combining elements of four well-known and validated quality assessment tools: the Critical Appraisal Skill Programme for cohort studies (CASP; 2018), National Heart, Lung and Blood Institute (NIH) Quality Assessment Tool for Observational, Cohort and Cross-sectional Studies (NIH, 2019), the Joanna Briggs Institute (JBI) for analytical cross-sectional studies (Moola *et al*., 2017) and the British Medical Journal (BMJ) Appraisal Tool for Cross-Sectional Studies (Downes, Brennan, Williams & Dean, 2016). These tools were tailored into a new

quality assessment tool (Appendix 3) to ensure that the different methodological biases in studies were adequately considered.

The quality assessment tool used for this review included 25 questions. The key variables assessed were study aims, definitions of IPV and stalking, study design, selection/sampling methods, measurement/performance bias, statistical bias, attrition bias and applicability of results. These particular biases were considered due to the significant impact on the reliability, validity and outcomes of relevant studies.

Each assessment item was measured on a three-point scale: a score of two if the criterion was fully met, one if the criterion was partially met, and zero if the criterion was not met. The criterion was omitted if it was unclear whether the criterion had been met or if not considered applicable to the study. Additional guidance on how to rate each criterion contained in the quality assessment tool can be found in Appendix 4. Scores were summed to give a total quality assessment score ranging from 0 to 50, unless unclear or inapplicable items were apparent which were subtracted from the total score. Higher scores indicated a higher quality study. Scores were then converted into percentages to enable comparison of quality between studies. Studies were categorised as either low quality (0-29%), moderate quality (30-69%) or high quality (70-100%).

Quality assessment of all studies was carried out by one reviewer. However, to ensure reliability of quality assessment scoring, 57% of studies (n=4) studies were scored by a second independent reviewer (a peer on the Doctorate in Forensic Psychology programme) to ensure consistency in scoring. Inter-rater reliability between both reviewers indicated a very good level of agreement, κ = .845 (95% CI, .74 to .95), p < .001. Inconsistencies in scoring between the two

reviewers were discussed until reaching a decision on a final quality assessment score.

3.5 Data Extraction

Data were extracted from included studies using a pre-defined data extraction form (Appendix 5) to obtain the required information. This allowed for a structured and consistent approach to the extraction process, and enabled comparisons to be made between studies. It was decided to extract data after assessing the quality of relevant studies in order to reduce potential bias towards the inclusion of studies that appeared to support the review questions (Fleeman & Dundar, 2017). The data extraction form was piloted on three studies to ensure that it allowed the reviewer to obtain the required data (Centre for Reviews and Dissemination, 2009).

Data extracted was completed by one reviewer for all studies prior to narrative synthesis, however, a second independent reviewer also extracted data for 57% (*n*=4) of studies. A meta-analysis was not undertaken due to heterogeneity of definitions, methodologies, analyses and outcomes. Instead, this review will present a narrative synthesis of overall study results.

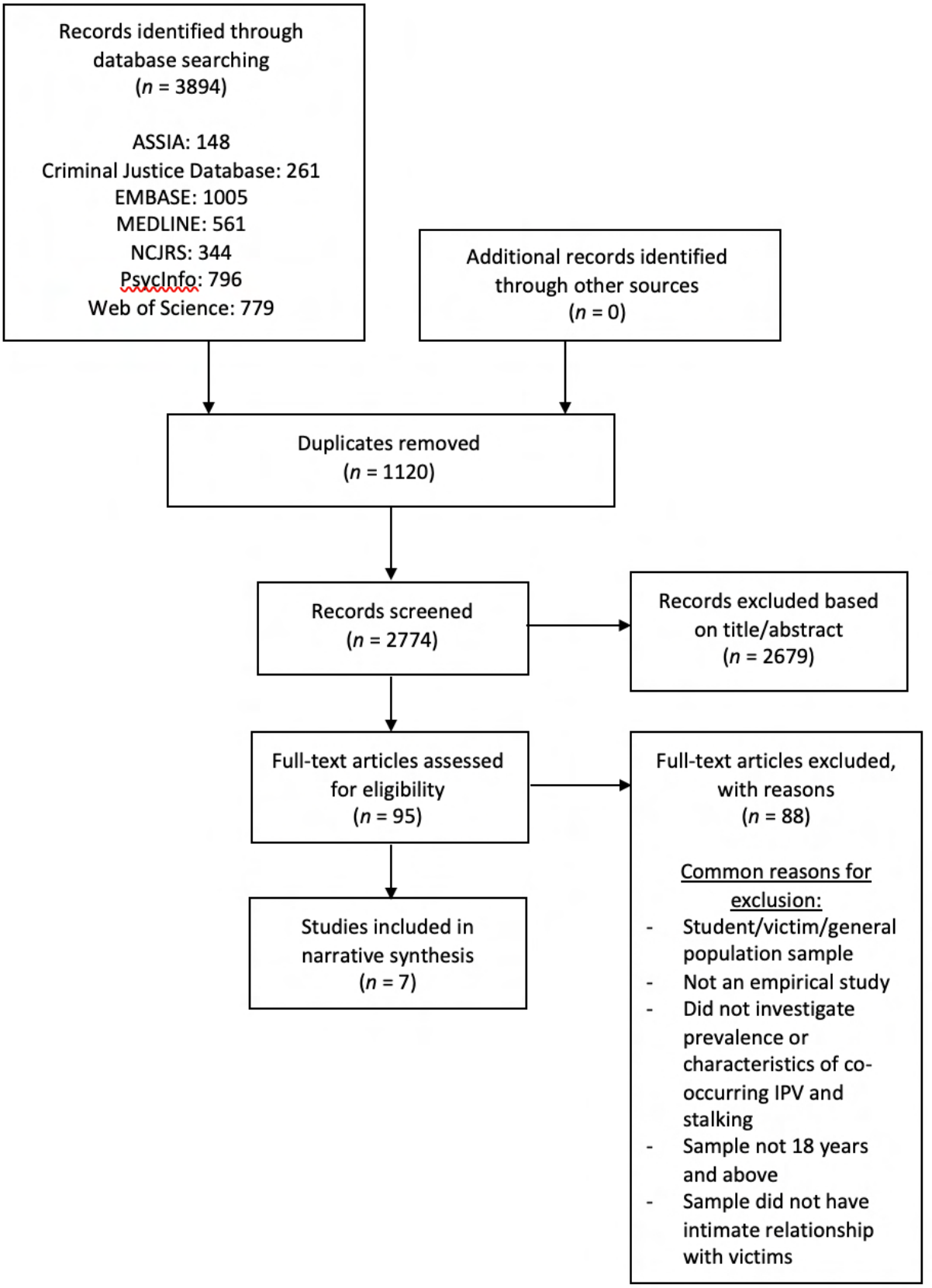
4.0 Results

4.1 Description of Studies

The total number of records yielded from the electronic databases was 3894; 1120 were duplicates which were removed. A total of 2658 records were excluded due to the title and abstract being deemed irrelevant, and 21 records were removed as they were not in English. The pre-defined inclusion and inclusion

criteria were applied to the full text of the remaining studies, leading to a further 88 records being removed according to PICO, which resulted in seven studies meeting the inclusion criteria. Reasons articles were excluded included: use of victim or general population samples, studies that focused on IPV-only or stalking-only perpetration, and articles in the form of literature reviews or book chapters. These final papers were subjected to a quality assessment, and no studies were excluded based on quality, leaving a total of seven papers included in the review. A flowchart of the study selection process can be found in Figure 2. When discussing the results, numbers in brackets refer to the Study ID numbers listed in Tables 2 and 3.

Figure 2. Diagram of study selection process



4.2 Characteristics of Included Studies

A total sample of 1288 participants contributed to the data (1237 males, 96%; 51 female, 4%). Sample sizes ranged from 115 (McEwan *et al*., 2017b) to 340 (Basile & Hall, 2011). The studies were published between 1997 and 2018 (refer to Table 2 for a summary of study characteristics). The included studies were all published articles and all but one of the studies (Gerbrandij *et al.*, 2018) were cross-sectional in nature, which was a cohort study.

Of the seven included studies, four studies were conducted in the United States[1, 2, 3, 6], two in Australia[4, 5] and one in Spain[7]. The lack of studies undertaken in the United Kingdom highlights the limited amount of research which met the inclusion criteria in relation to the review question and lends further support to the need for this review.

Studies differed in terms of their specific aims. Five studies[2, 3, 5, 6, 7] stated similar aims of exploring characteristics that differentiate between co-occurring IPV and stalking perpetration, and IPV-only or stalking-only perpetration. McEwan *et al*. (2017a) investigated risk factors associated with stalking violence, persistence and recurrence by examining associations between these outcomes and various characteristics. Basile and Hall (2011) examined the prevalence of co-occurring IPV and stalking perpetration through comparing models of IPV which treated psychological abuse and stalking as either combined and separate constructs. Despite the differences in their approach, the exposure and outcome of each study was deemed relevant to the current review.

As expected, the definition and measurement of IPV and stalking varied across studies. Most studies provided definitions for both IPV and stalking[3, 4, 5]. However, three studies[2, 6, 7] only included a definition for either IPV or stalking.

Only one study conceptualised IPV as including physical, psychological and sexual aggression[1].

All other studies that defined IPV[3, 4, 5] referred to IPV as including physical violence or a threat of physical violence. McEwan *et al.* (2017a) discussed how this was due to the difficulty in determining other forms of abuse in intimate relationships. Basile and Hall (2011) incorporated stalking into their definition of IPV, but did not provide a separate definition to clarify how the authors were conceptualising stalking. All studies that reported a stalking definition included repeated or unwanted acts that would cause the victim distress or fear[3, 4, 5, 6, 7]. However, stalking was also defined using criminal law in four studies[2, 3, 4, 7].

Of the seven studies included in the review, four studies[2, 3, 4, 5] assessed IPV and stalking across participants' lifetime. One study[1] assessed IPV and stalking occurring in the 12 months prior to the incident that resulted in participants being made subject to probation. The remaining two studies[6, 7] did not specify the time period in which they explored IPV and stalking perpetration.

Table 2. Key information from included studies

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
1	Basile & Hall (2011) Published, USA	To examine the fit of an IPV measurement model where stalking items are combined with indicators of psychological abuse relative to the fit of a measurement model where psychological abuse and stalking are treated as distinct constructs.	*N*=340 males arrested for physical assault of a female intimate partner. Recruitment: Convenience sample from corrections department who were either adjudicated in IPV court or coming through probation department. Age: 18-25 (33.3%), 26-40 (49.1%), 41+ (17.6%). Ethnicity: Black non-Hispanic (47.4%), Hispanic (31.2%), White (17.9%), Other (3.5%).	Design: Cross-sectional. Data collection: Survey. Measures: Adapted items from National Violence Against Women Survey (NVAWS; Tjaden & Thoennes, 2000); Conflict Tactics Scale (CTS; Straus, 1979); Centers for Disease Control and Prevention (CDC; Basile & Saltzman, 2002). Analysis: Descriptive statistics, Confirmatory Factor Analysis (CFA).	96.8% (*n*=329) of participants reported perpetration of at least one behaviour representative of each violence type (physical violence, psychological abuse, sexual abuse and stalking): 1.4% (*n*=4) reported perpetration of at least one act of physical, sexual and stalking behaviour. 0.3% (*n*=1) reported perpetration of at least one physical, stalking and psychological behaviour. 0.9% (*n*=3) reported perpetrating one physical and stalking behaviour. 0.3% (*n*=1) reported perpetrating at least	Strengths: Relatively large sample size. High disclosure rates despite participants completing survey prior to court cases being adjudicated. Focused on multiple types of IPV perpetration by the same perpetrator. First study to compare the factor structure of the four versus three violence types and evaluate indicators of these constructs. Inclusion of an extensive list of stalking perpetration behaviours along with other types of IPV. Weaknesses: Limited ability to generalise results outside of this region and court-mandated men (sample likely represent more serious offenders whose	Moderate (59%)

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
			Education: High school graduates (40%), college (22.1%), less than high school (27.5%).		one stalking and sexual behaviour. 0% (*n*=0) reported perpetrating any stalking or psychological behaviours. 0% (*n*=0) reported perpetrating any stalking, psychological or sexual behaviours.	behaviours have been confirmed). Poor response rate (27%). Reliance on self-report influencing reporting bias. Data on severity of four violence types not included in study design. Items used to capture each violence type may not cover the full extent of behaviours that characterise each of the violent outcomes.	
2	Burgess *et al.* (1997) Published, USA	To explore the differences between domestic violence cases that have a stalking component and those that do not and to explore if there are patterns of stalking behaviours.	*N*=120 individuals charged with domestic violence offences. Comparison group: Divided into two groups based on whether or not stalking behaviours were reported. Recruitment: Convenience sample using two procedures: 1) a	Design: Cross-sectional. Data collection: Survey. Measures: Stalking Checklist (Wright *et al*., 1996) was adapted for use with IPV participants. Analysis: Pearson correlation, stepwise multiple regression, canonical discriminant analysis.	30% of participants (*n*=36; 30 male, 3 female 3 did not report gender) self-reported stalking behaviours; 70% (*n*=84) did not report stalking behaviours. Variables that significantly differentiated between self-reported stalking and non-stalking cases included: history of stalking another victim, history of	Strengths: First empirical analysis on stalking using a forensic IPV sample. Use of comparator group to compare characteristics of IPV-only and both IPV and stalking perpetrators. Considered whether demographic differences/method of data collection impacted on differences between stalkers and non-stalkers. Provided theoretical models for	Moderate (60%)

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
			jail where individuals awaited arraignment for their charge of IPV and stalking offences, and 2) individuals attending a court-ordered batterer program. <u>Age:</u> *M*=31.41. <u>Gender:</u> 91.2% male, 8.8% female. <u>Ethnicity:</u> 61% Caucasian, 8.3% Hispanic, 22.2% Black.		assault, living alone and alcohol abuse all positively correlated with stalking. Perceived victim provocation, living with children and being married negatively correlated with stalking. Five variables accounted for 39.1% of the variance in differentiating between stalking and non-stalking cases: prior surveillance of victim, incident occurring in an open/public place, less perceived victim provocation, victim was strangled or choked, and prior stalking by the offender. Several other variables were considered important for discriminating between	co-occurring IPV and stalking cases. <u>Weaknesses:</u> Convenience sample of court-derived volunteers. Small sample size. Reliance on self-report and likelihood of inaccurate responding. Participants awaiting arraignments in court may have been unwilling to admit to committing additional behaviours. Authors did not report how many participants came from each recruitment procedure.	

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
					IPV stalkers and non-stalking IPV participants: victim was sleeping, victim using drugs, beating of the face, history of offender being assaulted, prior stalking of victim, offender living alone and perceived provocation.		
3	Gerbrandij *et al.* (2018) Published, USA	To examine similarities and differences within IPV and intimate partner stalking (IPS) offenders by exploring demographic, criminal history and diagnostic variables. Another aim was to examine the utility of abridged versions of two risk assessment tools developed for use with IPV offenders and IPS offenders.	*N*=158 male offenders charged with IPV and/or stalking related offences. Comparison group: three groups of IPS offenders (*n*=55), IPV offenders (*n*=51) and IPVS (history of both IPV and IPS) offenders (*n*=52). Recruitment: Convenience sample of	Design: Cohort. Data collection: Semi-structured interview, diagnostic interview and clinician-rated assessments. Also used official records to corroborate self-report. Measures: Structured Clinical Interview for DSM-IV Disorders (SCID) I and II (First, Spitzer, Gibbon & Williams, 1997, 2002), Brief	Significant differences for sociodemographic characteristics (race, marital status and current relationship status) observed between the three groups. However, these differences were modest. More Caucasian and Hispanic participants in IPS group, whereas African American participants more likely to be classified into the two IPV	Strengths: Use of comparator groups. Multiple sources of data. Measures used had adequate to strong reliability values. Use of well-established interview schedules. Considered covariates in analyses (PCL:SV, race/ethnicity, marital status, and current relationship status). First study to analyse risk assessment tools within subgroups of prior IPS and IPV offenders.	High (80%)

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
			individuals court-ordered to attend a community treatment programme. Age: 18-70 (*M*=34.23; *SD*=10.65). Ethnicity: 36.1% Black or African American (*n*=57), 25.3% Hispanic (*n*=40), 21.% Caucasian (*n*=34), 16.5% multiple or other backgrounds (*n*=26), race missing for one participant. Primary offence: Stalking or harassment (*n*=68, 43%), assault (*n*=40, 25.3%), violation of an order of protection (*n*=34, 21.5%), primary	Spousal Assault Form for the Evaluation of Risk (B-SAFER; Kropp, Hart & Belfrage, 2005), Guidelines for Stalking Assessment and Management (SAM; Kropp, Hart & Lyon, 2008), and Psychopathy Checklist, Screening Version (PCL:SV; Hart, Cox & Hare, 1995). Analysis: ANOVA for continuous variables, Chi-square frequency analyses for categorical variables, ROC analyses, hierarchical multivariate logistic regression, Mann-Whitney *U* tests.	groups (IPV and IPVS). IPV group more likely to be married/cohabiting and in a stable long-term relationship, whereas those in two stalking groups more likely to be single, separated or divorced and not in long-term relationship. None of the criminal history or diagnostic variables differed between the three groups.	Weaknesses: Outpatient sample that showed relatively little risk of serious violence/charged with minor offences permitting only a probation sentence. Results may not generalize to more violent IPV/IPS populations. Small sample sizes in each comparison group potentially impacting upon limited and modest differences between groups. Participants classified into groups based on their instant offence so they may have previously engaged in the other behaviour in the past (making differences between groups less clear).	

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
			offence data missing for 3 participants.				
4	McEwan *et al.* (2017a) Published, Australia	To investigate risk factors associated with stalking violence, persistence and recurrence by elucidating associations between various clinical, demographic, offending and stalking-related characteristics, and these three outcomes. Also investigated relationships between violence and a number of other variables for which there have been contradictory findings or limited previous evaluation (i.e. previous physical IPV along ex-intimates).	*N*=157 individuals with an established history of stalking behaviour. Recruitment: Convenience sample of clients referred to a stalking clinic in a forensic mental health service. Age: 18+ (*M*=35; *SD*=10.8). Gender: 143 (91%) male, 14 (9%) female. Nationality: 124 (79%) born in Australia, 35 (22%) immigrants to Australia.	Design: Cross-sectional. Data collection: Interview and survey. Self-report corroborated by information from referrals, official records and family member/caseworker. Measures: Coded variables relating to stalking, violence, threats, prior convictions and approach behaviours. Administered SCID-II (for 105 participants). Analysis: Chi-square analysis for categorical variables, Mann-Whitney U tests for ranked data, binary logistic	Of the 90 ex-intimate stalkers, 22 (24%) self-reported or had evidence of physical IPV towards the victim during the previous relationship. Among ex-intimates, prior IPV, explicit threats, loitering/spying and property damage best predicted stalking violence.	Strengths: First study to examine risk factors for different stalking outcomes in the same sample. Self-report corroborated by objective methods where possible. Risk factors for ex-intimates and other stalkers analysed separately. Converting regression models to improper models reduces the sample-specific variance which potentially made the model more applicable outside of the sample. Addressed non-response bias by examining whether those who refused consent differed markedly from the rest of sample. Weaknesses: Retrospective design	Moderate (69%)

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
				regression, ROC analysis.		limits causality between relationships. Small sample size likely reduced statistical significance of results, particularly when broken down into subgroups. Sample unlikely to include the most serious stalking cases that result in imprisonment of offenders which may account for low prevalence of disorders reported.	
5	McEwan *et al.* (2017b) Published, Australia	To provide the first estimate of the prevalence of previous IPV in a sample of directly assessed ex-intimate stalkers. A secondary aim was to identify demographic, clinical, or behavioural variables that differentiated between ex-	*N*=115 males with a stalking or stalking-related charge, or presenting with stalking behaviours. <u>Recruitment:</u> Convenience sample of individuals referred to a community-based forensic mental	<u>Design:</u> Cross-sectional. <u>Data collection:</u> Interview and psychometric testing. Official records obtained from police. <u>Measures:</u> Coded variables relating to index stalking and prior IPV, prior offending, stalking behaviours during	History of prior IPV identified in 39 cases (33.1%). Factors significantly associated with IPV were: criminal history, prior physical violence to other victims, SCID-II diagnosed personality disorder, SCID-II Cluster B diagnosis, SCID-II Cluster B traits, shared	<u>Strengths:</u> Multiple sources of data (self-report and official records). Clear definitions of variables. Comprehensive review of relevant literature and implications of results. Identified novel information about characteristics associated with engaging in both IPV and stalking. Addressed limitations of past	High (73%)

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
		intimate stalkers who had and had not engaged in prior IPV against the stalking victim.	health service for stalking behaviour. Age: 18-65 (M=34.27, SD=9.94). Ethnicity: Not specified, but 13 (15.3%) of the 2010–2013 sample spoke English as a second language, and 70 (82.4%) were born in Australia. Education: 80 (67.8%) completed primary but not secondary education, 24 (20.3%) completed secondary school, 14 (11.9%) completed tertiary education.	index stalking episode and mental disorder. Clinicians administered SCID-II and diagnosed psychopathology and substance use disorders using Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (Text Revision) (DSM-IV-TR). Analysis: Chi-square for dichotomous variables, Mann-Whitney U for continuous variables, binary logistic regression, ROC analyses.	children with victim, and stalking violence. Stalkers who engaged in previous IPV were more likely to present with Cluster B personality traits than those who only stalked. Final model for identifying prior IPV against the stalking victim included any prior physical violence and shared children with the victim, and this model effectively discriminated between stalkers who had and had not engaged in prior IPV.	literature regarding the conceptualisation of IPV and stalking. Weaknesses: Causal relationship between IPV and stalking could not be explored due to retrospective data. Study likely underestimates the true prevalence of prior IPV (particularly psychological abuse). Police recording of information did not allow for the nature of IPV reported (i.e. physical or psychological). Forensic sample limits generalisability and potentially inflates prevalence of personality disorder traits compared to a community sample. No comparator group used. Small sample size.	

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
6	Norris *et al.* (2011) Published, USA	This study examined a clinical sample of intimate partner batterers to assess the stalking-related behaviours committed against the participants' intimate partners. The study also aimed to examine the levels of severity between stalking-related behaviours and IPV, as well as identify differences between batterers who exhibited stalking-related behaviours and those who did not.	*N*=120 male IPV perpetrators. Comparison group: Divided participants into three categories: non-stalkers, sub-clinical stalkers, clinical stalkers to examine differences between batterers who perpetrate stalking-related behaviours and those who do not. Demographic and criminal history differences did not account for differences across stalker types. Recruitment: Convenience sample of individuals self-referred (28%) or court-referred (62.6%) for IPV	Design: Cross-sectional. Data collection: Semi-structured interview and self-report psychometric measures. Measures: Risk Assessment Inventory for Stalking (RAIS; Palarea, Scalora & Langhinrichsen-Rohling, 1999), two versions of the Conflict Tactics Scale-2 (CTS-2; Straus, Hamby, Boney-McCoy & Sugarman, 1996) to assess more specific forms of violence (CTS-Partner and CTS-Others), Millon Clinical Multiaxial Inventory-III (MCMI-III; Millon, Davis & Millon, 1997), Beck Depression	More than 66.7% of participants endorsed at least one stalking-related behaviour. More severe stalking was significantly related to higher levels of IPV and more extreme psychopathology. Significant effects for antisocial and sadistic personality traits, alcohol dependence, drug dependence and MDAI total score. Clinical stalkers had highest means compared to sub-clinical and non-stalkers. Sub-clinical and clinical stalkers are significantly more likely to engage in more negotiation behaviours than non-stalkers, with	Strengths: Use of comparator groups to report differences between stalkers and non-stalkers. Mostly well-validated measures. Controlled for potential differences across stalker types. Provided useful insight into differences between men who engage in this type of behaviour. Weaknesses: Reliance on self-report measures means that participants may have misrepresented their behaviours and tendencies. Lack of generalisability as sample limited to participants in IPV treatment program that lacked ethnic diversity. Small sample size. Potential impression management as participants were in treatment. Analyses	Moderate (54%)

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
			treatment at a local public hospital. Age: 19-62 (*M*=36.4). Ethnicity: 82.5% White, 10.8% African American, 4.2% Hispanic, 0.8% Asian American, 1.8% Other. Education: 7-20 years (*M*=12.1).	Inventory-II (BDI-II; Beck, Steer & Brown, 1996), Multidimensional Anger Inventory (MDAI; Siegel, 1986). Analysis: Chi-square analysis, Analysis of Variance (ANOVA), Multivariate Analysis of Variance (MANOVA).	psychological abuse significantly more likely in clinical stalkers. Antisocial personality considered an important difference among the three groups, rising with the endorsement and increasing severity of stalking behaviours. A sadistic/aggressive personality and drug and alcohol dependence significantly separated clinical stalkers, suggesting that abuse of drugs and alcohol might affect the stalker, possibly promoting more severe behaviours. Significant differences in MDAI scores between stalkers and non-stalkers,	only identified endorsement of at least one stalking-related behaviour, therefore may not be a pattern of stalking behaviour.	

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
					indicating that anger could play a role in whether a batterer chooses to engage in stalking behaviours.		
7	Viñas-Racionero *et al.* (2017) Published, Spain	To analyse stalking in Spanish court cases IPV and contrasts the benefits of the new bill article 172ter, which criminalises stalking, compared with the Organic Law 1/2004 on partner violence. A specific aim was to describe descriptive statistics on relevant offender characteristics.	*N*=278 court cases of partner violence. Recruitment: Convenience sample of cases extracted from a court that prosecutes family violence cases. Age: 18+ but no further information provided. Gender: 91% (*n*=253) males, 9% (*n*=25) females.	Design: Cross-sectional. Data collection: Cases extracted from two file sources - court archives and a restricted database. Measures: Data coded using a codebook, consisting of 28 dichotomous items grouped into four different areas: crime variables, victim and offender demographics, stalking, physical violence and confrontation. Coding scheme based on previous work on IPV and stalking risk assessment.	62.95% (*n*=175) of cases were assaults against an intimate or ex-intimate partner without stalking, and 37.05% (*n*=103) of cases were incidents that incorporated stalking behaviours. Stalking offenders (*n*=103) were males (94.18%, *n*=97), with 44.66% (*n*=46) of this subgroup had prior partner violence convictions. More than a third of stalkers (36%) engaged in physical violence and/or property violence. Both groups of stalkers (stalkers who	Strengths: One of the first studies of partner stalking in Spain. Offers guidance for implementing more effective stalking management strategies. Attempts to empirically classify participants to six clusters of stalking strategies. Weaknesses: Study only analysed stalking behaviours reported by victims, law enforcement or witnesses which limited its ability to provide a holistic view of partner stalking. Some stalking behaviour may not have been detected or reported. Cannot provide longitudinal trajectories of stalking	Moderate (54%)

Study ID	Author(s), year, country	Study aims	Sample and setting	Research design and data source	Results	Strengths and limitations	Quality category (%)
				Analysis: Cluster analysis, binary logistic regressions.	physically attacked victims or their properties and stalkers who did not) were similar in their use of intimidatory, controlling, and intrusive motivations. However, only stalkers who used physical violence presented concurrent intimacy-seeking and coercive stalking behaviours.	dynamics. Lack of valid instruments to measure stalking behaviour. Limited ability to correctly classify subjects in a cluster analysis with nonparametric data.	

4.3 Quality of Included Studies

The quality of study ratings ranged from 26 to 40 out of a possible 50 (*M*=30.86; *SD*=5.34). Table 3 outlines the results of quality assessment for each study.

Table 3. Quality scores for all studies

Study ID	Study	Initial Screening (max=6)	Study Design (max=2)	Sampling and Selection Bias (max=12)	Measurement and Performance Bias (max=14)	Statistical Bias (max=10)	Attrition Bias (max=2)	Applicability of Findings (max=4)	Total Score (%)
1	Basile & Hall (2011)	5	2	6	3	6	2	3	27 (59%)
2	Burgess *et al.* (1997)	5	2	7	4	7	2	2	29 (60%)
3	Gerbrandij *et al*. (2018)	6	2	8	9	10	2	3	40 (80%)
4	McEwan *et al.* (2017a)	6	1	8	4	9	2	3	33 (69%)
5	McEwan *et al.* (2017b)	6	2	8	4	10	2	3	35 (73%)
6	Norris *et al*. (2011)	5	2	5	2	9	0	3	26 (54%)
7	Viñas-Racionero *et al*. (2017)	5	2	7	4	4	2	2	26 (54%)
	Average Quality Score (%)	5.43 (90.5%)	1.86 (93.0%)	7 (58.3%)	4.29 (30.6%)	7.86 (78.6%)	1.71 (85.5%)	2.71 (67.8%)	

Studies varied in overall quality, achieving quality scores ranging between 54% and 80%. Two studies were considered high quality, five studies were considered moderate quality, and no studies were deemed low quality. Narrative

synthesis was carried out on studies that met the inclusion criteria and quality assessed above 50%. This threshold was considered to be a reasonable level of quality for inclusion to ensure that studies were of at least moderate quality, as well as possibly preventing bias. The seven studies subjected to quality assessment all achieved this score and therefore were included in the review. Recommendations for future research in reducing potential bias are highlighted in the discussion of this review.

4.4 Sampling and Selection Bias

The selection/recruitment process was considered clearly defined and appropriate in three studies[1, 3, 5]. Five studies[1, 2, 3, 5, 7] reported their inclusion and exclusion criteria. All studies employed convenience sampling of participants which were representative of the target population. However, it is noted that the forensic nature of samples employed in all studies were reflective of more serious offenders whose behaviours had been reported and confirmed, which may limit the generalisability of the findings to other subgroups of co-occurring IPV and stalking perpetrators who have no involvement with the Criminal Justice System. Satisfactory response rates were achieved in five studies[2, 3, 4, 5, 7], which reduces the risk of bias of studies not adequately representing the target population.

It is important for studies to provide clear descriptions of the recruitment process and participant demographics in order for researchers to be able to replicate the same methodology, using as close to the original parameters as possible, and make comparisons in replications. Most studies provided adequate information of the population from which participants were recruited, including demographics, location and time period. Four studies[2, 4, 5, 7] omitted details relating to participant demographics, such as ethnicity and age ranges.

Participants were from similar populations who were recruited from a variety of settings including court-ordered community treatment programmes[2, 3, 6], a forensic mental health service[4, 5] and a corrections department[1, 2]. One study used archival data from criminal court records[7]. Four studies recruited samples of IPV perpetrators[1, 2, 6, 7], two studies consisted of stalking perpetrators[4, 5] and one study used a sample that comprised perpetrators of either IPV or stalking[3]. Considered together, samples of included studies indicate that perpetrators from a variety of environments (i.e. mental health and criminal justice) were included.

None of the studies had a clearly sufficient sample size as recommended by the quality assessment checklist (400+), with several studies having a small sample size which was reduced further when participants were divided into subgroups; potentially reducing the power of statistical analyses. However, it is worth noting that no study provided power calculations which makes it unclear whether sample sizes were appropriate for reliable estimates of the measures of interest. Therefore, it may have been that studies had enough participants to detect an association with less than 400 participants. In place of sample size justifications, five studies[1, 3, 4, 5, 7] provided variance estimates and effect sizes regarding associations between variables.

Only two studies[1, 5] did not include any comparison group to control for confounding variables that might influence the differences between groups. The remaining studies used a variety of groups to make comparisons between outcomes but none included a control group with no exposure to IPV or stalking perpetration. Two studies[2, 7] divided participants into two groups to compare differences between stalkers and non-stalkers. McEwan *et al*. (2017a) compared the differences between ex-intimate and non-ex-intimate stalkers, whereas Norris *et al.* (2011) divided participants into three groups (non-stalkers, sub-clinical

stalkers and clinical stalkers). Gerbrandij *et al*. (2018) also classified participants into three groups to explore the differences between IPV perpetrators, stalking perpetrators and those who had a history of both IPV and stalking.

4.5 Measurement and Performance Bias

This was the most common source of bias across the included studies. Due to the cross-sectional design of most studies, the exposures and outcomes were measured at the same time. This limits the ability of these studies to derive causal relationships between exposures and outcomes. Indeed, cross-sectional studies are more prone to bias than other study designs and tend to provide weaker evidence.

Measurement of exposures and outcomes were clearly described and implemented consistently across participants in all studies. Three studies[1, 2, 6] lacked objective measurement through use of self-report from participants to identify the prevalence or characteristics of co-occurring IPV and stalking, whereas two studies[3, 4] used multiple measurement methods by corroborating participant self-report with official records, documentation and individuals known to participants. Reliance on self-report is considered to increase the risk of measurement bias due to the possibility of participants offering biased estimates of self-assessed behaviour, either due to misunderstanding the measures or as a result of socially desirable responding. Using multiple methods of measurement increases the quality of measurement and confidence in the obtained results. Two studies[5, 7] relied on archived databases and official records provided by the courts or police. However, use of secondary data permits the inclusion of participants who otherwise may have refused to consent to the research. It is also possible that official records were inconsistent in their recording and were subject to errors

in recording information. Further, only having access to databases and official records may have underestimated the prevalence and characteristics of co-occurring IPV and stalking.

Measurement of outcomes in studies included a variety of measures, several of which were validated tools. However, few studies utilised the same measures to assess exposures and outcomes, making it difficult to make comparisons across studies as not all measures accounted for the same forms of abuse or behaviours. Measures used to explore characteristics included the SCID-I and II[3, 4, 5], PCL:SV[3], PCL-R[4], MCMI-III, BDI-II and MDAI[6]. Measures used in studies that pertained to IPV and stalking perpetration included the NVAWS[1], B-SAFER[3], CTS and CTS-2[1, 6], Stalking Checklist[2], SAM[3] and RAIS[6]. Four studies[1, 3, 6, 7] reported measurement reliability, and measurement validity was discussed in three studies[1, 3, 6]. Most measures used were reported to have good reliability and validity coefficients, indicating the accuracy and reliability of measurement tools. There was no mention of reliability or validity in the remaining three studies[2, 4, 5]. A lack of inter-rater reliability resulted in measurement bias in two studies[4, 5], as inter-rater reliability was not reported for coding of relevant information and scoring of validated assessments to ensure the reliability of their coding or ratings. All but one study[6] reported how missing data was managed.

4.6 Statistical Bias

All included studies used statistical tests appropriate to study design and clearly described results. However, two studies[2, 6] did not report significance values or confidence intervals for some analyses. It is noteworthy that only one study[4] reported whether their data met the relevant assumptions. One study[4] conducted analyses to determine whether those who refused consent significantly

differed from included participants, minimising non-response bias. Two studies[2, 6] explored whether there were significant differences in demographic information of comparison groups that might explain the results obtained.

The reliability of results were impacted upon by the reliance on participant self-report in most studies[1, 2, 3, 4, 5, 6] as participants may not have been honest in their responding due to the sensitive nature of the studies. Settings from which participants were derived from (i.e. court-ordered treatment programmes, mental health service and corrections department) may also have influenced inaccurate responding due to potential impression management from being in treatment, over-exaggeration of mental health difficulties, or an unwillingness to admit to committing additional behaviours whilst awaiting arraignment in court.

Further, small sample sizes in overall samples and between comparison groups may have reduced the statistical power of studies. Only two studies identified and controlled for confounding variables[2, 7], whereas the remaining studies did not measure or adjust for confounding variables[1, 3, 4, 5, 6]. Thus, results from the latter studies should be treated with caution.

4.7 Attrition Bias

Risk of attrition bias was low as five studies indicated that there were no drop-outs[1, 2, 3, 5, 7]. Only one study commented on whether individuals who refused to take part were systematically different from those who participated[4], whereas Norris *et al*. (2011) did not report rates or reasons for non-completion.

4.8 Applicability of Findings

Individuals selected for participation were likely to be partially representative of the target population. Six studies considered their sampling

methods and results as a limitation of their research which hindered the applicability of their findings. Three studies[1, 2, 6] highlighted that their findings could not be generalised from their sample of court-mandated males or IPV treatment programme attendees, as such samples are indicative of higher risk offenders whose behaviours have been disclosed and confirmed. One study[3] noted that their sample presented with little risk of serious violence having only received a probation sentence, and that findings may not apply to more serious offenders.

Another study[4] implied that their findings may not apply to more serious offenders, however, adjusted their analyses to increase the applicability of their results outside of their sample. Importantly, McEwan *et al*. (2017b) highlighted that the forensic nature of their sample may have resulted in an overestimation of IPV and stalking prevalence. On the whole, although samples were all comprised of IPV or stalking perpetrators, results of included studies are limited in their generalisability to individuals whose perpetration of both IPV and stalking has not been reported or resulted in them being known to criminal justice or mental health services.

4.9 Descriptive Data Synthesis

The synthesis is divided into three sections: the prevalence of co-occurring IPV and stalking perpetration; the characteristics of co-occurring IPV and stalking perpetration; and gender differences in the characteristics associated with co-occurring IPV and stalking perpetration. A narrative approach was conducted to synthesise the data in relation to the three review questions.

4.10 Prevalence of co-occurring IPV and stalking perpetration

The first review question aimed to establish the prevalence of the co-occurrence of IPV and stalking perpetration. As discussed above, there were variations in the way that studies defined and measured IPV and stalking and so not all studies examined the same forms of each behaviour. The behaviours at the focus of each study are likely to vary without a homogeneous definition or measure. Further, the populations and period of time in which the behaviours were examined across studies differed. As a result, this creates difficulties when making comparisons across studies and should be taken into account when interpreting the prevalence rates reported. All studies reported the prevalence of co-occurring IPV and stalking. As depicted in Table 2, rates of co-occurrence of IPV and stalking differed across studies, with prevalence rates ranging from 24% (McEwan *et al*., 2017a) to 96.8% (Basile & Hall, 2011).

Basile and Hall (2011) reported that 96.8% of participants admitted perpetrating at least one behaviour that represented four different types of violence (physical violence, psychological abuse, sexual violence and stalking) over the past 12 months. This prevalence rate is considerably higher than other included studies, particularly considering participants were only asked to self-report behaviours over a 12-month period which differed from studies that examined behaviours across the lifespan. It is also notable that participants disclosed a high rate of violent behaviours considering that the sample were awaiting the adjudication of their court cases. It may be that such high prevalence rates were achieved due to the focus on multiple types of violence perpetration and range of behaviours, which may have captured additional behaviours that represent IPV and stalking which are not incorporated into measures used in other studies.

A high prevalence rate was reported in Norris *et al.*'s (2011) study. They reported that 66.7% of their sample of IPV perpetrators self-reported at least one stalking behaviour as identified using the RAIS, which explored several types of stalking behaviours (i.e. distant contact, proximate contact, threat behaviours and harm behaviours); embodying a greater range of different aspects of stalking behaviours in comparison to other stalking measures. Notably, Norris *et al*. (2011) also measured several specific forms of IPV through the CTS-2 (i.e. physical, psychological, sexual, injury and negotiation). Together, this study considered the breadth of abusive behaviours that can occur in intimate relationships, which, similarly to Basile and Hall (2011), may explain the high prevalence rate reported.

Five studies[2, 3, 4, 5, 7] found relatively similar rates of prevalence of co-occurring IPV and stalking perpetration, ranging between 24% and 37.05%. Although Viñas-Racionero *et al.* (2017) found that 37.05% of participants were IPV perpetrators who had also perpetrated stalking behaviours, the study only analysed stalking behaviours reported by victims, law enforcement or witnesses which limits its ability to provide a holistic view of partner stalking. Further, it is noted that Viñas-Racionero *et al.* (2017) and Basile and Hall (2011) did not require a minimum number of episodes for it to be considered stalking which may have inflated the true rate of stalking perpetration, particularly when considering that several definitions in the literature require stalking to consist of a pattern of multiple and repeated intrusive behaviours[4]. Viñas-Racionero *et al.* (2017) also only considered physical violence between intimate partners; overlooking the presence of psychological abuse within intimate relationships. Further, data in this study were extracted from court cases and therefore only focused on isolated episodes of IPV and stalking captured by official records, rather than a longitudinal exploration of co-occurring IPV and stalking perpetration.

In comparison, three other studies[2, 4, 5] explored the prevalence of co-occurring IPV and stalking perpetration across the lifespan. Burgess *et al.* (1997) reported that 30% of their sample of IPV perpetrators disclosed engaging in stalking behaviours, however, they did not specify what type of IPV their sample had been charged with. McEwan *et al*. (2017a) found that 24% of their sample of stalkers had previously engaged in physical violence towards the victim when the relationship had been intact. Again, this study did not consider other forms of IPV in addition to physical violence. There was a history of IPV in 33.1% of stalking cases in McEwan *et al.*'s (2017b) study, which consisted of either physical or sexual violence against the victim during the relationship. Both of these studies[4, 5] required stalking behaviours to have consisted of multiple unwanted intrusions for more than two weeks.

Although the results indicate that prevalence rates of co-occurring IPV and stalking perpetration range from 24% to 96.8%, any conclusions made should be viewed as tentative as the differences across studies do not allow for a definite estimate of prevalence.

4.11 Characteristics associated with co-occurring IPV and stalking perpetration

The second aim of this review was to identify the characteristics associated with the co-occurrence of IPV and stalking perpetration. Four studies[2, 3, 5, 6] explored the characteristics of perpetrators who engaged in both IPV and stalking behaviours. Few of the included studies explored the same characteristics, making it difficult to identify themes across studies. Studies varied in the characteristics they identified that were relevant to co-occurring IPV and staking perpetration, including sociodemographic, clinical and behavioural factors. The variables examined in each study were not consistently investigated and findings were not

replicated in other included studies, which limits the ability to draw reliable conclusions from the included studies.

Findings from the four studies indicated that there were common variables that differentiated the perpetrators who engaged in co-occurring IPV and stalking perpetration from IPV-only or stalking-only perpetrators. Several studies identified similar characteristics, for instance, two studies[5, 6] found that co-occurrence perpetrators significantly presented with SCID-II Cluster B personality disorder traits and diagnoses. Norris *et al.* (2011) specifically found that clinical stalkers who reported higher levels of IPV had antisocial and sadistic personality traits. However, no effect sizes were reported in their analyses. McEwan *et al*. (2017b) also found that stalkers having a Cluster B SCID-II diagnosis was significantly associated with prior physical abuse perpetration; which attracted a medium effect size (φ = .28). However, the overall number of Cluster B traits identified was also significantly associated with prior IPV, irrespective of whether a diagnosis was given, with this being a large effect size (θ = .71). Despite this, McEwan *et al.* (2017b) excluded the SCID-II variables from their multivariate analyses as such data was only available for a subset of participants. Overall, such findings were able to effectively discriminate between stalkers who had and had not engaged in prior IPV.

Due to the forensic nature of these samples, it could be that there was an overrepresentation of personality disorder in these populations compared to other populations. Additionally, McEwan *et al.* (2017b) did not employ a comparison or control group, thus it is unclear whether these findings are unique to co-occurrence perpetrators as it is likely that personality disorder is present in a wide range of offenders. For instance, Douglas and Dutton (2001) highlighted that antisocial personality disorder may be less prevalent in stalkers in comparison to

other Cluster B personality disorders (i.e. borderline, narcissistic and histrionic). In comparison, Douglas and Dutton (2001) suggested that IPV offenders tend to possess personalities that are reflective of antisocial personality disorder, and that their tendency for detachment reducing the likelihood of them stalking intimate partners upon the termination of the relationship. It is worth noting that McEwan *et al*.'s (2017b) study was found to have one of the highest quality assessment scores which implies these findings are reliable and consistent. In addition, Norris *et al*. (2011) also found that co-occurring IPV and stalking perpetration was more likely for individuals who experience anger, as well as alcohol and drug dependency. Co-occurring IPV and stalking perpetrators also reported experiencing increased alcohol use in Burgess *et al*.'s (1997) study, which significantly differentiated between co-occurring IPV and stalking perpetration and IPV-only cases. Two studies[5, 6] reported an association between IPV and stalking severity/violence, leading Norris *et al.* (2011) to conclude that severe stalking is associated with higher levels of IPV and psychopathology.

Gerbrandij *et al*. (2018) compared groups of IPV-only, stalking-only and co-occurring IPV and stalking perpetrators in terms of demographic, criminal history and diagnostic factors. Interestingly, none of the criminal history (i.e. previous convictions and previous violence) or diagnostic variables (i.e. substance use disorder, mood/anxiety disorder, psychotic disorder, personality disorder) differed between the three groups. However, a limitation of this study was that each comparison group consisted of small sample sizes which likely reduced the statistical power of the study. Despite this, this study was found to have the highest quality of all included studies which suggests the measurement and design of the study increase the reliability of the results. Indeed, this was the only study

that compared a group of offenders with a history of both IPV and stalking to IPV-only or stalking-only offenders.

In relation to the criminal history of perpetrators, two studies[2, 5] achieved similar findings. McEwan *et al*. (2017b) found that co-occurring IPV and stalking perpetrators had a criminal history (φ = .30) and evidence of prior physical violence towards others (φ = .23), not including the victim of their stalking offence. Similarly, Burgess *et al.* (1997) reported that co-occurring IPV and stalking participants had a history of being assaulted, a history of committing assault and stalking other victims, compared to IPV-only participants.

Three studies[2, 3, 5] revealed significant findings regarding sociodemographic characteristics for co-occurring IPV and stalking perpetrators. These characteristics included shared children with the victim (φ = .26)[5] and living alone[2]. Other factors that negatively correlated with co-occurring IPV and stalking perpetration were perceived victim provocation, living with children and being married, however, these correlations were weak[2]. Similarly, Gerbrandij *et al*. (2018) found modest differences between their three comparison groups, in that co-occurring IPV and stalking perpetrators were more likely to be single, separated or divorced. However, these factors were also found to be relevant to stalking-only perpetrators in Gerbrandij *et al*.'s (2018) study rather than exclusive to those who engage in both behaviours. With regards to race, Gerbrandij *et al*. (2018) also found that African American participants were more likely to engage in both behaviours, but again, African American participants were more likely to be classified into IPV-only and co-occurring IPV and stalking perpetration.

4.12 Gender differences in the characteristics associated with co-occurring IPV and stalking perpetration

The third aim of this review was to examine whether there are gender differences between characteristics associated with co-occurring IPV and stalking perpetration. Only three studies[2, 4, 7] included female perpetrators within their samples. However, none of these studies investigated gender differences in their sample or reported separate data for men and women to ascertain potential differences in relevant characteristics for each gender. This meant that it was not possible to answer the third review question, and will be discussed further in the discussion section.

5.0 Discussion

This systematic review aimed to establish the prevalence of and characteristics associated with the co-occurrence of IPV and stalking perpetration, in addition to examining potential gender differences between perpetrators. Seven studies met the inclusion and exclusion criteria and were therefore included in the review.

5.1 Interpretation of Findings

This review found that between 24% and 96.8% of participants have a history of both IPV and stalking behaviours. The prevalence rates seen in the aggregated sample are mostly within the range of 30%-65% as suggested by Douglas and Dutton (2001), asides from the considerably high rate of co-occurring IPV and stalking perpetration reported in Basile and Hall's (2011) study. However, other studies did not always consider other forms of IPV asides from physical

violence. Therefore, prevalence rates would possibly be higher if studies included psychological abuse in reported estimates.

Overall, the findings imply that there is an increased likelihood of IPV perpetrators also engaging in stalking after the relationship has ended. However, methodological variations across studies may explain the varying prevalence rates. Considering the selective nature of participants in all studies, it is possible that studies over-estimated the prevalence of co-occurring IPV and stalking perpetration. Rates of co-occurrence varied depending on the definitions and timeframes used to measure IPV and stalking, the type of IPV and stalking and samples used.

It is important to differentiate between more and less robust studies when interpreting the prevalence rates of co-occurring IPV and stalking perpetration. Where the higher rates were reported, this might be partly explained by the articles being of poorer quality, whereas the lower prevalence rates are derived from higher quality articles. Therefore, the quality ratings of the articles can be used to narrow down the prevalence rates which ranged from 24% (McEwan *et al*., 2017a) to 96.8% (Basile & Hall, 2011). The quality ratings for Gerbrandij *et al.* (2018), McEwan *et al.* (2017a) and McEwan *et al.* (2017b) were 80%, 69% and 73%, respectively. Taking into account these higher quality articles, the range of prevalence rates could be narrowed down to between 24% (McEwan *et al.* (2017a) and 33.1% (McEwan *et al*., 2017b). However, while these three studies were considered to be more robust, they only considered physical violence and overlooked psychological or emotional abuse in their measurement of IPV. In comparison, most of the remaining studies, albeit of a lower quality, measured a wider range of abusive behaviours (physical, psychological and sexual abuse). Therefore, this may also explain the reduced prevalence rates compared to lower

quality studies and is likely an underestimation of the true prevalence of IPV by only accounting for physical violence within intimate relationships.

This is supported by previous research which has explored the prevalence of co-occurring IPV and stalking perpetration. For example, Ornstein and Rickne (2013) examined rates of stalking among female victims of IPV and reported higher rates of stalking among participants who had experienced coercive and controlling behaviours during the relationship. Furthermore, Sheridan and Roberts (2011) established that 42% of stalking victims reported physical violence from their ex-intimate partner during the relationship, whereas 84% were exposed to emotional abuse and 49% of those who experienced emotional abuse also reported physical violence in the relationship. These findings suggest that rates of psychological abuse are likely higher than physical violence, and highlights the importance of ensuring that psychological abuse and coercive and controlling behaviours are captured when establishing prevalence rates for co-occurring IPV and stalking perpetration. This is reiterated by McEwan *et al.* (2017b) who proposed that psychological abuse during a relationship may be more prevalent among those who stalk ex-intimate partners following the end of an abusive relationship. Although it is possible for this review to use higher quality studies to narrow down the prevalence range of co-occurring IPV and stalking perpetration to 24%-33.1%, this adjusted range appears to be more reflective of co-occurring physical IPV and stalking perpetration, due to several studies not measuring other types of abusive behaviours in intimate relationships.

A further issue regarding the wide range of reported prevalence rates comes from the measurement of stalking. Both Basile and Hall (2011) and Norris *et al.* (2011) who reported the highest prevalence rates only required there to be at least one stalking episode, which deviates from the widely accepted definition of

stalking in the literature as a pattern of multiple and repeated stalking episodes (McEwan *et al.*, 2017a). Instead, the higher quality studies required there to be repeated stalking episodes over a period of time for it to be considered stalking. This implies that the true rate of stalking perpetration may have been overestimated in lower quality studies, as stalking consists of a pattern of behaviours rather than a single act (Norris *et al.,* 2011). As a result, it is difficult to establish an accurate prevalence estimate due to issues in the measurement of both IPV and stalking. Despite the difficulties in determining an accurate prevalence rate of co-occurring IPV and stalking perpetration, this review has indicated that at least one quarter of abusive intimate relationships result in stalking by ex-intimate partners upon termination of the relationship.

The evidence suggests that perpetrators of co-occurring IPV and stalking are likely to share distinct characteristics, such as a history of general violence and offending behaviour, along with more severe personality difficulties. There was some indication of antisocial and sadistic personality traits being linked to an increased severity in stalking behaviours (Norris *et al.,* 2011). Further, the findings suggest that the use of alcohol and drug use might increase the risk of stalking behaviours in IPV offenders. However, it remains unclear whether these findings are unique to co-occurring perpetrators.

It may be that individuals who engage in IPV-only or stalking-only also possess these characteristics, but to a lesser degree. The findings suggest that co-occurring IPV and stalking perpetration differs in severity to IPV-only or stalking-only perpetration. These findings provide limited support to Douglas and Dutton (2001) who proposed that co-occurring IPV and stalking perpetration is associated with Cluster B personality traits or diagnoses. However, it is important to note that some studies highlighted that findings which differentiated co-

occurring IPV and stalking from IPV-only or stalking-only perpetrators were modest (Gerbrandij *et al.,* 2018).

Further, McEwan *et al*. (2017b) found that stalkers who had a history of IPV had predominant diagnoses of antisocial personality disorder (65.5%), followed by borderline personality disorder and paranoid personality disorder (both 20.7%), and obsessive compulsive personality disorder (17.2%). This differs from Douglas and Dutton's (2001) claim that antisocial personality disorder is likely to be less prevalent in stalking offenders, and that co-occurring IPV and stalking offenders present with difficulties associated with borderline personality disorder. This finding could be explained by the overlap between antisocial and borderline diagnostic criteria, in relation to anger and impulsivity (McEwan *et al.,* 2017b).

Given that three[2, 3, 5] of the four studies exploring characteristics of perpetrators only included physical violence in their measurement of IPV, the current findings may be more applicable to co-occurring physical IPV and stalking perpetration. Restricting the study to physical IPV means that other types of IPV are overlooked which, in turn, impacts on establishing accurate correlates of co-occurring IPV and stalking perpetration. However, it is worth noting that McEwan *et al*. (2017b) and Norris *et al.* (2011) both identified that Cluster B personality traits and/or diagnoses were significantly associated with co-occurring IPV and stalking perpetration, despite the latter being the only study exploring characteristics to include physical, psychological and sexual abuse in their study. Similarly, Burgess *et al.*'s (1997) study focused on physical violence only and found that co-occurring IPV and stalking perpetration was linked to increased alcohol use, which was also reported as a significant factor for Norris *et al.* (2011) who examined a broader range of IPV behaviours. This indicates that the current findings could be applied to those who simultaneously engage in physical,

psychological and sexual violence in intimate relationships. Previous research (Juarros-Basterretxea, Herrero, Escoda-Menéndez & Rodriguez-Diaz, 2020) suggests that psychological abuse is often preceded by physical and sexual violence, and that physical and sexual violence does not occur without psychological abuse. However, although psychological abuse can often co-occur with other forms of IPV, it can also occur independently of other types of IPV (Coker, Smith, McKeown & King, 2000; Juarros-Basterretxea *et al*., 2020). Therefore, the findings of this review may not be reflective of those who engage in co-occurring psychological IPV and stalking. Future research should include all types of IPV perpetration, rather than focusing exclusively on physical violence, in order to make the findings more applicable to IPV perpetrators who engage in various forms of abusive behaviours.

5.2 Strengths and Limitations of Review

This systematic review is the first known review to explore the co-occurrence of IPV and stalking perpetration in adult offenders. However, there are some limitations to consider. It is positive that over half of the included studies were subject to quality assessment and data extraction from a second reviewer, to maintain objectivity and minimise the risk of bias. A high level of inter-rater reliability was achieved which highlights the consistency in scoring across studies. The inclusion of moderate quality studies also possibly prevented important findings from being disregarded, however, this may have also made the review more susceptible to bias by including studies that were considered weaker in design.

Restricting the review to individuals associated with the CJS was highly selective and likely introduced bias to the review. The findings of this review may

be inflated in comparison to non-forensic samples, with regards to characteristics, psychopathology and criminal histories. Also, findings would not likely be applicable to IPV and stalking offenders that are imprisoned. The findings of this review are therefore restricted to a sub-group of perpetrators and therefore cannot be applied to all populations who engage in both behaviours that might not have been detected by criminal justice agencies. Future reviews should consider employing diverse samples for findings to be generalisable to other populations. Representative samples would enable a better understanding of the true extent of the co-occurrence of these behaviours, and to determine whether there are differing characteristics associated with specific populations that may present with varying levels of risk.

It is also noted that the current review relied on perpetrator self-report, which overlooks the potential value of victim perspectives. However, it could be disputed whether victims can assess the characteristics of perpetrators in a more objective or useful manner. It is possible that inclusion of victim self-report would introduce hindsight bias in that victims may over-estimate the frequency and severity of other behaviours.

Given the sensitive nature of studies, it is possible that responses were socially desirable to avoid any further negative consequences for their behaviours. In line with the exclusion criteria, studies were excluded which employed victim samples as it was unclear whether their perpetrators were associated with the CJS. However, Langhinrichsen-Rohling, Palarea, Cohen and Rohling (2000) highlighted the importance of combining perpetrator and victim perspectives for increased accuracy in the assessment of IPV and stalking. Future reviews should include studies focusing on victim reports of IPV and stalking victimisation for a holistic approach.

5.3 Strengths and Limitations of Included Studies

Although the studies report valuable findings, it is important to consider sources of bias when interpreting the findings. There were differences across studies in relation to the specified timeframe of perpetration, with some studies considering abuse and stalking either across the lifespan or within a short period of time. Studies also interpreted IPV and stalking in different ways as evidenced by the range of definitions and conceptualisations employed. Some studies used inadequate definitions of IPV which did not take into account the wide range of IPV behaviours. IPV behaviours are limited when restrictive terminology is used for operationalising IPV. For instance, defining perpetrators as batterers implies severe acts of violence and overlooks less severe or alternative forms of IPV (Dixon & Bowen, 2012). As a result, this overlooks a proportion of abuse that occurs in intimate relationships outside of physical violence.

Similarly, definitions of stalking varied across studies, with some considering stalking as consisting of a single intrusive incident rather than a pattern of multiple incidents over a period of time. Therefore, it may be that some behaviours classified as stalking do not actually represent stalking. There needs to be a consensus among researchers about the definitions and terminology of IPV and stalking, to ensure consistency and accuracy in measurements of both behaviours (Dixon & Bowen, 2012). Without clarity on what constitutes IPV and stalking it is difficult to meaningfully interpret findings across studies.

All studies consisted of retrospective designs which are susceptible to considerable bias. The review highlighted the lack of longitudinal studies or cohort studies on this topic. Use of more robust study designs will help the development of risk assessments and tailored interventions for IPV perpetrators at risk of engaging in stalking (Senkans *et al*., 2017). Future research needs to employ

prospective study designs to explore the trajectories of co-occurring IPV and stalking perpetration (Senkans *et al*., 2017). Further, as the majority of studies originated from the United States, the findings may be skewed as IPV and stalking perpetration may vary when taking into account potential cultural differences.

The review highlighted that studies predominantly employed male samples, with several studies excluding female perpetrators which highlighted how this population are overlooked in empirical research. Studies failed to present separate findings for males and females, meaning that comparing gender differences in the co-occurrence of IPV and stalking perpetration was not possible. Although IPV and stalking are considered to be gendered crimes, the exclusion of female perpetrators from samples may have reduced the extent of co-occurring IPV and stalking perpetration. Future studies should consider gender-inclusive samples and consider how males and females may differ in terms of characteristics.

A limitation in the current literature is the absence of studies utilising control groups or considered confounding factors that might impact on findings. It remains unclear whether some reported findings are exclusive to co-occurring IPV and stalking perpetrators or whether they also apply to those who engage in either IPV or stalking perpetrators but to a lesser degree or severity. Future research should investigate whether the characteristics differ for co-occurrence perpetrators in terms of their severity rather than possessing distinctive characteristics. This would allow such studies to determine whether their findings are unique to co-occurring IPV and stalking perpetrators.

Considering the study settings and samples used, it is surprising that none of the studies used a measure related to impression management or social desirability. Future research should utilise measures of social desirability in order to control for possibility of this confounding variable skewing findings. Positively,

some studies used collateral information from official records to reduce the bias associated with self-report measures. The use of convenience sampling meant that only willing participants agreed to take part in the studies, which restricts the generalisability of findings and reduces the external validity of studies. Many studies also consisted of small sample sizes which means that inferences made from the results be done so cautiously. Future research would benefit from employing larger sample sizes in order to increase the robustness of statistical analyses.

Overall, there were clear differences between studies which obscures the ability to draw definitive conclusions about the prevalence and characteristics of co-occurring IPV and stalking perpetration. Despite these limitations, the findings provide insight into the current evidence-base around this topic, and how future research can build on the limitations discussed above to identify more reliable findings.

5.4 Conclusions and Recommendations

Overall, the findings have important implications for practice and research. The review findings highlight that practitioners should recognise that there are characteristics that appear to be distinct to co-occurring IPV and stalking perpetration (Burgess *et al.,* 1997). The aforementioned findings should be taken into account during risk assessments and consideration of treatment needs when working with this sub-group of offenders. However, Gerbrandij *et al*.'s (2018) findings imply that co-occurring IPV and stalking perpetrators in fact share more similarities than differences and that may not require unique considerations in terms of risk assessments.

The findings suggest that co-occurring IPV and stalking perpetrators may not be qualitatively different from IPV-only or stalking-only perpetrators, but simply that they differ in severity. This implies that co-occurring IPV and stalking perpetrators would likely benefit from the same interventions as IPV-only or stalking-only perpetrators, however, co-occurring IPV and stalking perpetrators would likely need longer-term and more intensive interventions taking into account the severity of characteristics.

The identification of factors related to co-occurring IPV and stalking perpetration is also vital for considering victims of IPV that might be at risk of stalking victimisation if they terminate an abusive relationship. The early identification of IPV offenders at risk of stalking could play a role in the prevention of further abuse towards ex-intimate partners. Increasing our understanding of characteristics of this sub-group of offenders also has implications for determining interventions that are likely to target their criminogenic needs. Practitioners should be aware of the role of personality and relationship factors that may increase the risk of co-occurring IPV and stalking perpetration.

Future research should continue to identify characteristics of IPV perpetrators that are associated with increased risk of stalking in order to inform risk management strategies and interventions delivered during abusive relationships (McEwan *et al*., 2017b). It is imperative that future research consider the role of psychological abuse when exploring co-occurring IPV and stalking perpetration, particularly as Norris *et al*. (2011) reported that psychological abuse may be more indicative of IPV offenders who go on to stalk intimate partners, as opposed to physical violence. Psychopathology could be used to assess potential risks of stalking behaviours in IPV offenders who present with alcohol and drug dependency, anger and Cluster B personality difficulties (Norris *et al.,* 2011).

Due to the wide range of methodologies used across studies it is recognised that direct comparisons of findings are difficult. When further high-quality studies emerge in the literature, future reviews would benefit from limiting inclusion of studies to those who employed comparison or control groups to be able to make firmer conclusions regarding whether characteristics are unique to co-occurring IPV and stalking perpetration. It has not been possible to make definite conclusions in relation to the aims of the review. Importantly, a systematic evaluation of the available literature has identified several areas for future research to consider in order to address the recommendations of this review and improve the robustness of their findings to further increase our understanding of the individuals who engage in IPV and stalking.

Chapter Three: An exploration of the association between the propensity to engage in intimate partner violence, stalking and image-based sexual abuse

Abstract

Purpose: The aim of the study was to assess the association between the behavioural propensity to engage in intimate partner violence (IPV), stalking and image-based sexual abuse (IBSA) behaviours.

Methods: A within-participants design was used whereby 313 male participants from the general population completed a cross-sectional online survey. Participants were recruited through convenience sampling and snowball sampling. Participants responded to scales that measured the propensity towards each behaviour, along with a scale to assess socially desirable responding.

Results: Data violated parametric assumptions, therefore non-parametric analyses were employed. Spearman's correlation analysis revealed significant positive relationships between all variables. Friedman's ANOVA indicated a significant effect of the extent to which participants indicated their propensity to engage in each type of abuse, $\chi 2$ (2) = 322.39, $p < .001$, $W = .52$. Post-hoc analyses using Wilcoxon signed-rank tests identified statistically significant differences between each comparison of behaviours with large effect sizes ($p < .001$).

Implications: The findings suggest that individuals who have an increased propensity towards either IPV, stalking or IBSA may be at risk for perpetrating other forms of abusive behaviours. Whilst an increased propensity towards IPV, stalking and IBSA appear to have some conceptual overlap, they appear to be heterogeneous crimes and this should be taken into account during assessment and treatment of offenders who commit these crimes.

6.0 Introduction

Intimate partner violence (IPV) and stalking are two phenomena which are deemed substantial public health and criminal justice issues; affecting individuals of all genders, ethnicities and socioeconomic backgrounds (Dutton, 2006; Meloy, 1998; Wilson & Daly, 1993). The outcome of the systematic review in Chapter Two was that there is no homogeneity in definitions used for IPV and stalking, leading to inconsistency across studies. Although varying definitions exist, IPV can take on many forms including completed or threatened physical, psychological and sexual abuse as well as controlling behaviours between current or former partners (Dixon & Bowen, 2012). Dixon and Graham-Kevan (2011) defined IPV as '…any form of aggression and/or controlling behaviours used against a current or past intimate partner of any gender or relationship status' (p. 1).

Douglas and Dutton (2001) defined stalking as '…repeated following, communicating, and contacting a person in a threatening manner that causes the person to fear, on a reasonable basis, for his or her safety' (p. 519). However, McEwan, Shea, Nazarewicz and Senkans (2017b) highlighted that a more helpful conceptualisation of stalking between ex-intimate partners is when it occurs during 'the period after the relationship has ended and the victim has clearly stated their desire to have no further contact with their now ex-partner' (p. 224). This is to enable the differentiation of monitoring and surveillance that occurs during abusive relationships that constitutes IPV when operationalising these constructs in empirical research. However, there is a general consensus in the literature that stalking is a persistent pattern of behaviour consisting of two or more separate acts of behavioural intrusion or unwanted attention over time (Roberts, 2005).

In recent years, there has been an increasing amount of empirical research (Dixon & Bowen, 2012; Douglas & Dutton, 2001; McEwan *et al*., 2017b; Norris, Huss & Palarea, 2011) that has explored the intersection between IPV and stalking perpetration, however, this line of research thus far has largely overlooked technological advancements in social communication and the impact of these mediums on the perpetration of abuse in intimate relationships. Both IPV and stalking have been transformed from taking place exclusively offline to also occurring online (Clevenger & Gilliam, 2020). Consequently, empirical research is limited regarding how a specific form of cyber abuse, known as IBSA, relates to IPV and stalking (Woodlock, 2017).

Henry and Powell (2015b) suggested that IBSA extends beyond a relationship breakdown, and can also be used as means of controlling and threatening current or ex-partners. Walker and Sleath (2017) discussed how technology can escalate the repertoire of abusive behaviours against victims. Therefore, the increased scope of detrimental consequences for victims necessitates research attention to address the deficit in knowledge regarding the intersection between IPV, stalking and IBSA by exploring the association between the propensity to engage in each behaviour.

It is important to identify those who present future risk of perpetrating adverse behaviours in intimate relationships for the purposes of prevention. This can be established by identifying those who report a propensity towards such behaviours using proclivity measures. Proclivity measures are designed to assess an individuals' likelihood of engaging in a particular behaviour (Parfitt & Alleyne, 2018). Thus, employing proclivity measures will enable this study to explore IPV, stalking and IBSA propensity in a general population sample, in order to make inferences about perpetrators of these offences.

6.1 The link between IPV and stalking

The association between IPV and stalking is poorly understood (McEwan *et al*., 2017b). Although the two constructs are believed to have shared underlying causal mechanisms, IPV and stalking are assumed to be interchangeable with little empirical evidence to support such claims (McEwan *et al*., 2017b; Senkans, McEwan & Ogloff, 2017). Stalking has previously been hypothesised to be a feature of IPV, or even a continuation of coercion in intimate relationships (Davis, Ace & Andra, 2000; Dye & Davis, 2003; Mullen, Pathé & Purcell, 2009). However, previous studies have tended to conflate the two behaviours, obscuring potential factors that link and differentiate them (Senkans *et al*., 2017).

It has been suggested that between 30-65% of stalking cases previously involved physical violence when the relationship was intact (Douglas & Dutton, 2001; McEwan *et al*., 2017b). In support of this, a meta-analysis by Spitzberg and Cupach (2007) found an overlap between stalking and physical violence in intimate relationships, with 32% of stalking cases involving physical violence in 82 studies. Additionally, romantic partners are the perpetrators in 50% of all stalking cases (Spitzberg, 2002). However, stalking is not preceded by physical violence during a relationship in up to two thirds of cases, with McEwan *et al*. (2017b) suggesting that psychological abuse may be more common among those who commit stalking.

Research has found that stalking is highly associated with physical and psychological abuse (Davis *et al*., 2000; Mechanic, Weaver & Resick, 2000). Dye and Davis (2003) suggested that these two behaviours are theoretically linked by the perpetrator's need for control and power. Kurt (1995) supported this notion by proposing that stalking is a coercive strategy that extends from physical and psychological abuse. Stalking perpetrators have been shown to demonstrate

higher rates of physical and emotional abuse, both when the relationship was intact and also post-separation (Sheridan & Davies, 2001).

Davis *et al.* (2000) found that post-relationship stalking was significantly associated with the psychological maltreatment an intimate partner prior to the breakdown of the relationship. As a result, Davis *et al.* (2000) suggested that future research should look beyond physical violence when giving consideration to how IPV relates to stalking. The implication of this study is that post-relationship stalking should be predicted by psychological abuse of intimate partners during a relationship, and by some of the same characteristics relevant to physical and psychological violence. However, Davis *et al.* (2000) utilised a student sample and therefore their findings cannot be generalised to the general population. Further, Mechanic *et al*. (2000) explored victim experiences of IPV and stalking and found that stalking was more associated with psychological abuse rather than physical abuse.

Although it is important to recognise the importance of stalking in relation to abuse in intimate relationships, it has been disputed whether stalking should be considered a distinctive form of abuse (Basile & Hall, 2011). For instance, Basile and Hall (2011) found physical violence, psychological abuse and stalking perpetration to be distinct constructs despite all correlating with one another. Whilst representing a positive shift in the literature by focusing on several types of IPV in a single study, Basile and Hall (2011) relied on a sample of court-mandated IPV offenders which poses constraints on the generalisability of the results. Mechanic (2011) highlighted that IPV offenders who participate in court-ordered batterer intervention programs do not represent IPV offenders from the general population whose behaviours may be less severe. Therefore, this finding

may not be applicable to a wider range of IPV offenders, such as those who have not come to the attention of the CJS.

Despite empirical attempts to establish a relationship between IPV and stalking, it is unclear what impact IBSA has had on the relationship between these behaviours.

6.2 The association between IPV, stalking and IBSA

Intimate partners are now able to use alternative means for expressing aggression (Marganski & Melander, 2015). Digital technologies are believed to have exacerbated extant forms of IPV and stalking and play a nuanced and multifaceted role in the perpetration of abuse in intimate relationships (Dragiewicz *et al.*, 2018; Freed *et al.,* 2017). Harris and Woodlock (2019) considered how digital technology has enabled IPV to be 'spaceless' by removing the physical boundaries to abuse and enabling related behaviours to be perpetrated remotely, thereby leading victims to consider abusive current or former partners as ubiquitous and unconstrained (Woodlock, 2017).

While IPV and stalking have had considerable research attention, there has been less focus on IBSA (Borrajo, Gámez-Guadix & Calvete, 2015). As mentioned in Chapter One, McGlynn and Rackley (2017) defined IBSA as "the non-consensual creation and/or distribution of private, sexual images" (p. 3). IBSA is primarily considered from the perspective of interpersonal conflict within current and ex-intimate relationships. It is viewed as a form of technology-facilitated sexual violence which can be used as a platform to express abusive behaviours and further exert control and power over victims (Henry & Powell, 2015b). Digital technologies provide perpetrators with quick and easy opportunities for enabling and reinforcing the abuse and harassment of victims, which can be exacerbated

by the use of public forums as a platform to intimidate or humiliate a current or ex-partner (Melander, 2010; Woodlock, 2017).

Victims of IBSA are thought to experience a wide range of negative consequences such as public shame, mental health problems, employment difficulties and even offline stalking (Bates, 2016). As a result, it has been argued that IBSA should be considered within a continuum of IPV behaviours (Walker & Sleath, 2017). Although there are indeed similarities between IPV and stalking, stalking can be conceptualised as being limited to occurring after the relationship has ended and the victim no longer desires to have contact with their ex-partner, whereas IPV relates to coercive or abusive conduct during a relationship (Douglas & Dutton, 2001). However, it is difficult to conceptualise the defining characteristic of IBSA that differentiates it from IPV and stalking. This is because it could fall between the two behaviours, occurring both during and after a relationship.

IBSA could enable perpetrators to express abusive behaviours which they would not commit in person (Smith, 2012). Marganski and Melander (2015) proposed that technology-facilitated violence might be utilised as an alternative strategy for relieving negative emotions to prevent the use of in-person violence. However, IBSA could amount to psychological abuse, with the potential for cyber aggression and offline psychological and physical IPV to be related and co-occur (Almendros, Gámez-Guadix, Carrobles, Rodríguez-Carballeira & Porrúa, 2009). Citron and Franks (2014) proposed that IBSA can be used as a manipulation tactic to maintain control within intimate relationships. Further, Henry, Powell and Flynn (2017) suggested that the motivation behind IBSA is not limited to retribution, but instead that technology-facilitated abuse occurs alongside other forms of abuse as methods of control or power in intimate relationships (Johnson, 2008).

Several studies (Borrajo *et al.*, 2015; Duerksen & Woodin, 2019; Marganski & Melander, 2015; Schnurr, Mahatmya & Basche, 2013) have indicated significant relationships between technology-facilitated abuse perpetration and offline physical, psychological and sexual abuse perpetration. However, these studies are limited by their design and sampling methods. Their cross-sectional nature means that temporal relationships between online and offline abuse cannot be established. Further, all samples comprised either college or university students which limits the applicability of this finding to other populations. Additionally, some studies restricted participation to those who were in a current intimate relationship, requested participants to provide responses for their current relationship only, or only used a reference period of the last 12 months for data collection. The issue with this is that cyber abuse could occur after the ending of a relationship and so relevant data regarding their association may have been overlooked by exclusively focusing on current relationships.

Brem *et al.* (2019) explored cyber abuse and monitoring in a sample of 216 men arrested for IPV and found that 81% of the sample reported perpetrating at least one cyber abuse behaviour within the last 12 months. Positively, this was the first study to examine cyber abuse in adult males arrested for an IPV offence. This finding indicates an association between IBSA and IPV proclivity. Another study by Messing, Bagwell-Gray, Brown, Kappas and Durfee (2020) explored stalking and technology-facilitated abuse in victims of IPV, and found that 60-72% of the sample reported previous experiences of stalking and technology-facilitated abuse. Marganski and Melander (2015) found that between 92.6% and 96% of their sample of undergraduate students who had experienced cyber IPV also reported experiencing physical, psychological or sexual IPV.

Powell, Scott, Flynn and Henry (2020) conducted a study with 6109 participants from the United Kingdom, New Zealand and Australia, and found that female participants reported experiencing IBSA alongside IPV, stalking and/or sexual violence. Further, female participants also disclosed being more likely to experience multiple types of abuse from the same perpetrator of IBSA. In this study, one in five men (22.3%) disclosed having engaged in one or more IBSA behaviours.

Previous research by Cutbush, Williams, Miller, Gibbs and Clinton-Sherrod (2012) supported these findings in that cyber aggression was found to co-occur with psychological offline aggression. Additionally, Laxton's (2014) study with 307 female IPV victims found that 45% reported technology-facilitated abuse by their partner during the relationship, and 48% of victims experienced online abuse by their ex-partner after the relationship ended. These findings suggest that there is likely to be a relationship between IBSA with both IPV and stalking.

Harris (2016) explored the co-occurrence of different forms of abuse and found that all 30 victims in their sample reported experiencing technology-facilitated abuse in parallel with other types of abuse and/or stalking. Almendros *et al.* (2009) proposed that intimate cyber abuse could be understood as a form of psychological abuse and may even co-occur; indicating further support for the potential relationship between IBSA and IPV. These findings are supported by Henry *et al*. (2020) who conducted a study with 75 participants from the United Kingdom, Australia and New Zealand who had experienced IBSA and found that almost one third of participants disclosed being a victim of IBSA in addition to other forms of IPV, stalking, sexual violence and sexual harassment in an online and offline context.

It is unclear whether IBSA is a new form of IPV or if it is an extension of psychological abuse. It is thought that IBSA often occurs in the context of IPV, such as an abuser disseminating or making threats to publicly circulate explicit images of their ex-partner after the relationship has ended (Citron & Franks, 2014). Hand, Chung and Peters (2009) argued that technology-facilitated abuse is not a new form of domestic violence or stalking, but instead a new and boundless medium for controlling and abusing intimate partners. Brown, Reed and Messing (2018) recommended that technology-facilitated abuse be considered as a new context for offline abuse due to the literature suggesting that both types of abuse occur synchronously. However, in a study by Dempsey, Sulkowski, Dempsey and Storch (2011) using an adolescent sample, they found that cyber aggression to be a separate latent construct from relational and overt aggression. Although not generalisable to adult populations, this findings supports the notion that cyber aggression is a distinct form of abuse in intimate relationships. Further, Watkins, Maldonado and DiLillo (2018) highlighted the need to explore cyber aggression as a separate type of IPV.

IPV, stalking and IBSA are thought to be linked through the commonalities of threat, control and insults (Melander, 2010). Therefore, those who commit physical and psychological aggression may also engage in IBSA. However, in Borrajo *et al*.'s (2015) study the relationship between psychological and cyber aggression was only moderate, suggesting that IBSA could be associated with specific characteristics that distinguish it from both psychological and physical aggression. It should be noted that Borrajo *et al.* (2015) relied on self-report measures which may have introduced bias in their findings as participants may have been reluctant to admit being victims of either online or offline aggression within their intimate relationships. This may have reduced the strength of the

association between cyber aggression with physical and psychological aggression. Regardless, the findings of this study highlight that individuals who are involved in offline aggression have an increased likelihood of also engaging in cyber aggression.

O'Malley and Holt (2020) used qualitative analysis of court documents and media articles to understand the characteristics and demands of 152 cyber sextortion offenders, and found that 12.5% of offenders targeted current or former female intimate partners to control and manipulate victims, as seen in in-person IPV. For example, to prevent the victim from leaving the relationship or to demand that the victim contacts or meets the offender. Despite cyber sextortion only consisting of threats to disseminate explicit images rather than the actual distribution of the images, this behaviour shares similarities with IBSA (Citron & Franks, 2014). This lends support to the possibility of IBSA perpetrators sharing characteristics with traditional IPV perpetrators. Indeed, research (Bates, 2016; Woodlock, 2017) has reported that victims of IPV and IBSA have experienced their partner using explicit images of them for the purposes of control and coercion.

Although research (Dimond, Fiesler & Bruckman, 2011) has recently established that digital technologies are being increasingly used by abusive partners, several studies have focused their efforts on a broad range of behaviours which limits our understanding of the explicit role of IBSA in relation to IPV and stalking (Dragiewicz *et al.,* 2018). Further, many of the studies have employed adolescent samples to explore technology-facilitated abuse, which are not generalisable to adult populations (Cutbush, *et al.*, 2012). However, the aforementioned research findings lend support to the notion that there is likely an intersection between IPV, stalking and IBSA proclivity.

6.3 Rationale

Research thus far has focused on retrospectively establishing the prevalence of IPV and stalking in forensic or clinical samples when assessing the relationship between the two behaviours, without the explicit consideration of IBSA (McEwan *et al*., 2017b). Although the aforementioned research has highlighted a potential relationship between IPV, stalking and IBSA, there appears to be no existing study that has explored the relationship between the propensity to engage in these behaviours. To date, empirical research has lacked consideration of the relationship between cyber abuse and offline abuse in intimate relationships, particularly in adult populations (Borrajo *et al*., 2015). To bridge the gap between research on IPV, stalking and IBSA proclivity, the current study will use a community male sample to explore the relationship between IPV, stalking and IBSA by assessing the behavioural propensity to engage in these behaviours. A direct comparison of the propensity to engage in these three abusive behaviours within a single study is absent from the literature. If there is an association between IPV, stalking and IBSA proclivity then it is hoped that future research will build on this study and explore whether there are underlying criminogenic needs or risk factors that might increase our understanding of whether these offences might be a similar expression of the same behaviour, or are indeed different constructs.

Effective prevention strategies require the identification of individuals who present future risk of perpetrating abuse in intimate relationships. This can be achieved by identifying individuals who report a propensity towards abusive behaviours by using proclivity measures. Examining propensity is important for improving our understanding of these three behaviours as it could help to differentiate between individuals at risk of perpetration and those who are not at

risk. However, it is noted that measuring the propensity to perpetrate is not necessarily predictive of perpetration (Palmer, McMahon & Fissel, 2020). Regardless, Ward, Keown and Gannon (2007) demonstrated that beliefs or attitudes that support offending behaviour are good predictors of offending behaviour. Therefore, assessing proclivity enables researchers to determine an individual's propensity towards engaging in offending behaviour (Gannon & Barrowcliffe, 2012).

Ruddle (2017) highlighted that exploring the propensity to engage in a behaviour can be useful for identifying individuals who may possess similar attitudes, beliefs and experiences with those of convicted offenders. Research (Palermo, Dadgardoust, Arroyave, Vettor & Harkins, 2019) has highlighted the use of general population samples to assess propensity due to large proportion of offenders evading arrest, which is particularly the case for IBSA perpetrators. It has also been suggested that assessing proclivity to perpetrate is less influenced by socially desirable responding as participants are not required to confess engaging in the behaviour (Seabrook, McMahon & O'Connor, 2018).

This study will help to lay the groundwork for future research on the propensity for abuse towards women, by focusing upon the emerging trend of IBSA as a strategy for abuse. Looking at the proclivity to engage in IPV, stalking and IBSA would offer the opportunity to test theoretical explanations in future studies, with a focus on individuals who perpetrate these behaviours. If it is established that there is a relationship between the three behaviours in the general population, then it can reasonably be assumed that the same applies to offenders of these behaviours. This study will allow for an exploration of whether these are a range of behaviours that may be separate but also combined as a set of abuse tactics towards women. This study will serve an important step in the

literature by assessing the association between the propensity for different types of abuse in intimate relationships, in addition to identifying which type of abuse participants report the highest propensity for.

6.4 Hypotheses and Research Questions

The aim of this study is to assess the association between the propensity to IPV, stalking and IBSA perpetration; to see if there is a proclivity to perpetrate a range of behaviours that are conceptually linked. To achieve this, the following research questions will be explored:

1. Is there a significant association between the propensity to engage in IPV, stalking and IBSA?

For the first research question, the null hypothesis is that there will be no significant association between participant's propensity to engage in IPV, stalking and IBSA. The alternative hypothesis is that there will be a significant association between participant's propensity to engage in IPV, stalking and IBSA.

2. Is there a significant difference between the propensity to engage in each type of abuse (IPV, stalking and IBSA)?

For the second research question, the null hypothesis is that there will no significant difference between participant's propensity to engage in IPV, stalking and IBSA. The alternative hypothesis is that there will be a significant difference between participant's propensity to engage in IPV, stalking and IBSA.

7.0 Methods

This study was combined with the study in Chapter Four and run as a single study, with the same participants completing all measures to reduce individual

variance between two studies. However, the data have been divided into two separate studies with different analyses conducted.

7.1 Sample

Using the G*Power programme (Faul, Erdfelder, Lang & Buchner, 2007), a power analysis revealed that there was an 80.1% chance of rejecting the null hypothesis of there being no difference in participant's propensity across the three behaviours with a total of 27 participants using ANOVA. This analysis also showed that for correlation analysis, a total sample size of 84 was required to detect a medium effect size (.3). The sample consisted of adult males (aged 18 and above) from the general population who were fluent in English. A general population sample was chosen to ensure the outcomes were as valid as possible in their representation of the propensity for abuse across all intimate relationships. A male sample was chosen due to the gendered nature of abuse in intimate relationships, with perpetrators and victims being primarily male and female, respectively (Henry *et al*., 2017; Smoker & March, 2017).

Participants were recruited through convenience sampling (advertising on social media websites and online forums/research websites such as Reddit, Facebook, Instagram, Twitter) or snowball sampling (asking existing participants to recruit other participants from their contacts). A total of 313 members of the general male population participated in the survey. Two participants were excluded as they did not provide any responses to items. The final sample therefore comprised 311 participants aged between 18-71 ($\bar{x}$ = 29.80, *SD* = 10.93). Although a sample of this size has the advantage of considerably increased statistical power, there is an increased chance of demonstrating a statistically significant effect which is too small to be clinically meaningful. Regarding ethnicity,

the majority of participants were white (81%, *n*=252), with 2.6% (*n*=8) being Hispanic or Latino, 2.9% (*n*=9) being Black or African American, 9.6% (*n*=30) being Asian or Pacific Islander and the remaining 3.9% (*n*=12) reporting other ethnicities. The majority of participants (82%, *n*=255) identified as heterosexual, 7.1% (*n*=22) were homosexual, 7.4% (*n*=23) were bisexual, 0.6% (*n*=2) did not wish to report their sexual orientation, and the remaining 2.9% (*n*=9) identified other sexual orientations.

7.2 Design

Using a within-subjects design, a cross-sectional online survey was the method of data collection. This methodology was chosen due to its ability to investigate patterns of relationships among a large number of variables and determine the direction and strength of associations between variables. Although cross-sectional research is limited in its ability to test causality between variables, inferences can be made from identified relationships to inform future research (Howitt & Cramer, 2008). However, inaccurate self-reporting from participants and self-selection bias may result in the data not well representing the entire target population and limit the generalisability of the results (Wright, 2005).

7.3 Measures

7.3.1 Demographic Information

Basic demographic questions asked participants to indicate their age, ethnicity and sexual orientation in order to define the sample.

7.3.2 Propensity for Abusiveness Scale (PAS; Dutton, 1995)

IPV proclivity was measured using the PAS (Dutton, 1995), a measure designed to counteract reactivity and socially desirable responding when assessing for abusiveness due to it not explicitly addressing abusive behaviour. The PAS (Appendix 6) consists of 29-items which comprises three factors: Recalled Negative Parental Treatment, Affective Lability, and Trauma Symptoms. The Affective Lability subscale has a five-point Likert-type scale ranging from 'completely undescriptive of you' (1) to 'completely descriptive of you' (5), the Recalled Negative Parental Treatment subscale has a four-point Likert-type scale from 'never happened' (1) to 'always occurred' (4), and the Trauma Symptoms subscale consists of a four-point Likert-type scale ranging from 'never' (0) to 'very often' (3). Scoring of the PAS is achieved by summing the responses to all items. Winters, Clift and Dutton (2004) reported that mean scores on the PAS for assaultive males range from 62.2 to 66.1. This scale has a Cronbach's alpha ranging from .88-.92, demonstrating good internal consistency reliability (Dutton, 1995; Winters, Clift & Dutton, 2004).

7.3.3 Stalking Propensity Scale (SPS; Palmieri & Giannini, 2010)

The propensity to stalk an intimate partner was measured with the SPS (Appendix 7). Using a five-point Likert-type scale from never (1) to always (5), participants indicated the extent to which they agreed with 15 items. Responses are divided into three subscales, Following and Harassing Behaviours, Impulsiveness and Aggressiveness, and Needs of Intimacy. Scoring of the SPS is achieved by summing the responses to all items, with scores ≥40 indicating a propensity for stalking. Internal consistency reliabilities (α) range from .77-.85 for all three scales. The Cronbach's alpha coefficient of the total scale is .87 (Palmieri & Giannini, 2010). The scale developers recommended that the good psychometric

qualities of the scale support its use for exploring stalking propensity in general and clinical populations.

7.3.4 Revenge Porn Proclivity Scale (Pina, Holland & James, 2017)

IBSA proclivity was assessed using the RPPS (Appendix 8). Pina *et al*. (2017) developed the scale and is the only known study to have implemented the scale. Participants read five scenarios involving an intimate image of another person being shared on the internet without their consent. After reading each scenario, participants answered seven questions related to proclivity and reactions towards the acts committed in the scenarios, using a 5-point Likert-type scale. For the proclivity question, participants were given response options ranging from 1 (definitely would not do the same) to 5 (definitely would do the same). For all other questions, response options ranged from 1 (not at all) to 5 (very).

Participants' proclivity score was measured by accumulating their ratings for all five scenarios when asked whether they would do the same. The reliability for this scale is α = .76, demonstrating acceptable reliability. Pina *et al.* (2017) also devised two additional subscales by summing participants' responses to the questions about their reactions to each scenario: IBSA approval and IBSA enjoyment. Both subscales exhibited high internal consistency; IBSA approval (α = .80) and IBSA enjoyment (α = .87). Pina *et al.* (2017) developed the scale using a mixed gender community sample, and recommended that future research replicate the RPPS with male samples.

7.3.5 Marlowe-Crowne Social Desirability Scale – 13 Item Version (MCSDS; Reynolds, 1982)

Socially desirable responding tends to occur in response to sensitive questions, which can affect the validity of the results if participants do not answer truthfully (King & Brunner, 2000). It was thought that implementing a measure of social desirability would help in controlling this confound. The MCSDS (Appendix 9; Reynolds, 1982) ensures that responses are not distorted by positive self-representation. Participants indicated their answer to the 13 items using a true or false response. Higher scores are indicative of socially desirable responses. This scale has acceptable reliability with a reported Cronbach's alpha of 0.76 (Reynolds, 1982).

7.4 Procedure

Participants were directed to an online survey tool, Bristol Online Surveys, where information was provided on the purpose of the research (Appendix 10). Participants were asked to provide their informed consent for inclusion in the sample, by ticking a box indicating that they understand and accept the terms of their participation (Appendix 10). To reduce the likelihood of social desirability bias, participants were informed that the focus of the survey concerned their general feelings towards behaviours in intimate relationships. Participants then proceeded to answer demographic questions followed by four scales. The entire survey took approximately 20-25 minutes to complete, based on data from brief pilot testing. On completion of the survey, participants were presented with a debrief sheet (Appendix 11) which thanked them for their participation and explained the full aim of the study.

7.5 Ethical Considerations

The study was conducted in accordance with the guidelines specified by both the British Psychological Society's Code of Ethics and Conduct (2009) and the Code of Human Research Ethics (2010). In order to obtain ethical approval the researcher considered issues related to informed consent, confidentiality and anonymity of participants' information, the sensitivity of the topics addressed in the survey, voluntary withdrawal from the study, the minimisation of psychological harm to participants and the treatment and disposal of data. The study was granted ethical approval by the University of Nottingham Faculty of Medicine and Health Sciences Research Ethics Committee (Ref: FMHS 290-1803; Appendix 12).

Participants were informed that the study was voluntary and that they were able to withdraw at any time. To ensure anonymity and confidentiality, all participants were asked to give a unique identifier code. Participants were informed that they did not have to answer any question they did not feel comfortable with. To minimise the risk of harm, participants were also provided with details for a helpline and advised to contact their GP should they be affected by the nature of the study. The debrief page also provided details on the deadline for withdrawal from the study post-completion. The anonymised database is stored on a password-protected file accessible only to the researchers. Anonymised research data will be retained securely for 7 years, in accordance with the University of Nottingham's Code of Research Conduct and Research Ethics.

8.0 Results

Data were analysed using the Statistical Packages for Social Sciences (SPSS version 26) software. There were three dependent variables: IPV propensity, stalking propensity and IBSA propensity. There were no independent variables as there was no manipulation of data. Social desirability was included as a confounding variable. A significance of $p < .05$ determined if the analyses and any interactions between the dependent variable were statistically significant.

8.1 Data screening

The data were screened for missing values. A missing value analysis revealed that 1.06% of data were missing, which was considered inconsequential. However, several new variables were created to substitute the missing values with the variable means (Tabachnick & Fidell, 2007). Schafer (1999) advised this as an appropriate approach when there are less than 5% of missing values. As each of the variables were measured on a different scale, each scale was converted to have the same lower and upper levels, with the adjusted variables having a range of 0-10 (de Vaus, 2002). This was done to make the dependent variables more comparable. Correlation analysis was repeated before and after converting the variables to ensure that the associations between variables remained the same.

Preliminary analyses were performed to determine the normal distribution of data. Kolmogorov-Smirnov tests indicated that all three dependent variables did not follow a normal distribution: RPPS, $D(311) = .38$, $p < .001$; SPS, $D(311) = .17$, $p < .001$; and PAS, $D(311) = .09$, $p < .001$. As a result, the data did not meet the assumptions for parametric analysis and attempts to correct these

through transformation were unsuccessful. Therefore, nonparametric analyses were employed instead using a repeated-measures design.

8.2 Descriptive analyses

Table 4 presents the means, distributions of ranks, standard deviations, ranges and alpha reliabilities for the variables. Cronbach's alpha was calculated to determine the internal reliability of each scale and subscale, with the majority of measures demonstrating acceptable to excellent reliability. The MCSDS was the only scale that obtained questionable reliability, however, it is noted that this was just below the cut-off of .70 for acceptable reliability.

Table 4. Means, standard deviations, mean rank, range and alpha reliabilities of the variables

	$\bar{x}$ (SD)	Mean Rank	Range	Scale α
PAS				
Affective Lability	32.39 (9.75)		12.00-60.00	.89
Recalled Negative Parental Treatment	15.75 (6.74)		10.00-40.00	.94
Trauma Symptoms	12.20 (3.83)		7.00-28.00	.79
Total Scale	60.34 (16.77)	2.72	29.00-128.00	.93
SPS				
Following and Harassing Behaviours	10.01 (4.87)		7.00-35.00	.90
Impulsiveness and Aggressiveness	7.69 (3.25)		4.00-20.00	.81
Needs of Intimacy	7.29 (3.81)		4.00-20.00	.88
Total Scale	24.98 (10.17)	1.98	15.00-75.00	.92
RPPS				
IBSA Proclivity	6.16 (2.67)	1.30	5.00-19.00	.83
IBSA Enjoyment	29.38 (9.78)		15.00-62.00	.85
IBSA Approval	35.79 (9.38)		15.00-64.00	.77
MCSDS	6.48 (2.81)		0.00-13.00	.68

The IPV propensity mean score was 60.34 (*SD*=16.77). Although the PAS does not provide standardised scores, mean scores can be compared with responses from populations in other studies. The current study achieved a higher mean score compared to both violent (*M*=59.2, *SD*=17.1) and non-violent (*M*=44.7, *SD*=11.7) males in Dutton's (1995) original study. The mean score for stalking propensity was 24.98 (*SD*=10.17), which is below the cut off of 40 or above for propensity for stalking as recommended by Palmieri and Giannini (2010). There are limited findings to compare the current stalking propensity scores to due to the scale being published in Italian, however, participants in Palmieri and Giannini's (2010) study achieved a mean score of 30.73 (*SD*=9.81). Similarly, this thesis is believed to be the only research to employ the RPPS other than the study in which the scale was developed (Pina, Holland & James, 2017). Therefore, it is not possible to compare the RPPS mean score to other findings as Pina *et al*. (2017) did not provide any mean scores or a cut-off point to determine increased IBSA proclivity.

8.3 Correlations

A Spearman's correlation analysis was carried out to measure the degree of association between the dependent variables (see Table 5). As shown in Table 2, there was a moderate positive relationship between the SPS and PAS, r_s = .40, 95% BCa CI [.309, .492], p < .001. A weak positive relationship was detected between the RPPS and SPS, r_s = .33, 95% BCa CI [.209, .438], p < .001. The analysis also revealed a very weak positive relationship between the RPPS and the PAS, r_s = .16, 95% BCa CI [.046, .260], p = .005. The MCSDS achieved very weak or weak yet significant negative relationships with the three dependent

variables, indicating that higher scores on the social desirability scale resulted in lower propensity scores for each behaviour.

Table 5. Spearman's correlation analysis of all variables

	1	2	3	4
1) RPPS	-			
2) SPS	.331**	-		
3) PAS	.159*	.400**	-	
4) MCSDS	-.145*	-.256**	-.370**	-

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

8.4 ANOVA

Despite the association between social desirability and the dependent variables, it was not possible to include social desirability as a covariate in subsequent nonparametric analyses due to the study design. Quade's (1967) non-parametric analysis of covariance was considered, however, there was no between-subjects factor which is required for this analysis. Despite the central limit theorem suggesting that sufficiently large samples enable the sampling distributions of means to be normally distributed regardless of the distributions of variables, it was unclear whether the current study would be robust to violations of normality due to the presence of outliers and skewness. Therefore, it was decided to proceed with nonparametric analysis without controlling for social desirability.

As the data violated parametric assumptions, the non-parametric equivalent to the one-way repeated-measures ANOVA, Friedman's ANOVA, was conducted to assess whether there was a statistically significant difference

between participants' propensity to engage in each type of abuse. There was a significant effect of the extent to which participants indicated their propensity to engage in each type of abuse, $\chi 2$ (2) = 322.39, $p < .001$, $W = .52$. The Kendall's coefficient of concordance (W) indicates a medium effect size. Thus, the null hypothesis is rejected as there is a statistically significant difference between the propensity scores. This was the result of participants being less likely to engage in IBSA than stalking ($p<.001$), less likely to engage in IBSA than IPV ($p<.001$), as well as being less likely to engage in stalking than IPV ($p<.001$).

Post-hoc analyses using Wilcoxon signed-rank tests was conducted to evaluate comparisons with a Bonferroni correction applied to control for Type I errors, resulting in a significance level set at $p < .017$ (0.05/3). There were statistically significantly lower scores for IBSA propensity vs stalking propensity (Z = -10.067, $p < .001$, r = -.48), IBSA propensity vs IPV propensity (Z = -13.231, $p <.001$, r = -1.01), and stalking propensity vs IPV propensity (Z = -12.353, $p < .001$, r = -.53). Each comparison yielded a large effect size (Cohen, 1988). Inspection of the median values showed that the PAS (Mdn = 2.93) was higher than both the SPS (Mdn = 1.17) and the RPPS (Mdn = 0.00).

9.0 Discussion

Despite the range of adverse behaviours that occur in intimate relationships, no empirical studies are believed to have focused specifically on the association between IPV, stalking and IBSA in adult intimate relationships. This exploratory study was designed to address a gap in the literature by exploring the relationship between the propensity to engage in IPV, stalking and IBSA among a sample of males from the general population. The study explored whether there was a significant association between the propensity to engage in each type of

abuse, as well as whether there was a significant difference between the propensity to engage in each type of abuse. The first null hypothesis was that there would be no significant association between participant's propensity to engage in IPV, stalking and IBSA. The first alternative hypothesis was that there would be a significant association between participant's propensity to engage in IPV, stalking and IBSA. The second null hypothesis was that there would be no significant difference between the propensity to engage in the three behaviours. The second alternative hypothesis was that there would be a significant difference between the propensity to engage in IPV, stalking and IBSA.

In order to investigate the hypotheses, first the rates of propensity for each behaviour were calculated before examining the strength of the association between the propensity to engage in each behaviour. Finally, the extent to which there were significant differences between participants propensity to engage in each type of abuse was established.

9.1 Research Question 1: Is there a significant association between the propensity to engage in IPV, stalking and IBSA?

Correlation analysis revealed that IPV, stalking and IBSA propensity were all significantly related to one another, suggesting that there is a significant relationship between the propensity to engage in each behaviour. Therefore, the null hypothesis can be refuted as this finding provides support for the alternative hypothesis. The strongest relationship was a moderate one between IPV and stalking propensity (r_s = .40), with participants who reported higher levels of IPV propensity also reporting higher levels of stalking propensity. This finding is in accordance with previous research that has established an association between IPV and stalking perpetration (Basile & Hall, 2011; Davis *et al*., 2000; Mechanic

et al., 2000; Spitzberg & Cupach, 2007). Given the conceptual overlap between IPV and stalking and that they are considered to be linked by a need for control and power (Dye & Davis, 2003; Melander, 2010), this finding should not be surprising. Conceptualisations of the intersection between IPV and stalking perpetration have proposed that both behaviours consist of coercive and controlling strategies that perpetrators employ over victims (Kurt, 1995). The correlation between the propensity to engage in the two behaviours could be attributed to stalking being a continuation of IPV after the termination of a relationship. Stalking could be characterised as an extreme form of control or dominance when it occurs following an abusive intimate relationship. Although the cross-sectional nature of this study prevents causal inferences regarding the relationship between the two behaviours, it is evident that these two variables are linked.

The correlation coefficients also highlighted that IBSA proclivity had a significant moderate relationship with stalking propensity (r_s = .33). This indicates that participants who reported a higher propensity to engage in IBSA also reported a higher propensity towards stalking. The weakest association was between IPV and IBSA propensity, although this relationship was still significant (r_s = .16). This indicates that there is less of a propensity to engage in the latter two behaviours, and that there may be a conceptual overlap between an increased proclivity towards stalking and IBSA. Previous research has indicated that stalking is more aligned with psychological abuse rather than physical abuse (McEwan *et al*., 2017b; Mechanic *et al*., 2000). Therefore, the association between the propensity to engage in IBSA and stalking could be explained by both behaviours being considered to be forms of psychological abuse. The significant, albeit weak, correlation between IPV and IBSA propensity raises the question about whether

IBSA should be conceptualised as another expression of IPV as, arguably, both behaviours appear to be about control.

The association between the variables are in line with previous findings suggesting that IPV, stalking and IBSA are related constructs (Almendros *et al*., 2009; Borrajo *et al.*, 2015; Harris, 2016; Schnurr *et al*., 2013).

Another possible hypothesis to explain the significant association between IPV, stalking and IBSA propensity could be the feature of power and control dynamics in intimate relationships (Felson & Messner, 2000). In other words, all three types of abuse might afford individuals to feel superior and in control.

In Chapter One, attachment theory (Bowlby, 1969) was proposed as a useful framework for understanding the overlap between these behaviours in intimate relationships. From an attachment perspective, IPV, stalking and IBSA could be used by perpetrators as a means of restoring proximity in the relationship or managing their emotional response to conflict or dissatisfaction within the relationship.

Similar to how IPV and stalking behaviours might be utilised as a means for preventing or retaliating to intimate partners threatening to or ending the relationship (Mechanic *et al*., 2000), IBSA behaviours could also be employed for similar reasons relating to control and intimidation. It may be that IBSA enables the facilitation of other types of abusive behaviours through providing another means for expressing these abusive behaviours (Dunlap, 2012). However, it is worth noting that, despite the significant correlations, the strength of the associations between variables only ranged from very weak to moderate. This could be explained by the use of a general population sample who self-reported relatively low rates of propensity towards each behaviour. Regardless, as a significant relationship was obtained between all three behaviours in the general

population, then it can be assumed that the same might apply to perpetrators of these offences. Therefore, when working with individuals for convictions for these behaviours, practitioners need to be aware of the other offences they might be likely to commit.

The significant associations between IPV, stalking and IBSA indicates that the three behaviours have something in common between them. It is quite reasonable to assume that individuals with a high level of propensity of all three behaviours are more likely to perpetrate abuse in intimate relationships in comparison to an individual with low levels of propensity.

9.2 Research Question 2: Is there a significant difference between the propensity to engage in each type of abuse (IPV, stalking and IBSA)?

Results from Friedman's ANOVA found significant differences between the propensity to engage in IPV, stalking and IBSA. Therefore, the null hypothesis can be rejected as the findings support the alternative hypothesis. Post-hoc analyses identified that participants self-reported being most likely to perpetrate IPV, and least likely to perpetrate IBSA. It is possible that participants reported an increased propensity for IPV perpetration due to the measure used to assess this construct having low face validity. In comparison, the stalking and IBSA propensity measures may be more susceptible to socially desirable responding due to more explicit references to possessing a tendency to engage in those behaviours.

The current findings would fit with Clarke's (2004) argument that theories of offline abuse are not necessarily applicable to online abuse due to technological advancements enabling 'traditional' offences to evolve into new forms of abuse. Therefore, it is possible that IBSA is not only a type of abuse itself, but also

contributes to and impacts upon other types of in-person IPV. The significant difference between IBSA and IPV propensity is noteworthy considering the tendency of existing literature to conceptualise IBSA as an extension of IPV (Hand *et al*., 2009; Walker & Sleath, 2017). However, the current findings suggest that there might be factors that differentiate between the proclivity to engage in IBSA and IPV.

Although the propensity to engage in all three behaviours are significantly related, the results suggest that there are clear differences between the likelihood of engaging in each behaviour. This fits with research (Basile & Hall, 2011; Dempsey *et al*., 2011; Hand *et al.,* 2009; Watkins *et al*., 2018) that has suggested these behaviours be conceptualised as distinct constructs that are distinguishable from each other. The findings appear to suggest that although there are similarities between individuals being predisposed to perpetrate each type of abuse, there are factors that significantly differentiate between individuals being likely engaging in each type of abuse which is supported by the strength of the relationships between the variables. Overall, the results imply that IPV, stalking and IBSA are heterogeneous behaviours and it is recommended that this be taken into account during assessment and treatment of offenders who commit these crimes.

9.3 Strengths, Limitations, Future Research and Practical Implications

This study has gone some way towards enhancing our understanding of the propensity to engage in multiple types of abusive behaviours and extended previous studies which have considered the relationship between IPV, stalking and IBSA. Such results also provide further insight into a specific form of technology-facilitated abuse, IBSA, to consider how this contributes to the association

between the likelihood of engaging in abusive behaviours in intimate relationships; which has not yet been empirically tested in the existing literature. Another strength of the study is that the use of a larger sample (*N*=311) increased the robustness of the statistical analyses by reducing the likelihood that the significant differences between each type of abuse is the result of chance. A large sample size also reduces concerns regarding lack of statistical power which are often thought to be a disadvantage with nonparametric analyses, in comparison to traditional parametric approaches.

A number of potential limitations need to be considered. Although the results add to the evidence base, it is important to remember that this was an exploratory study. Obtaining the data through cross-sectional methods limits the ability to make inferences about causality regarding relationships between variables. Therefore, readers should take caution when interpreting the results. Further, use of self-report measures may impact on the reliability of participant responses as it is possible that participants were inaccurate in their self-report due to social desirability demands. As a result, it is possible that the study underestimates the true extent of the association between the propensity to engage in the three behaviours.

Although a measure of social desirability was incorporated in the design of the study, the data did not allow for parametric analysis which prevented the inclusion of this measure as a covariate in the appropriate analysis. Failure to control for covariates can result in biased or skewed data, therefore this further calls the reliability of the findings into question. Additionally, there may be other confounding variables not contained in the study which influenced the relationships between variables. Future research should endeavour to explore this by accounting for other potential confounding variables (i.e. alcohol or drug use,

heightened emotional distress, violent tendencies, experiences of abuse, socioeconomic status).

Another limitation of the current study is the use of a non-random sample of convenience, which may limit generalisability of the findings. Likewise, the sample was comprised of males from the general population, which limits the generalisability of the findings to more diverse samples (i.e. known perpetrators of these behaviours). It is important to note that it cannot be inferred from the current findings that participants who endorsed any of these behaviours would perpetrate them. As a general population sample was employed for this study, the self-reported propensity to engage in these behaviours was relatively low. For instance, the SPS considers individuals to have a propensity for stalking if they score 40 and above on the SPS, whereas the mean for participants in the current study was 24.98. However, the mean score for IPV propensity in the current study was 60.34, which is similar to mean PAS scores for samples consisting of assaultive males; ranging between 59.2 and 66.1 (Dutton, 1995; Dutton, Landolt, Starzomski & Bodnarchuk, 2001).

As a result, this study likely underestimates the true strength of the association between these behaviours in the sample. It may be that clinical or forensic samples would report higher rates of propensity to engage in the three behaviours. Although it cannot be postulated that participants who reported higher levels of propensity will indeed engage in the behaviours, previous studies (Malamuth & Check, 1980) have found that individuals who report higher levels of propensity towards a particular offence share the same cognitions as convicted offenders of that offence. Therefore, the current findings can be considered in relation to the association between the propensity towards these behaviours in offenders of IPV, stalking and IBSA. Future research should consider replicating

this study with samples that include perpetrators of abuse in intimate relationships as this may obtain different results.

Further, this study was not able to differentiate the association between different forms of IPV propensity with stalking and IBSA propensity as the PAS measure does not separately report physical, psychological and sexual abuse; but instead only reports an overall score. Future studies looking at samples of individuals who have engaged in these behaviours could employ measures that assess propensity towards different types of IPV to see what aspects are most linked to both stalking and IBSA propensity. This is particularly important given that previous research has suggested an association specifically between psychological abuse with stalking and IBSA perpetration. Likewise, as IBSA is a relatively new and growing phenomenon, there are limited well-validated measures to assess this construct. Despite the RPPS having good preliminary reliability coefficients in its original study (Pina *et al*., 2017), no further studies are known to have employed this measure which highlights the lack of empirical evidence to support their valid measurement of IBSA proclivity. Additional research will be required to further test the reliability and validity of this measure.

Despite these limitations, the current study offers directions for future research related to the perpetration of IPV, stalking and IBSA. Further studies are needed to determine which individuals are most at risk for engaging in more than one of these behaviours in order to identify strategies for prevention, intervention and management.

This exploratory study will hopefully serve as a guide for further research in this area by recommending that IPV, stalking and IBSA are considered as separate constructs in analyses. Although assessing the propensity to engage in each of these behaviours is useful for improving knowledge regarding the potential

for abuse perpetration, it fails to inform researchers about the factors that contribute to an individuals' susceptibility to certain types of abuse in comparison to others. As things stand, the literature in this area is in its infancy and therefore remain atheoretical.

Future research should aim to identify the factors and theoretical frameworks that might be relevant for the explaining overlap in the propensity towards each type of behaviour. It would also be beneficial for research to explore the behavioural and psychological correlates of IPV, stalking and IBSA for individuals who endorse these behaviours in order to determine the similarities and differences between each behaviour. This could be achieved through assessing a variety of interpersonal and psychological factors that may further explain the links established in the current study.

Further consideration of how IBSA, stalking and IPV may influence each other is necessary in order for researchers and practitioners to develop appropriate interventions (Duerksen, 2018). A better understanding of the differences between perpetrators who commit these different forms of abuse will be an essential addition to the literature, as it is currently unclear why some individuals may be more susceptible to engage in each of these three behaviours, or whether there is an underlying cause to all three forms of abuse.

The significant relationship between IBSA propensity with both IPV and stalking propensity is notable. It highlights that IBSA is a behaviour that should be taken seriously by both researchers and criminal justice professionals. As proposed by Marganski and Melander (2015), there is a potential for IBSA to be an antecedent to offline abuse by perpetrators escalating their behaviour and progressing from online to offline abuse, or vice versa. Research attention must be given to this this increasingly prevalent phenomenon to consider whether there

are similarities between IBSA and other in-person abusive behaviours in intimate relationships.

The literature around IPV and stalking is vastly more developed than for IBSA, which remains a relatively unknown construct with regards to our understanding of perpetrators. Therefore, further research is required to explore factors that may increase the likelihood of someone perpetrating IBSA. The literature currently lacks an understanding regarding predictive factors of perpetration of IBSA behaviours. Increasing our understanding of IBSA and the characteristics that puts an individual at risk of engaging in this behaviour can help the development of theoretical frameworks, prevention and intervention.

9.4 Conclusions

Based on the findings from the current study, whilst these behaviours appear to have some conceptual overlap, each behaviour should be treated as distinct from one another instead of being conflated as one varying construct. Overall, this study adds to the literature on IPV, stalking and IBSA by providing information about the association between the propensity to engage in these abusive behaviours. This is the first empirical study assessing the propensity to engage in these three behaviours in a male general population sample. The current findings are consistent with the literature in this area that suggests individuals who perpetrate one form of abusive behaviour may be at risk for perpetrating other forms of abusive behaviours (Brem *et al.,* 2019; McEwan *et al.,* 2017b; Messing *et al*., 2020). These findings also support previous findings that have established a link between offline and online aggression (Duerksen & Woodin, 2019; Henry *et al*., 2017). Due to the intersection between the propensity for engaging in IPV, stalking and IBSA, more conceptual work is needed to

consider how these three types of abuse interact, by exploring the links and differences between them (Duerksen, 2018).

Chapter Four: The impact of aversive and general personality traits, attachment style and moral disengagement on image-based sexual abuse (IBSA) proclivity.

Abstract

Purpose: To investigate the impact of the Dark Triad personality traits, HEXACO personality traits, attachment style and moral disengagement on the prediction of IBSA proclivity.

Methods: A within-participants design was used whereby 313 male participants from the general population completed a cross-sectional online survey. Participants were recruited through convenience sampling and snowball sampling. Participants responded to scales that measured each predictor variable, before being presented with vignettes of five hypothetical situations involving IBSA and answering several questions about their reactions towards the acts committed in the scenarios.

Results: Data were analysed by multiple regression. The Dark Triad, honesty-humility, agreeableness, conscientiousness and openness to experience, moral disengagement and attachment style significantly explained 35% of the variance in IBSA proclivity, $F(10,300)=16.159$, $p<.001$, in support of the main hypothesis. Machiavellianism, Openness to Experience, moral disengagement and attachment anxiety were significant predictors of greater IBSA proclivity.

Implications: The study provides new knowledge regarding factors that drive individuals to engage in IBSA. The identification of relevant characteristics is important for the classification of these acts in order to benefit preventative and rehabilitative methods.

10.0 Introduction

Developments in technology have led to the emergence of new methods for the facilitation of interpersonal violence (Powell & Henry, 2016). There are around 3000 websites that have been created for the dissemination of IBSA, with roughly 30 active websites in the UK (McGlynn, Rackley & Houghton, 2017). Additionally, perpetrators might upload sexually explicit images to such websites in addition to sending the images to the victims' friends, employers and social media (Bates, 2016). IBSA is a recent phenomenon which is defined as "the non-consensual creation and/or distribution of private, sexual images" (McGlynn & Rackley, 2017, p. 3). Such websites often disseminate explicit images of individuals which contain personal information that compromises their anonymity (Stroud, 2014). The difficulty with IBSA is that once a sexually explicit image is posted online, it is extremely difficult to erase it and prevent images from being recirculated by online bystanders of IBSA (Laird, 2013).

IBSA has been conceptualised as a gendered crime as those responsible for perpetrating IBSA are predominantly current or ex-intimate male partners (Bloom, 2014; Lamphere & Pikciunas, 2016). Hall and Hearn (2017) inspected the content attached to non-consensual sexually explicit images on a IBSA website and found that most of the images were shared by men. Although the prevalence of IBSA is difficult to establish, Powell, Henry, Flynn and Scott (2019) highlighted that the limited studies regarding adult populations collectively suggest that approximately between 12% and 30% of participants reported sharing explicit images without consent.

The focus of this study is on the non-consensual distribution of private, explicit images in intimate relationships. IBSA is set apart from other types of non-consensual distribution (i.e. upskirting, hacked images) by its occurrence

within the breakdown of intimate relationships where revenge is thought to be the primary motivation (Walker & Sleath, 2017). However, vengeance is not always the motivation for engaging in IBSA. Harper, Fido and Petronzi (2019) highlighted that the negative emotional states associated with sexual offending are also experienced when a relationship breaks down; proposing that IBSA perpetration may act as a coping mechanism to reduce feelings of insecurity or inferiority.

Several papers have established a relationship between offline and online behaviours. In a study of undergraduates, Reed, Tolman and Ward (2016) established a significant relationship between online digital abuse (including IBSA behaviours) and offline sexual and physical violence. Marganski and Melander (2015) found that online abuse predicted physical intimate partner violence (IPV), with those who experienced online victimisation being four times more likely to experience offline sexual IPV. However, our limited understanding of the behavioural propensity for IBSA warrants further research attention (Pina, Holland & James, 2017). In recent years, there has been a drive to understand whether IBSA perpetration correlates with the characteristics seen in other forms of sexual violence, or whether it signifies a different type of harmful behaviour (Powell & Henry, 2017). McGlynn *et al.* (2017) proposed that '…IBSA is on a continuum with other forms of sexual violence' (p. 2).

Researchers have identified the need to explore psychological and personality factors that may impact on IBSA perpetration (Henry & Powell, 2015b; Pina *et al.,* 2017). Much of the literature regarding IBSA consists of victim experiences and legal perspectives (Scott & Gavin, 2017), resulting in a dearth of empirical research examining the perpetration of IBSA. Walker and Sleath (2017) concluded that research should focus on establishing the pathways to IBSA

perpetration to inform theory, classification, prevention and intervention. A number of factors that may contribute to IBSA proclivity are discussed below.

10.1 Aversive personality traits

The 'Dark Triad' of personality (Paulhus & Williams, 2002) comprises three interrelated traits: Machiavellianism, psychopathy and narcissism. Machiavellianism refers to the tendency for manipulative behaviours for personal gain, cynicism, detached affect and immoral beliefs (Rauthmann & Will, 2011). Psychopathy refers to the tendency for callousness, deceit, impulsivity, stimulation-seeking behaviour and a disregard for the rights of others (Neumann & Hare, 2008). Narcissism refers to the tendency for grandiosity, entitlement, manipulation and egotism (Rauthmann, 2011). Although recognised as distinct characteristics, the Dark Triad traits are theorised as a unitary construct due to their shared callousness, deceitfulness and self-aggrandisement (Jakobwitz & Egan, 2006; Paulhus & Williams, 2002). Despite their socially undesirable nature, the Dark Triad traits are within the sub-clinical range and manifest in the general population (Vernon, Villani, Vickers & Harris, 2008). This constellation of personality traits have been linked to the propensity for antisocial behaviour (Pailing, Boon & Egan, 2014), sexually aggressive behaviour (Finkelstein, 2014) and problematic interpersonal relationships (Rauthmann, 2011). Given the focus of co-occurring IPV and stalking perpetration in Chapter Two, Delicato (2021) found that Machiavellianism and psychopathy were significantly associated with self-reported IPV and stalking behaviour.

There is some evidence to support the association between the Dark Triad and IBSA proclivity. Brewer, Hunt, James and Abell (2015) found that the Dark Triad predicted committing 'romantic revenge' in response to a partner being

unfaithful. Rasmussen and Boon (2013) also found that the Dark Triad was associated with feeling impelled to seek revenge after being wronged by an intimate partner. In Veselka, Giammarco and Vernon's (2014) study the Dark Triad traits predicted the propensity to seek revenge and engage in potentially harmful behaviour, however, psychopathy was the only significant individual predictor of being likely to pursue revenge on a romantic partner. Considering that primary motivations for IBSA are considered to be reasons relating to revenge and wanting to harm and humiliate the victim (Pina *et al.,* 2017), these findings are of particular importance. Individuals who endorse Dark Triad traits are likely to respond aggressively to wrongdoings, due to their lack of empathy and emotionally detached relationship style (Jonason, Lyons, Bethell & Ross, 2013). For instance, individuals who endorse the Dark Triad traits can feel particularly offended by any wrongdoing against them due to the threat to their self-esteem and therefore may seek revenge against intimate partners if provoked (Brewer *et al*., 2015; Rasmussen & Boon, 2013). If such individuals are mistreated such individuals may feel the need to punish the wrongdoer potentially to a more severe degree than the harm they originally received (Lee & Ashton, 2012).

Previous research has also demonstrated relationships between aversive personality traits and IBSA. Pina *et al.* (2017) found that higher levels of the Dark Triad were associated with greater self-reported IBSA proclivity, although only explained 18% of the variance. Although each trait significantly correlated with IBSA proclivity, psychopathy was the only significant predictor. This study did not include a measure of social desirability which may have confounded the results due to the sensitive nature of participants' responses. Pina *et al*. (2017) was the first study to explore potential factors related to IBSA proclivity, however, the sample mainly consisted of female participants which skewed the results. Given

the focus of the current study on male IBSA proclivity, the results may differ with a male sample, who are considered to consist of the majority of perpetrators of IBSA (Citron & Franks, 2014). Further, despite achieving significant associations between the Dark Triad traits and IBSA proclivity, these findings are yet to be replicated in studies with individuals who have previously engaged in IBSA.

Another noteworthy finding in Pina *et al.*'s (2017) study was that 28.6% of participants reported some propensity towards engaging in IBSA, 99% of participants indicated some approval and 87% reported some enjoyment of this behaviour. This suggests that individuals are more likely to be accepting of IBSA than participate in it. The aforementioned empirical findings are consistent with the argument that these personality traits are associated with the behavioural propensity to engage in IBSA. Scott and Gavin (2017) recommended that future research explore how the Dark Triad and other personality characteristics influence IBSA behaviours, to provide a more informed understanding of perpetrator characteristics.

10.2 General personality traits

Researchers (Lee & Ashton, 2012; Pailing *et al*., 2014) have used the HEXACO model of personality to increase our understanding of dispositional factors that underlie the Dark Triad in predicting antisocial behaviour. The HEXACO model consists of six factors: Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness and Openness to Experience (Lee & Ashton, 2004). Compared to the specific focus of the Dark Triad, general personality traits are more universal and therefore underpin such secondary constructs (Westhead & Egan, 2015).

The HEXACO model may provide insight into important aspects of personality that are not adequately captured by the Big Five model (Digman, 1990) in understanding IBSA proclivity (Pailing *et al.,* 2014). The HEXACO model is considered more a representative model due to the addition of the Honesty-Humility factor which is useful for predicting responses to transgressions (Lee & Ashton, 2012). Individuals with high levels of Honesty-Humility are described as being fair and modest, with low Honesty-Humility being characterised as exploitative, deceitful, pompous and entitled (Holden, Zeigler-Hill, Pham & Shackelford, 2014).

There is empirical support for the association between HEXACO personality traits and romantic revenge, although their relevance to IBSA proclivity is currently unknown. Individuals with low levels of Honesty-Humility are more likely to engage in antisocial behaviours in retaliating to transgressions, such as acts of revenge (Dunlop, Morrison, Keonig & Silcox, 2012). Lee and Ashton (2012) found that Honesty-Humility was strongly linked to specific revenge planning and intention, providing support for its association with responses to transgressions. Holden *et al.* (2014) also found that individuals with low levels of Honesty-Humility were more willing to engage in manipulative, deceitful or exploitative behaviours. Therefore, low levels of Honesty-Humility may contribute to IBSA proclivity.

Agreeableness has also been found to show a significant association with revenge (McCullough, Bellah, Kilpatrick & Johnson, 2001). Ashton and Lee (2007) described that there is a consistent link between Agreeableness and the tendency for retaliation due to this personality trait being associated with being argumentative, quick-tempered and unforgiving. Sheppard and Boon (2012) found that individuals with low levels of Honesty-Humility and Agreeableness considered romantic revenge as favourable when weighing up the costs and

benefits. Therefore, such individuals are more likely to approve of getting even following transgressions against them, irrespective of the costs.

Combined, these findings suggest that low levels of Honesty-Humility and Agreeableness may contribute to increased IBSA proclivity. Examining both the Dark Triad and HEXACO personality traits may prove beneficial in supporting our understanding of whether certain personality characteristics may contribute to IBSA proclivity.

10.3 Attachment style

Attachment theory is based on the notion that infants develop secure or insecure attachment styles based on their attachment to their primary caregiver (Bowlby, 1980). The attachment style developed in early infancy often epitomises the attachments an individual develops in adulthood (Hazan & Shaver, 1987). Insecure attachment styles (i.e. anxious or avoidant) result in the distortion of their view of themselves and others, and can lead to interpersonal difficulties in adult relationships (Hazan & Shaver, 1987).

Infants with anxious attachments experienced inconsistent caregivers who are sometimes highly responsive and inattentive at other times, and so the infant elicits attention from their caregiver through clingy and desperate behaviours. In adulthood, anxiously attached individuals are likely to require reassurance and emotional support, and experience heightened distress following the breakdown of an intimate relationship (Crittenden & Ainsworth, 1989). Infants with avoidant attachments experienced neglectful caregivers that did not adequately respond to their infant's needs, resulting in the infant detaching from the caregiver and becoming autonomous. Individuals with avoidant attachment styles in adulthood

have been found to experience less distress in the context of an intimate relationship breaking down (Simpson, 1990).

Attachment theory is fundamental in understanding the way that humans respond to those around them. As such, individuals with insecure attachments are known to experience intensified negative reactions to interpersonal transgressions compared to those with secure attachments (Shaver & Mikulincer, 2008; Simpson, Rholes & Phillips, 1996). Attachment-related strategies impact on an individual's response to an intimate partner's hurtful or negative behaviour, such as anger and hostility (Shaver & Mikulincer, 2008). These response patterns are also affected by the cultural phenomenon of technological advances (Mar, 2015).

Research has established an association between attachment style and psychological abusiveness. Bartholomew and Henderson (2001) found that individuals with attachment anxiety were more likely to engage in psychological abuse towards intimate partners. The hyper-activation of attachment strategies intensifies negative emotional reactions to interpersonal conflict, particularly for those with attachment-related anxiety (Mikulincer & Shaver, 2007). In support of this, Davis, Shaver and Vernon (2003) reported that attachment anxiety significantly predicted angry and vengeful behaviour in response to relationship dissolution. Mikulincer, Shaver and Slav (2006) also found that those with attachment-related avoidance may be more inclined to seek revenge following transgressions. These findings indicate that insecure attachment may increase IBSA proclivity.

Research has also established a relationship between insecure attachment and sexually aggressive behaviours. In a sample of male undergraduate students, Smallbone and Dadds (2000) found that insecure attachments were associated with sexually aggressive behaviours and predicted coercive sexual behaviour.

Findings from Russell (2016) support the role of anxious attachment in the prediction of sexual aggression. These findings suggest that anxious attachment is associated with the development of sexually aggressive personality traits (Russell, 2016).

To date, there are no known studies relating attachment styles to IBSA proclivity. As IBSA is perceived as another form of sexual violence it is important to explore whether attachment has a role in predicting IBSA proclivity, in line with other sexually aggressive behaviours (McGlynn *et al*., 2017).

10.4 Moral disengagement

Research has not yet explored psychological mechanisms that underlie an individual's propensity to engage in IBSA. Moral disengagement is an emerging framework that is being considered important for understanding moral processes in cyber-aggressive behaviour (Runions & Bak, 2015). According to Bandura's Social Cognitive Theory (1991), moral thought can enable individuals to either refrain from or engage in immoral or harmful behaviour (Bandura, 1999). Moral disengagement refers to an individual who convinces themselves that ethical standards do not apply to them within a particular situation or context (Page & Pina, 2015). Employing these cognitive mechanisms enables individuals to escape negative self-evaluations associated with nonadherence to their moral standards, and avoid aversive emotions such as guilt and shame when engaging in unethical behaviour (Perren & Gutzwiller-Helfenfinger, 2012).

Bandura (1986) proposed that there are eight moral disengagement mechanisms that allow individuals to disengage moral self-regulation to engage in immoral behaviours: moral justification, euphemistic labelling, advantageous comparison, displacement of responsibility, diffusion of responsibility,

disregarding or distorting the consequences, dehumanisation, and attribution of blame. Bandura (1986) highlighted that more frequent use of multiple strategies of moral disengagement allows these strategies to become more definitive for individuals.

Moral disengagement is in its infancy of being applied in empirical research, however, research (Leidner, Castano, Zaiser & Giner-Sorolla, 2010; Shu, Gino & Bazerman, 2011) suggests moral disengagement might play an important role in various forms of aggressive behaviour. There is empirical research that provides support for the association between moral disengagement and antisocial behaviour in adulthood (Gini, 2006; Hyde, Shaw & Moilanen, 2010). Research has highlighted that individuals who possess higher levels of the Dark Triad traits exhibit poorer moral reasoning and tend to justify antisocial behaviours, with moral disengagement being an underlying factor that influences such associations by serving as a disinhibitor for the perpetration of antisocial behaviour (Campbell *et al.*, 2009; DeLisi *et al*., 2014).

Bandura (2016) highlighted that the emergence of the internet has extended the means by which individuals can disengage from moral self-sanctions to engage in antisocial behaviour. Online technologies are thought to provide an emotional gap which allows individuals to detach from the emotional consequences of cyber-aggressive behaviours (Hymel, Schonert & Reichl, 2009). However, Runions and Bak (2015) highlighted that limited consideration has been given to what mechanisms of moral disengagement might be employed in cyber-settings. To date, some studies (Pornari & Wood, 2010; Robson & Witenberg, 2013) have found a relationship between moral disengagement and cyber-aggression, as well as other aversive behaviour towards others.

This concept offers a promising framework to increase understanding of the cognitive processes that facilitate and maintain sexually harassing behaviour (Page & Pina, 2015). Scarpati and Pina (2017) recommended that future research should explore the influence of moral disengagement on the proclivity to engage in sexually aggressive behaviours. Despite the established association between moral disengagement and aggressive behaviour (Orue & Calvete, 2019), IBSA research has not considered whether moral disengagement might increase IBSA proclivity. Having previously been applied to other forms of sexual violence and harassment, moral disengagement could be a significant disinhibitory factor for IBSA proclivity.

10.5 Hypotheses and Research Questions

Despite the growing body of literature on IBSA, significant gaps remain regarding IBSA perpetration. It has been suggested that research should focus on a greater array of psychological traits and characteristics that may enhance the likelihood of this behaviour (Pina *et al.,* 2017). The extensive consequences of IBSA on victims necessitates research into what type of individuals are most likely to engage in such behaviours (Chester & DeWall, 2017).

This study was designed to address a major deficit in knowledge regarding IBSA proclivity, by exploring the impact of aversive and general personality traits, attachment style and moral disengagement on IBSA proclivity. This study will also examine the impact of these factors on IBSA enjoyment and approval. A further aim of the research is to investigate whether these factors predict IBSA proclivity. Based on the aforementioned research findings, the following five hypotheses were tested in the present study:

- *Hypothesis 1:* Higher levels of the Dark Triad traits will be significantly related to IBSA proclivity, enjoyment and approval.
- *Hypothesis 2:* Lower levels of the Honesty-Humility and Agreeableness HEXACO factors will be significantly related to IBSA proclivity, enjoyment and approval.
- *Hypothesis 3:* Anxious and avoidant attachment styles will be significantly related to IBSA proclivity, enjoyment and approval.
- *Hypothesis 4:* Higher levels of moral disengagement will be significantly related to IBSA proclivity, enjoyment and approval.
- *Hypothesis 5:* Endorsement of the Dark Triad traits, Honesty-Humility and Agreeableness traits, attachment anxiety and avoidance, and moral disengagement will significantly predict IBSA proclivity, enjoyment and approval.

11.0 Methods

11.1 Sample

Given a desired moderate effect size (0.15) and a p=.05 significance level using multiple regression, power analysis using the G*Power programme (Faul, Erdfelder, Lang & Buchner, 2007) revealed that 127 participants were required to reach a power of 0.80. A general population sample was chosen as there is no evidence to suggest that IBSA is just committed by individuals who may be classified as offenders. Therefore, focusing on this behaviour in the general population would ensure the findings were as valid as possible in their representation of IBSA proclivity across common intimate relationships.

Inclusion criteria included being male, over 18 years old and fluent in English. Participants were required to be aged 18 and above due to the sensitive nature of the study's content. A male sample was chosen as the majority of perpetrators of IBSA are men (Citron & Franks, 2014). Conducting statistical analyses with unbalanced populations could call the validity of the results into question due to skewness in the gender ratio.

Participants were recruited through convenience sampling (advertising on social media websites and online forums/research websites such as Reddit, Facebook, Instagram, Twitter) or snowball sampling (asking existing participants to recruit other participants from their contacts). A total of 313 members of the general male population participated in the survey. Two participants were excluded as they did not provide any responses to items. The final sample therefore comprised 311 participants aged between 18-71 ($\bar{x}$ = 29.80, *SD* = 10.93). Regarding ethnicity, the majority of participants were white (81%, *n*=252), with 2.6% (*n*=8) being Hispanic or Latino, 2.9% (*n*=9) being Black or African American, 9.6% (*n*=30) being Asian or Pacific Islander and the remaining 3.9% (*n*=12) reporting other ethnicities. The majority of participants (82%, *n*=255) identified as heterosexual, 7.1% (*n*=22) were homosexual, 7.4% (*n*=23) were bisexual, 0.6% (*n*=2) did not wish to report their sexual orientation, and the remaining 2.9% (*n*=9) identified other sexual orientations.

11.2 Design

Using a within-subjects design, a cross-sectional online survey was the method of data collection. This methodology was chosen due to its ability to investigate patterns of relationships among a large number of variables, determine the direction and strength of associations between variables and

determine which variables predict an outcome. Although cross-sectional research is limited in its ability to test causality between variables, inferences can be made from identified relationships to inform future research (Howitt & Cramer, 2008). However, inaccurate self-reporting from participants and self-selection bias may result in the data not well representing the entire target population and limit the generalisability of the results (Wright, 2005).

The outcome variables were IBSA proclivity, IBSA enjoyment and IBSA approval. The predictor variables were the Dark Triad traits (psychopathy, narcissism, Machiavellianism), HEXACO personality factors (Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness and Openness to Experience), anxious and avoidant attachment styles and moral disengagement.

11.3 Procedure

Participants were directed to an online survey tool, Bristol Online Surveys, where information was provided on the purpose of the research (Appendix 10). Participants were asked to provide their informed consent for inclusion in the sample, by ticking a box indicating that they understand and accept the terms of their participation (Appendix 10). This study was combined with the other empirical research study to run as a single online survey, with participants completing all measures from both studies. To reduce the likelihood of social desirability bias, participants were informed that the focus of the survey concerned their general feelings towards behaviours in intimate relationships. Participants then proceeded to answer demographic questions followed by six scales. The entire survey took approximately 20-25 minutes to complete, based on data from brief pilot testing. On completion of the survey, participants were presented with

a debrief sheet (Appendix 11) which thanked them for their participation and explained the full aim of the study.

11.4 Measures

11.4.1 Demographic Information

Basic demographic questions asked participants to indicate their age, ethnicity and sexual orientation in order to define the sample.

11.4.2 The Short Dark Triad (SD3; Jones & Paulhus, 2014)

The Dark Triad traits were measured with the SD3 (Appendix 13) for the presence of psychopathy, narcissism and Machiavellianism. Using a five-point Likert-type scale from totally disagree (1) to totally agree (5), participants indicated the extent to which they agreed with 27 statements. The scale has demonstrated good levels of internal consistency and reliability, with internal alpha reliabilities for the SD3 subscales ranging from .77 to .80 (Jones & Paulhus, 2014).

11.4.3 HEXACO-60 (Ashton & Lee, 2009)

General personality traits were assessed using the HEXACO-60 (Appendix 14) which measures six dimensions of personality: Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness and Openness to Experience. Participants responded using a five-point Likert-type scale from strongly disagree (1) to strongly agree (5), to indicate the extent to which they agreed with each item. Ashton and Lee (2009) developed the HEXACO-60 scale with retained strong psychometric properties from the longer version of the

HEXACO-PI-R when administered to college students and community adult populations. Internal consistency reliabilities (α) range from .70-.80 for all six scales.

11.4.4 Experiences in Close Relationships - Revised (ECR-R; Fraley, Waller & Brennan, 2000)

Attachment style was measured using the ECR-R (Appendix 15; Fraley, Waller & Brennan, 2000). The ECR-R questionnaire is a revised version of Brennan, Clark and Shaver's (1998) Experiences in Close Relationships (ECR) questionnaire. This 36-item scale consists of statements on attitudes and behaviours in close romantic relationships, and was designed to assess the level of attachment-related anxiety and avoidance that participants experience. Participants responded using a seven-point Likert-type scale from strongly disagree (1) to strongly agree (7). Responses are divided into two subscales, attachment avoidance and attachment anxiety, with higher scores indicating insecure attachment. The ECR-R has yielded good psychometric properties for both subscales, with previous research indicating a Cronbach's alpha ranging from .92-.94 (Dang & Gorzalka, 2015; Fairchild & Finney, 2006).

11.4.5 Moral Disengagement Scale (Detert, Treviño & Sweitzer, 2008)

The Moral Disengagement Scale (Appendix 16) is designed to assess an individual's propensity to moral disengagement (Bandura, Barbaranelli, Caprara & Pastorelli, 1996). As Bandura *et al.*'s (1996) original scale was only applicable to children and adolescents, Detert *et al*. (2008) adapted the measure to suit an adult population. The revised 24-item scale was designed to assess the eight mechanisms of moral disengagement outlined in the introduction. Participants

responded on a five-point Likert-type scale from strongly disagree (1) to strongly agree (5). Higher scores on each subcomponent of the construct indicate higher moral disengagement. This scale has a Cronbach's alpha of .87, demonstrating good internal consistency reliability (Deter *et al*., 2008).

11.4.6 Marlowe-Crowne Social Desirability Scale – 13 Item Version (MCSDS; Reynolds, 1982)

Socially desirable responding tends to occur in response to sensitive questions, which can affect the validity of the results (King & Brunner, 2000). The MCSDS (Appendix 9; Reynolds, 1982) ensures that responses are not distorted by positive self-representation. Participants indicated their answer to the 13 items using a true or false response. Higher scores are indicative of socially desirable responses. This scale has acceptable reliability with a reported Cronbach's alpha of 0.76 (Reynolds, 1982). Moor and Anderson (2019) recommended that research involving the assessment of the Dark Triad traits consider the role of socially desirable responding due to such individuals' tendency for deceit.

11.4.7 Revenge Porn Proclivity Scale (RPPS; Pina et al., 2017)

IBSA proclivity was assessed using the RPPS (Appendix 8). Pina *et al*. (2017) developed the scale and is the only known study to have implemented the scale. Participants read five scenarios involving an intimate image of another person being shared on the internet without their consent. After reading each scenario, participants answered seven questions related to proclivity and reactions towards the acts committed in the scenarios, using a 5-point Likert-type scale. For the proclivity question, participants were given response options ranging from

1 (definitely would not do the same) to 5 (definitely would do the same). For all other questions, response options ranged from 1 (not at all) to 5 (very).

Participants' proclivity score was measured by accumulating their ratings for all five scenarios when asked whether they would do the same. The reliability for this scale is α = .76, demonstrating acceptable reliability. Pina *et al.* (2017) also devised two additional subscales by summing participants' responses to the questions about their reactions to each scenario: IBSA approval and IBSA enjoyment. Both subscales exhibited high internal consistency; IBSA approval (α = .80) and IBSA enjoyment (α = .87). Pina *et al.* (2017) developed the scale using a mixed gender community sample, and recommended that future research replicate the RPPS with male samples.

11.5 Ethical considerations

The study was conducted in accordance with the guidelines specified by both the British Psychological Society's Code of Ethics and Conduct (2009) and the Code of Human Research Ethics (2010). In order to obtain ethical approval the researcher considered issues related to informed consent, confidentiality and anonymity of participants' information, the sensitivity of the topics addressed in the survey, voluntary withdrawal from the study, the minimisation of psychological harm to participants and the treatment and disposal of data. The study was granted ethical approval by the University of Nottingham Faculty of Medicine and Health Sciences Research Ethics Committee (Ref: FMHS 290-1803; Appendix 12).

Participants were informed that the study was voluntary and that they were able to withdraw at any time. To ensure anonymity and confidentiality all participants were asked to give a unique identifier code. Participants were

informed that they did not have to answer any question they did not feel comfortable with. To minimise the risk of harm, participants were also provided with details for a helpline and advised to contact their GP should they be affected by the nature of the study. The debrief page also provided details on the deadline for withdrawal from the study post-completion. The anonymised database is stored on a password-protected file accessible only to the researchers. Anonymised research data will be retained securely for 7 years, in accordance with the University of Nottingham's Code of Research Conduct and Research Ethics.

12.0 Results

Data were analysed using the Statistical Packages for Social Sciences (SPSS version 26) software. Although the study's focus and hypotheses relate to IBSA proclivity, additional exploratory analyses were also conducted on IBSA enjoyment and approval. Although no specific hypotheses regarding these two subscales were not developed, such analyses enabled further exploration of the characteristics associated with participants who endorsed IBSA proclivity (Pina *et al*., 2017).

12.1 Data screening

The data were screened for missing values. A missing value analysis revealed that 1.06% of data were missing, which was considered inconsequential. However, several new variables were created to substitute the missing values with the variable means (Tabachnick & Fidell, 2007). Schafer (1999) advised this as an appropriate approach when there are less than 5% of missing values.

Preliminary analyses were performed to test assumptions of linearity, normality, multicollinearity, homoscedasticity and independence of errors. The

matrix scatterplots indicated linear relationships between the predictor variables and outcome variables, meeting the assumption of linearity. There were no Pearson correlation coefficients between the predictor variables higher than .9 (see Table 7), meeting the assumption of multicollinearity. The Durbin-Watson value for each regression model ranged between 1.289-2.012, meeting the assumption of independence of errors.

Inspection of the histograms, scatterplots and P-P plots indicated that the only non-normally distributed and heteroscedastic outcome variable was IBSA proclivity, violating the assumption of normality and homoscedasticity. However, this was to be expected given the rarity of IBSA proclivity in the general population (prevalence rates estimated to be between 12% and 30% in Powell *et al*.'s (2019) study). IBSA enjoyment and IBSA approval were approximately normally distributed, satisfying the assumption of normality and homoscedasticity. Although outliers in the model were detected through inspection of the scatter plot and box plot, assessment using Cook's distance revealed that these outliers did not have an undue influence on the model (Stevens, 2002).

12.2 Descriptive analyses

Table 6 presents the means, standard deviations and ranges for the predictor and outcome variables. Reliability analyses were conducted on all scales and subscales using Cronbach's α, with the majority of measures demonstrating acceptable to excellent reliability. However, three of the moral disengagement subscales and the MCSDS obtained poor to questionable reliability, but no particular items in these scales significantly affected the overall reliability of the subscale. Kline (2013) recommended that alpha reliability coefficients should be

above .70 to demonstrate good reliability, however, it is worth noting that some of these scale reliabilities only just fell below the cut-off point of .70.

Table 6. Descriptive statistics for the SD3, HEXACO-60, MDS, ECR-R, RPPS AND MCSDS

	$\bar{x}$ (SD)	Range	Scale α
SD3			
Machiavellianism	25.98 (6.07)	9.00-45.00	0.80
Narcissism	23.83 (5.34)	9.00-45.00	0.72
Psychopathy	19.87 (5.51)	9.00-37.00	0.73
HEXACO-60			
Honesty-Humility	33.65 (6.50)	15.00-48.00	0.75
Emotionality	30.54 (6.54)	12.00-48.00	0.77
Extraversion	31.59 (7.20)	10.00-49.00	0.82
Agreeableness	32.39 (6.09)	12.00-50.00	0.75
Conscientiousness	34.92 (6.44)	13.00-50.00	0.80
Openness to Experience	36.36 (6.95)	14.00-50.00	0.81
MDS			
Moral justification	9.02 (2.28)	03.00-15.00	0.57
Euphemistic language	6.93 (2.72)	03.00-15.00	0.73
Advantageous comparison	5.92 (2.77)	03.00-15.00	0.79
Displacement of responsibility	6.86 (2.46)	03.00-15.00	0.78
Diffusion of responsibility	7.36 (2.56)	03.00-15.00	0.67
Distorting consequences	5.95 (2.67)	03.00-15.00	0.86
Attribution of blame	6.43 (2.44)	03.00-15.00	0.65
Dehumanisation	5.39 (2.88)	03.00-15.00	0.87
Total scale	53.87 (14.97)	24.00-120.00	0.92
ECR-R			
Attachment Avoidance	51.52 (19.42)	18.00-109.00	0.93
Attachment Anxiety	66.97 (20.81)	18.00-124.00	0.92
RPPS			
IBSA Proclivity	6.16 (2.67)	05.00-19.00	0.83
IBSA Enjoyment	29.38 (9.78)	15.00-62.00	0.85
IBSA Approval	35.79 (9.38)	15.00-64.00	0.77
MCSDS	6.48 (2.81)	0.00-13.00	0.68

In line with other research that has employed proclivity measures (Gannon & O'Connor, 2015; Pina *et al*., 2017), only participants who categorically disagreed with the questions were considered to not have any endorsement of IBSA

proclivity, enjoyment or approval. Therefore, 29.3% of participants (*n*=91) presented at least some proclivity to perpetrating IBSA (scored >5 on the proclivity scale overall). Additionally, 92% of participants reported some endorsement of IBSA enjoyment (scored >15 on the enjoyment subscale overall), and 98.7% of participants expressed at least some approval of IBSA in the scenarios (scored >15 on the approval subscale overall). These values were similar to those reported by Pina *et al.* (2017).

Interestingly, 8.4% of participants indicated higher levels of IBSA proclivity (scored >10 on the proclivity scale overall). Higher levels of endorsement of IBSA enjoyment was reported by 42.4% of participants (scored >30 on the enjoyment subscale overall), and 71.1% of participants expressed higher levels of revenge approval (scored >30 on the approval subscale overall).

12.3 Correlations

A Pearson's correlation analysis was computed including all variables to identify significant relationships (see Table 7). These results determined which variables would be entered into the regression analyses as predictors of IBSA proclivity, enjoyment and approval.

Table 7. Pearson's correlation analysis of all variables

	1) Machiavellianism	2) Narcissism	3) Psychopathy	4) Honesty-Humility	5) Emotionality	6) Extraversion	7) Agreeableness	8) Conscientiousness	9) Openness to experience	10) Moral disengagement	11) IBSA Proclivity	12) IBSA Enjoyment	13) IBSA Approval	14) Attachment avoidance	15) Attachment anxiety	16) Social desirability
1)	-															
2)	.38**	-														
3)	.49**	.47**	-													
4)	-.51**	-.41**	-.53**	-												
5)	-.11	-.28**	-.16*	.07	-											
6)	-.10	.54**	.07	-.07	-.26**	-										
7)	-.41**	-.22**	-.48**	.37**	.06	.02	-									
8)	.03	.01	-.29**	.15*	-.09	.07	-.00	-								
9)	-.12*	-.02	-.16*	.21**	-.03	.07	.12*	.11	-							
10)	.34**	.37**	.57**	-.46**	-.09	.03	-.24**	-.33**	-.31**	-						
11)	.13*	.17*	.36**	-.24**	.04	-.09	-.17*	-.16*	-.27**	.56**	-					
12)	.16*	.19*	.28**	-.19*	-.10	.04	-.08	-.01	-.06	.28**	.51**	-				
13)	.24**	.14*	.29**	-.27**	-.06	.01	-.29**	-.04	-.16*	.26**	.41**	.43**	-			
14)	.23**	-.06	.21**	-.15*	-.04	-.30**	-.16*	-.10	-.26**	.26**	.23**	.07	.15*	-		
15)	.12*	-.03	.14*	-.15*	.44**	-.33**	-.05*	-.15*	-.10	.24**	.24**	.03	.15*	.20**	-	
16)	-.41**	-.08	-.35**	.38**	-.07	.20**	.50**	.19*	-.00	-.21**	-.11	-.04	-.18*	-.22**	-.23**	-

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

As shown in Table 7, Machiavellianism (r=.13, p<.05), narcissism (r=.17, p<.05) and psychopathy (r=.36, p<.001) all had significant positive correlations with IBSA proclivity. Additionally, Honesty-Humility (r=-.24, p<.001), Agreeableness (r=-.17, p<.05), Conscientiousness (r=-.16, p<.05) and Openness to Experience (r=-.27, p<.001) were found to be significantly negatively correlated with IBSA proclivity. Moral disengagement yielded the strongest positive correlation with IBSA proclivity (r=.56, p<.001), but both attachment avoidance (r=.23, p<.001) and attachment anxiety (r=.24, p<.001) also positively correlated with IBSA proclivity.

Higher levels of Machiavellianism (r=.16, p<.05), narcissism (r=.19, p<.05) and psychopathy (r=.28, p<.001) were found to be correlated with greater IBSA enjoyment. There was also a strong positive relationship between moral disengagement and IBSA enjoyment (r=.28, p<.001). A significant negative correlation was also revealed between Honesty-Humility and IBSA enjoyment (r=-.19, p<.05).

Machiavellianism (r=.24, p<.001), narcissism (r=.14, p<.05) and psychopathy (r=.29, p<.001) were all significantly positively correlated with IBSA approval. Honesty-Humility (r=-.27, p<.001), Agreeableness (r=-.29, p<.001) and Openness to Experience (r=-.16, p<.05) were significantly negatively correlated with IBSA approval. There were also significant positive correlations between moral disengagement (r=.26, p<.001), attachment avoidance (r=.15, p<.05) and attachment anxiety (r=.15, p<.05) and IBSA approval.

As shown in Table 7, the majority of the Pearson's correlations between variables were significant (p <.05; p < .001), despite several correlations being low.

12.4 IBSA proclivity

A multiple linear regression analysis using bootstrapping was conducted to test whether the SD3 traits, honesty-humility, agreeableness, conscientiousness and openness to experience, moral disengagement, attachment avoidance and attachment anxiety predicted IBSA proclivity. The 10 predictor variables were inputted into the regression model using the enter method due to the variables not being perceived as needing to be entered in a particular order. The bootstrapped standard errors, confidence intervals and significance values are interpreted as they are robust values that do not rely on the assumptions of normality or homoscedasticity, both of which were violated for IBSA proclivity.

The analysis indicated that the general model was significant, $F(10,300) = 16.159$, $p < .001$. The R^2 for the overall model indicated that 35% of the variance of IBSA proclivity was accounted for by the above predictor variables. Machiavellianism (b=-0.06, p=.045), Openness to Experience (b=-0.04, p=.050), moral disengagement (b=0.09, p=.001) and attachment anxiety (b=0.02, p=.036) were the only predictor variables that significantly predicted IBSA proclivity. Table 8 presents the regression coefficients for all predictor variables.

Table 8. Linear regression model of predictors of IBSA proclivity, with 95% bias corrected and accelerated confidence intervals reported in parentheses. Confidence intervals and standard errors based on 1000 bootstrapping samples

Variable	Unstandardised coefficients		Standardised coefficients	t	Sig.
	B	SE B	Beta		
Constant	1.15 (-3.60, 5.44)	2.50		.53	.647
Machiavellianism	-0.06 (-0.13, 0.00)	0.03	-.15	-2.43	.045
Narcissism	-0.01 (-0.06, 0.05)	0.03	-.01	-0.20	.813
Psychopathy	0.06 (-0.01, 0.15)	0.04	.13	1.86	.088
Honesty-Humility	0.01 (-0.04, 0.06)	0.03	.02	0.26	.797
Agreeableness	-0.02 (-0.07, 0.04)	0.03	-.04	-0.68	.516
Conscientiousness	0.03 (-0.01, 0.07)	0.02	.08	1.44	.146
Openness to Experience	-0.04 (-0.08, -0.00)	0.02	-.09	-1.84	.050
Moral disengagement	0.09 (0.05, 0.11)	0.02	.48	7.48	.001
Attachment avoidance	0.01 (-0.00, 0.02)	0.01	.07	1.35	.198
Attachment anxiety	0.02 (0.00, 0.03)	0.01	.12	2.34	.036

The Beta values for moral disengagement (β=.48, p=.001), Machiavellianism (β=-.15, p=.045), psychopathy (β=.13, p=.088) and attachment anxiety (β=.12, p=.036) show that these predictor variables had a higher degree of importance in the model compared to the other predictor variables. Finally, the part correlation coefficients were inspected to explore the unique contribution of each predictor variable. Moral disengagement accounted for 12.11% of the variance in IBSA proclivity, which was the largest unique contribution. The effect size, calculated using Cohen's f^2, was 0.54, which is large.

12.5 IBSA enjoyment

A further multiple linear regression was used to explore to what extent the SD3 traits, honesty-humility, moral disengagement, attachment avoidance and attachment anxiety predicted IBSA enjoyment. The total variance explained by the model was 10.5% which was significant, $F(7,303) = 5.095$, $p < .001$. However, inspection of the P-P plot revealed two outliers. Therefore, the same analysis was repeated after winsorizing both outliers.

This subsequent analysis with the winsorized outliers explained 10.7% of the variance, and indicated that the model was a significant predictor of IBSA enjoyment, $F(7,303) = 5.169$, $p < .001$. Whilst significant, only moral disengagement (b=0.12, p=.010) and psychopathy (b=0.28, p=.036) remained as significant predictors of IBSA enjoyment. Table 9 presents the regression coefficients for all predictor variables for IBSA enjoyment.

Table 9. Linear regression model of predictors of IBSA enjoyment, with 95% confidence intervals reported in parentheses

Variable	Unstandardised coefficients		Standardised coefficients	t	Sig.
	B	SE B	Beta		
Constant	16.64 (3.35, 29.92)	6.75		2.47	.014
Machiavellianism	0.03 (-0.19, 0.24)	0.11	.02	0.25	.806
Narcissism	0.07 (-0.17, 0.31)	0.12	.04	0.56	.576
Psychopathy	0.28 (0.02, 0.55)	0.13	.16	2.10	.036
Honesty-Humility	-0.01 (-0.21, 0.20)	0.11	-.00	-0.06	.950
Moral disengagement	0.12 (0.03, 0.21)	0.05	.18	2.586	.010
Attachment avoidance	-0.00 (-0.06, 0.06)	0.03	-.01	-0.11	.911
Attachment anxiety	-0.02 (-0.07, 0.04)	0.03	-.04	-0.67	.505

The Beta values for moral disengagement (β=.18, p=.010) and psychopathy (β=.16, p=.036) show that these predictor variables had a higher degree of importance in the model. Finally, the part correlation coefficients were inspected to explore the unique contribution of each predictor variable. Moral disengagement accounted for 1.96% of the variance in IBSA enjoyment, which was the largest unique contribution. The Cohen's f^2 value of 0.12 represents a medium effect size.

12.6 IBSA approval

Hierarchical multiple regression was performed to assess the ability of the SD3 traits, honesty-humility, agreeableness, openness to experience, moral disengagement, attachment avoidance and attachment anxiety to predict IBSA approval after controlling for the influence of social desirability. A significant

negative correlation was detected between social desirability and IBSA approval (r=-.18, p<.05).

Social desirability was entered into Step 1 and significantly explained 3.1% of the variance in IBSA approval, $F(1,309) = 9.871$, $p = .002$. After entry of the nine predictor variables at Step 2 the total variance explained by the model was 15.1%, $F(10,300) = 5.326$, $p < .001$. The predictor variables significantly explained a further 12% of the variance in IBSA approval, after controlling for social desirability (ΔR^2=.12, $F(10,300) = 4.703$, $p < .001$), showing that the proportion of variance already explained in IBSA approval by social desirability increases with the inclusion of the predictor variables in the model. In the final model, agreeableness was the only statistically significant predictor (b=-0.28, p=.007). Table 10 displays the regression coefficients from the reduced and full model.

Table 10. Hierarchical regression model of predictors of IBSA approval, with 95% confidence intervals reported in parentheses

Variable	Unstandardised coefficients		Standardised coefficients	t	Sig.
	B	SE B	Beta		
Step 1					
Constant	39.59 (37.00, 42.19)	1.32		30.02	.000
Social desirability	-0.59 (-1.00. -0.22)	0.19	-.18	-3.14	.002
Step 2					
Constant	40.61 (25.02, 56.21)	7.93		5.13	.000
Social desirability	0.14 (-0.31, 0.59)	0.23	.04	0.61	.544
Machiavellianism	0.09 (-0.12, 0.30)	0.11	.06	0.84	.400
Narcissism	-0.02 (-0.25, 0.21)	0.12	-.01	-0.17	.863
Psychopathy	0.12 (-0.15, 0.38)	0.13	.07	0.87	.385
Honesty-Humility	-0.13 (-0.33, 0.08)	0.10	-.09	-1.23	.219
Agreeableness	-0.28 (-0.49, -0.08)	0.10	-.18	-2.72	.007
Openness to experience	-0.08 (-0.23, 0.08)	0.08	-.06	-0.97	.332
Moral disengagement	0.06 (-0.03, 0.14)	0.05	.09	1.23	.221
Attachment avoidance	0.02 (-0.04, 0.07)	0.03	.03	0.53	.594
Attachment anxiety	0.04 (-0.01, 0.09)	0.03	.09	1.51	.133

The Beta values for agreeableness (β=-.18, p=.007) show that this predictor variable had the highest degree of importance in the model. The effect size, calculated using Cohen's f^2, was 0.12, which is medium.

13.0 Discussion

This study aimed to determine whether aversive and general personality traits, attachment style and moral disengagement were significantly related to and able to predict IBSA proclivity. One of the study's aims was to extend the research of Pina *et al*. (2017) to include other factors that might further explain IBSA proclivity. The hypotheses were proven as evidenced by the outcome of the analyses which are discussed below.

The extent of self-reported IBSA proclivity, enjoyment and approval in the current study were similar to rates reported in Pina *et al*.'s (2017) study. Participants' responses implied that they are more likely to approve of or find enjoyment in the dissemination of IBSA rather than perpetrate it. The fact that 29.3% of participants (*n*=91) presented at least some proclivity to perpetrating IBSA suggests that this study has captured a sample of males who indicate a likelihood to engage in IBSA, however, it is not possible to determine whether these participants will in fact engage in IBSA.

13.1 Overview of Findings

Hypothesis 1: Higher levels of the Dark Triad traits will be significantly related to IBSA proclivity, enjoyment and approval. With regards to the first hypothesis, higher levels of Machiavellianism, narcissism and psychopathy significantly correlated with a greater likelihood to perpetrate IBSA. Therefore, this hypothesis was supported by the current results and corroborates previous findings by Pina *et al.* (2017). The Dark Triad traits also obtained significant positive relationships with IBSA enjoyment and approval. Psychopathy achieved the highest correlation with IBSA proclivity, enjoyment and approval. However, these findings contradict those of Pina *et al*. (2017), who did not find a

significant relationship between narcissism and psychopathy with IBSA approval, nor between Machiavellianism and psychopathy with IBSA enjoyment. The findings from the current study are consistent with the wider literature regarding the association between the Dark Triad traits and seeking romantic revenge in response to being wronged by an intimate partner (Rasmussen & Boon, 2013). The association between the Dark Triad and the propensity to perpetrate, enjoy and approve of IBSA could be explained by the shared callousness of these aversive personality traits (Jakobwitz & Egan, 2006).

Hypothesis 2: Lower levels of the Honesty-Humility and Agreeableness HEXACO factors will be significantly related to IBSA proclivity, enjoyment and approval. A significant relationship was revealed between lower levels of Honesty-Humility and agreeableness with self-reported IBSA proclivity; supporting this hypothesis. There was also a significant negative relationship between Honesty-Humility and both IBSA enjoyment and approval. Agreeableness was also significantly associated with IBSA approval. Such findings advance previous literature as no study has been known to identify the relevance of general personality characteristics to IBSA perpetration. Results from this study lend support to previous findings (Dunlop *et al.,* 2012; Holden *et al*., 2014; Lee & Ashton, 2012; Sheppard & Boon, 2012) that have established a link between low levels of Honesty-Humility and Agreeableness with an increased likelihood for romantic revenge or engagement in antisocial, vengeful and exploitative behaviours in response to transgressions.

Hypothesis 3: Anxious and avoidant attachment styles will be significantly related to IBSA proclivity, enjoyment and approval. In line with this hypothesis, the results revealed that both attachment avoidance and attachment anxiety yielded a significant positive relationship with IBSA proclivity.

Further, both insecure attachment styles yielded significant positive relationships with IBSA approval. Therefore, the current results support past research (Davis *et al.*, 2003; Mikulincer *et al*., 2006) regarding insecure attachments being associated with sexually aggressive behaviours and an increased inclination to seek revenge for transgressions. However, these findings also add to the wider literature around the role of attachment specifically in relation to IBSA proclivity.

Hypothesis 4: Higher levels of moral disengagement will be significantly related to IBSA proclivity, enjoyment and approval. This hypothesis was also supported as the analysis revealed a significant relationship between moral disengagement and IBSA proclivity, enjoyment and approval. Further, moral disengagement was found to have the strongest relationship with IBSA proclivity out of all the predictor variables. The current study provides support for the endorsement of moral disengagement mechanisms increasing the likelihood of perpetrating, enjoying and approving of IBSA. These findings are consistent with previous research which has indicated an association between moral disengagement and engaging in antisocial (Campbell *et al.,* 2009; DeLisi *et al.*, 2014) and cyber-aggressive (Pornari & Wood, 2010; Robson & Witenberg, 2013) behaviours. In relation to IBSA, it may be that individuals who engage in this behaviour perceive it to be less serious in comparison to behaviours commonly considered more serious, view their behaviour as justified by projecting blame onto the victim, undermine the seriousness of their behaviour or minimise the impact on victims. Further, moral disengagement may allow individuals to engage in IBSA without any threat to their moral self-worth. This would support Hymel *et al*.'s (2009) suggestion that online technologies enable individuals to distance themselves from the emotional consequences of cyber-aggression perpetration.

Hypothesis 5: Endorsement of the Dark Triad traits, Honesty-Humility and Agreeableness traits, attachment anxiety and avoidance, and moral disengagement will significantly predict IBSA proclivity, enjoyment and approval. The findings indicated that the predictor variables significantly explained 35% of the variance in IBSA proclivity, with the additional inclusion of Conscientiousness and Openness to Experience to the regression model. Therefore, the null hypothesis can be rejected. It was found that Machiavellianism, Openness to Experience, moral disengagement and attachment anxiety were the best predictors of IBSA proclivity. While these predictor variables contributed significantly to the model, Honesty-Humility and Agreeableness did not. Further exploratory multiple regression analyses revealed that the Dark Triad traits, Honesty-Humility and moral disengagement significantly predicted IBSA enjoyment. However, psychopathy and moral disengagement remained the only independent significant predictors. In relation to IBSA approval, Agreeableness was the only predictor variable that significantly contributed to the regression model.

IBSA concerns the sharing of private and sensitive images that can have long-lasting and detrimental effects on victims, highlighting the callous nature of psychopathy and detached affect associated with Machiavellianism (Moor & Anderson, 2019). Interestingly, these findings are contrary to previous research by Pina *et al.* (2017) who found that psychopathy was a significant predictor of IBSA proclivity in addition to Machiavellianism. These differences in findings could be explained by Pina *et al.*'s (2017) sample comprising predominantly female participants and potential gender differences in a predisposition to IBSA; in that psychopathic traits may be endorsed more highly by females. However, previous research (Brewer *et al*., 2015; Veselka *et al*., 2014) has established the ability of

the Dark Triad to predict the propensity to seek romantic revenge and engage in harmful behaviours.

13.2 Summary of Findings

The findings of this study suggest that the callousness, lack of empathy and disregard for consequences which are characteristic of the Dark Triad traits are salient features in relation to IBSA proclivity (Furnham, Richards & Paulhus, 2013). However, it appears that Machiavellian traits (i.e. detached affect, high self-interest, interpersonal manipulation) hold more significance in relation to predicting the perpetration of IBSA. Rasmussen and Boon (2013) proposed that the endorsement of Machiavellian traits (i.e. wanting power and justice) likely promotes the perceived effectiveness of seeking revenge as an effective response to provocation, in order to retain dominance over their current or ex-intimate partner. Interestingly, Honesty-Humility was not identified as a significant predictor despite its strong correlation with all the Dark Triad traits; two of which were identified as significant contributors to the IBSA proclivity and enjoyment models. This suggests that the Dark Triad traits were more influential in the prediction of IBSA proclivity in comparison to Honesty-Humility alone, in that the deceitfulness and conceitedness (Hodson *et al*., 2018) that represent low levels of Honesty-Humility are less relevant to the likelihood of engaging in IBSA. The finding that low Openness to Experience is a significant predictor of IBSA proclivity is contrary to previous research which emphasises that high Openness to Experience is associated with risk-taking behaviours (Weller & Tikir, 2011). Additionally, the correlation between low Conscientiousness and IBSA proclivity is consistent with research that describes individuals with low conscientiousness being more disposed to engaging in risky or antisocial behaviours due to their

tendency to be impulsive and undisciplined (Jones, Miller & Lynam, 2011; Weller & Tikir, 2011).

The significance of attachment anxiety as a predictor of IBSA proclivity confirms previous findings that attachment anxiety predicts sexually aggressive (Russell, 2016) and vengeful behaviour (Davis *et al*., 2003). A possible explanation for this might be heightened distress and negative emotional reactions that anxiously attached individuals are believed to experience in relation to interpersonal conflict (Crittenden & Ainsworth, 1989; Mikulincer & Shaver, 2007). It may be that when individuals with anxious attachment styles experience a threat to a relationship with an attachment figure, they employ aggressive behaviours in an attempt to reduce distress or to prevent their intimate partner from ending the relationship through use of threats (Crittenden, 1997; Simpson, 1990). Considered together, individuals with anxious attachment styles may be more vulnerable to feeling distressed, and the added presence of Machiavellian traits increases the likelihood of reacting to this distress by engaging in IBSA.

It was also found that moral disengagement was the most significant contributor in the regression models for IBSA proclivity and enjoyment. This suggests that the perpetration and enjoyment of IBSA are underpinned by the tendency for individuals to disengage from their moral beliefs to justify their engagement in and approval of online immoral and antisocial behaviour (Bandura, 2016). In line with research by Campbell *et al.* (2009), the current study highlighted that moral disengagement had strong positive relationships with the Dark Triad traits. Therefore, it may be that moral disengagement underlies the Dark Triad traits as a disinhibitory factor for behaviours like IBSA (Fossati, Pincus, Borroni, Munteanu & Maffei, 2014). Indeed, Risser and Eckert (2016) found that

individuals with callous-unemotional traits presented with higher levels of moral disengagement.

Based on the findings, a preliminary model is proposed for understanding the processes that lead to the likelihood of engaging in IBSA. It is likely that IBSA proclivity is not the result of one independent factor but instead influenced by a myriad of factors. It may be that disrupted attachments, namely attachment anxiety, lead to impairments in personality development and result in the presence of callous-unemotional traits which increase their propensity for revenge due to their association with envy, anger, impulsivity and low empathy (Brewer *et al.*,2015; Kircaburun *et al*., 2019). The threat of a breakdown in the relationship might trigger such negative feelings and result in an individual acting impulsively by engaging in IBSA (Trendell, 2019). Disseminating explicit images of others may allow perpetrators to alleviate negative emotional states associated with conflict or a breakdown in a relationship, such as insecurity, inferiority and feeling out of control (Hall & Hearn, 2019). This standpoint lends itself well to theories that postulate sexually aggressive behaviours are an attempt by perpetrators to amend perceived power imbalance (Tittle, 1995).

As individuals with Machiavellian traits are thought to possess immoral beliefs (Rauthmann & Will, 2011), the ability to disengage from their moral standards may act as a further disinhibiting factor for IBSA when responding to transgressions. Individuals with insecure attachments and callous-unemotional traits may be more likely to engage in IBSA as a result of self-serving cognitions which allow them to justify their antisocial conduct (van Leeuwen, Rodgers, Gibbs & Chabrol, 2014). This may be the case due to the individual being exposed to beliefs that condone the use of antisocial behaviour as a coping or problem-solving strategy, resulting from experiences of harsh and rejecting caregiving that

contribute to the development of moral disengagement through the influence of early caregivers (Hyde et al., 2010).

High levels of Machiavellianism is associated with an impaired sense of morality and higher moral disengagement (Karandikar, Kapoor, Fernandes & Jonason, 2019). Although Machiavellianism is associated with detached affect, it is possible that attachment-related anger towards intimate partners influences the likelihood of responding aggressively (i.e. engaging in IBSA). It is possible that individuals with higher levels of Machiavellianism are more inclined to engage in IBSA in order to cope with the anxiety resulting from rejection or transgressions by intimate partners (Ináncsi, Láng & Bereczkei, 2015). Indeed, Ináncsi *et al*. (2015) found that Machiavellian individuals showed more attachment-related anger towards an intimate partner. Although Machiavellian individuals are thought to exhibit dismissing or avoidant attachment styles, it is possible that engaging in IBSA restores self-esteem which was likely damaged in response to being wronged by an intimate partner (Van Monsjou *et al.*, 2015). Future research should modify and expand on this model when additional relevant factors are identified in order to improve our understanding of the trajectories to IBSA perpetration.

13.3 Strengths and Limitations of Study

Although the contributions of this study to the literature are noteworthy, there are limitations that merit consideration. The generalisability of the results is restricted by the use of a general population sample, therefore the results are only tentative and are not representative of IBSA perpetrators. Despite this, the design of the study allows an exploration of what factors may put someone at risk of engaging in IBSA behaviours. Further, the results may have been impacted upon by participants being unlikely to readily admit their propensity to engage in IBSA.

However, this confounding variable was accounted for by the inclusion of a social desirability scale.

It is questionable whether participant responses to the vignettes reflect behavioural and attitudinal tendencies in real life. The factors that might lead someone to perpetrate IBSA may be more reactive in nature and unlikely to be reflected in an online survey where participants are asked to consider hypothetical situations. Therefore, the true extent of IBSA proclivity may be higher, as participants might react differently if involved in real life situations. Despite this, it is still concerning that 8.4% of participants indicated increased IBSA proclivity (i.e. responses indicated participants were either not sure, probably or definitely likely to engage in the IBSA outlined in the vignettes).

Another limitation is that the study's cross-sectional design limits the number of inferences that can be made regarding the results. The design of the study consisted of an online survey containing several scales with there being no incentives for participation. Therefore, participants may have not properly considered their responses or lost motivation. A further limitation is that the online survey tool did not allow the measures to be counterbalanced, which means the results may have been subject to fatigue and order effects.

Despite these limitations, this study contributes to an emerging evidence base around potential characteristics associated with IBSA proclivity. The current findings offer new knowledge into what impels individuals to share IBSA. Even though previous research has shown the Dark Triad to be associated with IBSA proclivity, this study empirically extended this to examine the influence of general personality traits for the first time. The identification of such characteristics is important for the classification of these acts in order to benefit preventative and rehabilitative methods, and allow important insight into the use of technology to

facilitate violence. A strength of this study is that it includes a relatively large sample (N=311) which enabled the study to produce meaningful results.

13.4 Future Research

Indicators for future research have emerged from this study. As this is the first study to consider the combination of these predictor variables in relation to IBSA proclivity, future research should replicate this study to determine the robustness of these results. Further research is needed to explore other factors and characteristics that may contribute to engaging in IBSA. Despite the statistical significance of the results, the percentage of variance explained by the predictor variables in the regression models suggests that there are other major variables that contribute to IBSA perpetration, which require consideration in future research (i.e. vengefulness, impulsivity, aggressiveness, emotion dysregulation or antisocial/hostile attitudes). Taking into account Harper *et al*.'s (2019) suggestion regarding IBSA perpetration acting as a coping mechanism to reduce feelings of inferiority and insecurity when a relationship breaks down, it may be that these factors might also account for some of the variance in IBSA proclivity.

Regardless, the study signifies to some extent that the predictor variables that have been considered do essentially have an impact on IBSA proclivity, enjoyment and approval. Although it is not possible for this study to identify the motivations behind the perpetration of IBSA proclivity, the results of this study suggest that individuals are more likely to engage in IBSA if they possess callous-unemotional traits (i.e. disregard for others, lack of empathy and detached affect), an anxious attachment style, low openness to experience, and poorer moral reasoning.

More research is needed to improve our understanding of the characteristics of perpetrators by doing studies with this population directly. The contribution of this study is important, but more is needed to be done with regards to this concerning phenomenon. Therefore, future research should aim to employ quantitative or qualitative methods with a sample of IBSA perpetrators to develop our understanding of their reasons and motivations for engaging in IBSA.

13.5 Conclusion

Overall, this study explored the impact of aversive and general personality traits, attachment style and moral disengagement on IBSA proclivity. The findings from this study add to the existing literature by highlighting that IBSA proclivity is influenced by Machiavellianism, Openness to Experience, attachment anxiety and moral disengagement. This is the first study to acknowledge the relationship between general personality traits, attachment styles and moral disengagement with IBSA proclivity. Considered together, these findings have highlighted behavioural and psychological factors that can be targeted in future approaches for prevention. However, the findings are far from conclusive. Although this study represents a step forward in our limited understanding of IBSA proclivity, more research is required to achieve a fuller understanding of the underlying characteristics associated with an increased likelihood of engaging in IBSA, in order to contribute to effective interventions.

Chapter Five: A psychometric critique of The Propensity for Abusiveness Scale (PAS; Dutton, 1995)

14.0 Introduction

This chapter reviews the Propensity for Abusiveness Scale (PAS; Dutton, 1995) in terms of its psychometric properties and research uses for assessing propensity for intimate partner violence (IPV) perpetration. As it was a psychometric measure used in the empirical study contained in Chapter Three of this thesis, it is important to ascertain its strengths and limitations due to their potential impact on the results and conclusions drawn from the study. First, an overview of the PAS is presented, including the area that it assesses, the purpose of the tool, and its content. Second, the tool's attempts to measure the intended construct are evaluated, drawing upon principles of reliability, validity and appropriate norms. Practical and research implications, limitations and avenues for further research will also be discussed.

Due to the widespread effects of IPV on individuals, families and society, assessing the potential for or presence of abuse in intimate relationships is imperative in order to establish preventative strategies for IPV and reduce its reoccurrence (Kropp, 2004; Nicholls, Pritchard, Reeves & Hilterman, 2013). As a result, numerous IPV assessment measures have been developed in response to the concerns surrounding IPV perpetration (Dutton & Kropp, 2000; Strauchler *et al*., 2004). The validity of violence prediction has often been called into question and a longstanding debate exists regarding the ability to accurately predict violence (Dutton & Kropp, 2000). Criminal justice and health care professionals are often asked to make judgments about the risk of IPV.

Traditional methods of assessing risk of IPV, such as professional judgement, have received extensive criticism for inaccurate predictions and susceptibility to individual bias (Nicholls *et al*., 2013). This has led to the development of a range of actuarial risk assessments and tools that amalgamate several risk factors that are empirically associated with an increased risk of abuse into a single scale in order to generate robust quantitative risk estimates (Taft, LaMotte & Gilbert, 2017; Williams & Grant, 2006). Evidence-based IPV measures allow us to determine the level of risk posed by perpetrators, enhance the safety of victims, highlight treatment needs and ascertain the context and severity of abuse (Nicholls *et al*., 2013).

15.0 Historical and current measures of IPV

There are a range of instruments designed to assess abusiveness in intimate relationships that involve victim ratings, IPV risk scales and risk scales devised for general or violent recidivism (Hanson, Helmus & Bourgon, 2007). Victim accounts are deemed to be an important source of information due to their knowledge and experience of the perpetrator (Dutton & Kropp, 2000). However, assessing perpetrator reports of abusiveness is problematic as their responses can be disingenuous due to socially desirable responding and reactivity, which can result in IPV perpetration going undetected (Arias & Beach, 1987). For instance, Dutton and Hemphill (1992) determined that IPV perpetrator reports of physical and emotional abuse were strongly associated with social desirability.

Established measures of IPV include the Conflict Tactics Scale (CTS; Straus, 1979), Psychological Maltreatment of Women Index (PMWI; Tolman, 1989) and Severity of Violence Against Women Scale (SVAWS; Marshall, 1992). However, these along with many other self-report measures are explicitly imply the

measurement of IPV; making them susceptible to participant reactivity and socially desirable responding (Dutton, 1995). This is particularly important to consider when taking into account the consequences of IPV perpetrators evading accurate estimates of abusiveness. Several measures pertain to the historical or current occurrence of IPV (Strauchler *et al*., 2004). Other scales, such as the Danger Assessment (DA; Campbell, 1986) and Spousal Assault Risk Assessment (SARA; Kropp & Hart, 1997), aim to predict further IPV perpetration. However, few measures exist that were developed to capture the propensity for abuse as opposed to recidivism or risk of perpetration.

16.0 Overview of the PAS

16.1 Background to the Measure

The PAS was designed as a measure of propensity for male perpetration of abuse towards female partners in intimate relationships (Dutton, 1995). The PAS is a 29-item, self-report measure which appears unrelated to IPV perpetration as it taps into background factors that are empirically associated with abusiveness (Dutton & Kropp, 2000). This was to allow for the potential for abuse to be assessed without generating reactive responses that may minimise the extent of the abuse (Nicholls *et al.,* 2013). Whereas some measures that predict IPV include items relating to a past history of violence, the PAS does not. Men are likely to react to measures that explicitly tap into abuse tactics by minimising the extent of their abusiveness (Dutton, 1995). As a result, the PAS was designed to assess the inclination to be abusive without directly asking about abusive behaviours in order to reduce potential reactivity and social desirability bias that results in misrepresentation (Taft *et al.*, 2017).

16.2 Scale Development

The PAS is based on the notion that IPV is a result of the psychopathology of perpetrators instead of sociocultural and other individual factors, such as gender inequalities, relationship dynamics or ensuring control over female partners (Riley, 2018). Dutton (1995) developed questions by selecting items from other measures that were related to IPV and "loaded most heavily on a discriminant function for emotional abusiveness" (Dutton, 1995, p. 206), but that did not explicitly address abusive behaviour. These measures included the Trauma Symptom Checklist (TSC-33; Briere & Runtz, 1989), Multidimensional Anger Inventory (MAI; Siegel, 1986), Borderline Personality Organisation scale (BPO; Oldham *et al.*, 1985), Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994), and Recollections of Early Childrearing (EMBU; Perris Jacobsson, Lindstrom, von Knorring & Perris, 1980).

Collectively, the PAS taps into personality traits, trauma symptoms, anger, adult attachment styles, and parental warmth and rejection, all of which have shown strong associations with reports of physical and emotional abuse perpetration (Dutton, 1995; Dutton, Landolt, Starzomski & Bodnarchuk, 2001). The resulting scale, the PAS, was thought to provoke less reactivity than explicit abuse scales.

Dutton (1995) developed the PAS based on associations between men's childhood and adult variables and their female partners' accounts of IPV as identified in an assessment given to convicted batterers and non-violent controls. Dutton (1995) obtained data from 140 males accessing a treatment program for female partner assault, and 63 of their female partners (Dutton, 1995). Furthermore, the control sample consisted of 44 demographically matched males and 33 of their partners. The criterion variable was male abusiveness as reported

by their female partners, with the criterion measure used with their partners being the PMWI which has two factors (Dominance/Isolation and Emotional Abuse), and the CTS which assesses physical abuse (Dutton, 1995).

When constructing the scale, Dutton (1995) aimed to select subscales with the highest bivariate correlation with abusiveness as reported by female partners, determine the item-whole correlations to these scales, factor analyse the PAS and establish associations of the PAS with criterion variables (Dutton *et al*., 2001). The subscales chosen from other tools were shown to have strong relationships with abusiveness as measured by the PMWI. The items which were found to correlate most highly with the PMWI were chosen to form the PAS (Dutton, 1995). The new measure, the PAS, yielded three factors that were not explicitly associated with IPV (Winters, Clift & Dutton, 2004).

16.3 Administration and Scoring

Respondents are asked to rate the items using a Likert-type scale, which allows for quantifiable analysis to compare responses. The first 12 items form the Affective Lability (AL) subscale, which have a 5-point scale with responses ranging from 'completely undescriptive of you' (one) to 'completely descriptive of you' (five). The AL subscale measures anger, insecure attachment and borderline personality organisation (Clift, Thomas & Dutton, 2005). The next 10 items define the Recalled Negative Parental Treatment (RNPT) subscale, which measures the extent of negative parenting respondents received from their parents/guardians. Responses for these items have a 4-point scale ranging from 'never happened' (one) to 'always occurred' (four) (Dutton, 1995). The final seven items comprise the Trauma Symptoms (TS) subscale, with responses on a 4-point scale ranging from 'never' (zero) to 'very often' (three). The TS subscale examines the presence

of symptoms that are indicative of exposure to trauma, such as anxiety attacks and insomnia (Clift *et al.*, 2005).

The PAS requires a tenth grade reading ability and was designed to be completed by the actual or potential perpetrator, however, victim responses can be considered to corroborate perpetrator accounts (Dutton *et al*., 2001). The simple format of the scale allows it to be fully administered in approximately five minutes. On completion, the PAS is scored by summing the responses to each item, allowing a score ranging from 22 to 121. Higher scores are considered to represent greater propensity for abusiveness of an intimate partner. The outcome is regarded as continuous rather than providing categorical representation of, for example, high or low propensity to perpetrate IPV. Therefore, scores can only be described in terms of their proximity to the normative score. Please refer to Appendix 17 for the PAS items.

16.4 Application of the PAS

The PAS has been applied to participants from diverse cultural backgrounds, including Caucasians, African Americans, Asians and Latinos, mainly in the United States of America (USA) and Canada (Allen, 2014; Buttell & Carney, 2008; Clift *et al*., 2005; Dutton, 1995). Dutton *et al*. (2001) cross-validated the PAS and concluded that there is ample evidence to support using the PAS with diverse populations. Over time, the PAS has been associated with physical and psychological abusiveness in abusive males, college students, blue collar workers, gay males and assaultive males in IPV treatment (Clift, 2001; Dutton *et al.*, 2001). The PAS also correlates with psychological abusiveness in a control group of clinical outpatients, and non-assaultive males (Dutton *et al.*, 2001). Despite the

differences in demographics between these groups, the PAS maintained its strong relationship with abusiveness as reported by the respondents' partners.

Although research has predominantly explored the use of the PAS with male populations, some research has considered its applicability to female IPV perpetrators (Allen, Swan, Maas & Barber, 2015). Whilst IPV is considered a gendered crime, it is important that research focuses on the applicability of this measure with female populations as the psychometric properties may differ between genders. The PAS has been utilised to assess the needs of clients in IPV treatment programs and evaluating IPV treatment programs to ascertain the effects that such interventions have on the propensity to abuse an intimate partner post-treatment (Allen *et al*., 2015; Buttell & Carney, 2002; Buttell & Carney, 2006).

However, Dutton and Kropp (2000) suggested that the PAS is likely more suited to non-criminal populations when the aim is to predict emotional abuse and risk of physical abuse; despite the measure being validated using a sample of known IPV perpetrators. This is due to alternative measures often including items about prior IPV behaviours or histories of violence and offending which are more appropriate for criminal populations, particularly those with a known history of IPV perpetration (Dutton & Kropp, 2000). Consequently, the PAS is suitable for use as a preventative measure before individuals become involved with the criminal justice system (Dutton *et al*., 2001).

17.0 Psychometric properties of the PAS

A psychometric measure is objectively considered to be a good test if it is reliable and valid, along with having appropriate norms (Kline, 1986). The

psychometric properties of the PAS have been validated through a range of studies.

17.1 Reliability

The term reliability is a consideration of how consistent a measure is in assessing a construct and producing similar results under consistent conditions. A measure is considered reliable if it is consistent both internally and over time in producing similar results when used in similar conditions (Kline, 2013).

17.1.1 Internal reliability

Internal reliability refers to the extent to which items are consistent with each other for measuring the same construct. This is often measured using Cronbach's alpha (*α*) and is based on the average correlation between items on a particular scale (Kline, 1986). An alpha reliability coefficient of .70 or above is considered good, and high internal reliability is considered to be essential for high validity (Kline, 2013). The PAS has been found to have good internal reliability, with internal reliability coefficients ranging between .80-.95 for the overall scale and subscales (Allen *et al*., 2015). The study in which it was developed found the PAS to have high internal reliability overall, with a Cronbach's alpha of .92 (Dutton, 1995).

17.1.2 Test-retest reliability

Test-retest reliability refers to the extent to which scores are consistent over time. This is measured by determining the correlation between a participant's scores on different administrations, with Pearson's *r* being the statistic used to represent the correlation between the two scores. Kline (2000) suggests that an

adequate test–retest period is three months. Kline (2013) recommended that a good measure should have a minimum test-retest correlation of .70.

The PAS has demonstrated long-term test-retest reliability in a study by Clift *et al.* (2005) who found two-year test-retest reliability of $r(37) = .851$, $p < .001$ and $r(27) = .629$, $p < .001$ in female and male undergraduate students, respectively. As there were no significant differences between male and female scores on the PAS, Clift *et al.* (2005) combined the sample for further analysis and reported two-year test-retest reliability of $r(64) = .774$, $p < .001$. Each subscale demonstrated significant correlations between the two administrations, with the RNPT subscale achieving the highest reliability and the TL subscale being the least reliable subscale. These results prove the PAS to be a highly reliable measure over a long period of time for both men and women. However, this sample consisted of university students and therefore the generalizability of these coefficients to offenders and other populations is unclear (Nicholls *et al.*, 2013).

17.2 Validity

Irrespective of whether a scale obtains reasonable reliability standards, it is important to consider the validity of the scale. Validity refers to how accurately a tool measures a desired construct, which can be demonstrated in various ways as detailed below.

17.2.1 Face validity

Face validity refers to the extent to which a scale appears to measure the intended construct. Scales in which the purpose is clear are thought to have high face validity, whereas scales where the purpose is unclear have low face validity (Nevo, 1985). High face validity can make a scale more susceptible to social

desirability bias whereby participants may manipulate their responses to present themselves in a favourable light (Kline, 2013). This would likely be the case for IPV scales due to the sensitive nature of the topic and consequences of disclosing unfavourable information. However, a scale can lack face validity but retain other aspects of validity which are related to the true validity of a scale. Visual inspection of the PAS suggests that no items have overt face validity as there is no explicit reference to IPV perpetration. Therefore, low face validity is less likely to result in reactivity than other instruments that assess risk of abuse and has not been found to be associated with social desirability responding (Dutton, 1995).

17.2.2 Concurrent validity

Concurrent validity measures how much a tool correlates with other measures designed to assess the same construct, which is achieved by scores correlating highly with other measures of the same construct (Kline, 2013). It has been suggested that correlations above 0.4 indicate acceptable concurrent validity, with a coefficient above 0.6 considered as good concurrent validity.

Dutton (1995) reported that the PAS achieved significant correlations of .52 with the Dominance/Isolation scale and .45 with the Emotional Abuse scale of the PMWI. In Dutton *et al.*'s (2001) study, the sample of gay males significantly correlated with the wives' reports on the PMWI (r = .50 Dominance/Isolation and r = .36 Emotional Abuse), but did not correlate with the CTS. The clinical sample did not correlate with the PMWI, however, the college sample significantly correlated on the PMWI (r =.56 Dominance/Isolation, r =.40 Emotional Abuse) and r = .41 with the CTS. Finally, the assaultive sample significantly correlated with the PMWI (r = .64 Dominance/Isolation, r =.52 Emotional Abuse). Comparisons of the PAS with the SVAWS revealed that the PAS correlated .76 with

use of threats towards their victim and .30 with physical violence (Dutton & Kropp, 2000). Therefore, the PAS has demonstrated satisfactory concurrent validity with other IPV measures.

17.2.3 Predictive validity

Predictive validity is the degree to which a measure is able to accurately predict a future outcome through exploring correlations between administering a measure and another criterion at a later date (Kline, 1986). The PAS was not designed to be a predictive measure of IPV, but instead assesses predictive risk factors for IPV. However, determining the propensity of IPV can be a good indicator of future IPV behaviour.

Dutton (1995) reported that the PAS could accurately classify men as either high (one standard deviation (SD) above the mean) or low (one SD below the mean) in perpetrating psychological abusiveness in 82% of cases when corroborated with their partner's reports. Therefore, Winters *et al.* (2004) consider the PAS as "a second-order estimate of actual abusiveness" (p. 263). Buttell and Carney (2008) reported that the PAS significantly contributed to the prediction of treatment completion among male batterers (Wald $\chi 2 = 12.910$, $df = 1$, $p = .000$). Dutton *et al*. (2001) ascertained that the PAS is able to significantly predict emotional and physical abuse, use of dominance or isolation and the use of threats to kill or injure (Dutton *et al*., 2001). Despite the PAS not overtly measuring IPV, these results speak to its high predictive validity. However, little is known about whether the predictive validity of the PAS remains with alternative ethnic backgrounds and female-perpetrated IPV (Dutton *et al*., 2001).

17.2.4 Content validity

Content validity measures the degree to which a tool reflects the entire construct in question. The implication of a tool lacking content validity is that it will not offer a true representation of the construct it claims to measure. The PAS needs to include all features of IPV in order for an accurate assessment of propensity. Strauchler *et al.*'s (2004) review of IPV measures revealed that they focused primarily on physical violence, but did not account for other factors considered important in understanding IPV perpetration (i.e. power, threats, control or mind games). The literature recognises that emotional lability, trauma and childhood abuse are risk factors for IPV, which supports the internal validity of the PAS when assessing men and women who have been referred for IPV treatment (Allen *et al*., 2015).

However, Dutton (1995) did not address content validity in the development of the PAS. This has implications for the exclusion of concepts that may be essential in defining and assessing IPV, which should be accounted for when constructing an IPV scale (Strauchler *et al.*, 2004). Therefore, the PAS does not appear to cover every aspect of IPV, and content validity may be lower than is desirable. This implies that other IPV measures may be a better albeit more explicit measure of IPV perpetration, due to the PAS assessing predisposing factors believed to lead to IPV, as opposed to other measures exploring a recent history of IPV.

17.2.5 Construct validity

Construct validity refers to the extent to which a tool measures what it is proposed to measure. This aspect of validity comprises discriminant and convergent validity, and can be explored through the correlation of a measure

with other variables that are known to be theoretically related to the same construct attempting to be measured. Dutton (1995) explored the discriminant validity of the PAS based on male abusiveness as reported by their wives using the PMWI.

The PAS significantly correctly classified 84.4% of males on the Emotional Abuse factor, and 80% of males on the Dominance/Isolation factor. Allen *et al*. (2015) later tested whether the latent constructs underlying the PAS were comparable for men and women based on Dutton's (1995) original model. The multi-group model was shown to be a poor fit, $\chi 2$ = 4623.60*; $\chi 2/df$* (1521, n = 885) = 3.04, p <.001; RMSEA = *.07;* TLI = *.92;* CFI = *.92*. However, it was considered that the misfit of the model was due to the differential impact of negative parental treatment between genders. Therefore, Allen *et al.* (2015) modified the model to accommodate for separating indicators of RNPT by parent gender which resulted in a four factor model. This revised model produced a good model fit: $\chi 2$ = 3613.01; $\chi 2/df$ (1517, n = 885) = 2.38, p < .001; RMSEA = .06; TLI = .95; CFI = .94, which suggests that the latent constructs of the PAS do not appear to differ by gender. Discriminant validity has yet to be reported for this measure. Additionally, the PAS has only been correlated with partner's accounts of abuse and not compared to future abuse (Nicholls *et al.,* 2013).

17.3 Factor structure

Factor analysis allows further exploration of construct validity and the underlying structure of the scale. Factor structure determines the suitability of items for the measure. A principal component analysis of the PAS revealed three factors: AL, RNPT and TS (Dutton, 1995). Together, the three factors accounted for 55% of the variance of the PAS. The RNPT factor accounted for 30% of the

total variance, whilst the TS and AL factors accounted for 25% of the variance of the scale (Allen *et al.*, 2015).

Allen *et al.* (2015) found that the PAS demonstrated configural (whether the same factor structure holds across groups), metric (the extent to which relationships between factors and items are equivalent across two groups), and scalar (whether two groups use the response scale similarly) invariance between male and female samples when using the modified four-factor model. These results indicate that it is appropriate to make comparisons between women and men based on PAS factor scores as they respond comparably with scale items. Therefore, it is feasible that the factors underlying the behaviours measured by the PAS are similarly important predictors of IPV for men and women (Allen *et al.*, 2015).

17.4 Normative samples

A normative sample is a group of people that are thought to represent the wider population when utilising a certain measure. The scores derived from the measure are evaluated by using the normative sample as a reference, which is important for considering the suitability of a measure for a given population (Kline, 2013). There is a possibility that scores would be of less value without a normative comparison (Kline, 2000). Both assaultive and non-assaultive men comprise the reference sample of the PAS (Dutton, 1995). Dutton's (1995) study reported the mean score of non-violent males to be 44.7 (SD = 11.7) and violent males as 59.2 (SD = 17.1). The PAS scores obtained between these two groups were found to be significantly different (t = 3.41, df = 2, 158, p < .01). Scores of around 45 appear to be obtained by community samples who have no known history of IPV

(Dutton *et al*., 2001), which is lower than the mean score of 60.34 for participants in the empirical study in Chapter Three.

Research (Allen *et al.*, 2015; Simmons, Lehmann & Cobb, 2008) has established differences in the mean scores between genders. When exploring the utility of the PAS with female IPV perpetrators (*N* = 544), Ferreira and Buttell (2016) found significantly higher mean scores for dropouts of IPV treatment programmes (70.19, *SD* = 23.66) and participants who completed treatment (68.68, *SD* = 21.00) than the male batterers in Dutton's (1995) original study. These results suggest that female samples are more forthcoming about their IPV tendencies. However, Clift *et al*. (2005) reported no gender differences in PAS scores among a sample of undergraduate students. As the measure claims to measure the propensity for IPV, standardised scores are not provided for the PAS as it was not intended for diagnostic purposes. Therefore, raw scores could be sufficient for comparing the differences between scores of individuals and groups. The PAS would benefit from more reference samples for various populations in order to compare responses with similar sample groups.

18.0 Discussion and Conclusion

This critique examined the psychometric properties of the PAS with respect to its reliability and validity, which revealed that it is an effective measure for the prediction of future perpetration of psychological and physical abuse. Overall, there has been sufficient research to support its validity and reliability to measure the propensity of IPV across a variety of populations. Internal reliability for the has been demonstrated consistently across a range of studies using a range of samples (Allen *et al*., 2015; Buttell & Carney, 2006; Carney & Buttell, 2004; Clift *et al*., 2005; Dutton, 1995). However, researchers and clinicians would benefit

from using the PAS in conjunction with other measurement methods (corroborating sources, interviews, clinician ratings) in order to increase the quality of measurement and confidence in results, as opposed to the PAS as a sole measure of the propensity or actual IPV perpetration.

Additionally, it is positive that the PAS demonstrated long-term test-retest reliability, considering that the TS subscale is likely to fluctuate over time due to the nature of the questions. In comparison, the AL and RNPT subscales are more stable due to items being reflective of historical experiences, entrenched traits and core beliefs that are less amenable to change. Further support for the psychometric properties of the PAS comes from it achieving moderate to strong correlations with other validated IPV scales, along with its ability to correctly discriminate IPV perpetrators with 82.2% accuracy (Dutton, 1995). Such results are indicative of its validity in measuring IPV propensity or perpetration.

A merit of the PAS is its short length and being an effective scale that minimises reactivity from respondents which is highly predictive of males engaging in abusive behaviours (Dutton *et al*., 2001). Although the PAS was not developed to be a predictive measure, its ability to accurately predict individuals who engage in IPV lends support to its predictive validity. Another strength is that it significantly correlates with both psychological and physical abusiveness, as demonstrated by the correlation between the PAS and the CTS (Dutton, 1995). A positive of Dutton's (1995) original study in which the PAS was developed is the inclusion of female partner reports of abusive behaviour, along with the comparison of the scores between the treatment group to a demographically matched control group (Nicholls *et al*., 2013). The strong relationship between the PAS with partner reports of emotional abuse and physical abuse is an indication of its reliability.

There are some limitations that merit consideration which may limit the generalisability of the PAS and have implications for clinical practice. As the PAS doesn't explicitly refer to IPV, there could be aspects of the construct the PAS is not capturing. While psychopathology may be a contributing factor for IPV perpetration, individuals are also likely to be driven by individual and sociocultural factors. Indeed, there are a range of theoretical perspectives regarding the underlying causes of IPV that differ from Dutton's (1995) school of thought, including biological, social learning, psychological and feminist theories (Ali & Naylor, 2013). Future research should focus on identifying whether the PAS fails to measure other risk factors related to IPV perpetration (Allen *et al.*, 2015).

Strauchler *et al*. (2004) postulated that factors which should be considered to understand and assess IPV include intimidation, power and control. Therefore, other more established and validated IPV measures may be more applicable to assessing for the risk of or perpetration of IPV, particularly with clinical and forensic populations due to their inclusion of factors that relate to prior abusive behaviour. Indeed, in comparison to other IPV measures, the PAS lacks the ability to distinguish what type of IPV behaviours respondents might be inclined to engage in. It is therefore unclear whether the PAS is comprehensive enough to encompass the full extent of IPV (Murphy & Hoover, 1999).

Despite the PAS allowing for accurate self-reporting of traits and behaviours that have been found to be predictive of IPV, a limitation is that it has not explored IPV recidivism (Nicholls *et al*., 2013). The PAS is a relatively dated measure and has not been revised since its development in 1995 to account for the developments in empirical research regarding the assessment of and factors related to IPV perpetration (i.e. the impact that technology has had on abuse tactics, female perpetration, same-sex relationships). This may have

consequences for the psychometric properties of the PAS, and suggests that the current version may benefit from revisions. Further, the limited scope for comparison in interpretation of scores in a current limitation of the PAS, as scores can only be understood in relation to their proximity to the normative score.

There is scope for more comprehensive research to promote our understanding of the psychometric integrity of this measure. Therefore, it is recommended that further research is conducted exploring the reliability and validity of the PAS, taking into account the advancements in IPV assessment. Further research should continue exploring the stability of PAS scores over time with offending and other populations to increase test-retest reliability (Nicholls *et al.*, 2013). The strengths and limitations of the PAS outlined in this critique have important implications for interpreting findings of studies exploring IPV using only this tool. However, the PAS maintains good psychometric properties and is deemed a helpful tool for measuring the propensity for IPV perpetration due to its focus on reducing socially desirable responding, increasing the likelihood of accurate data. Overall, the diverse samples employed across validation studies supports the high reliability and validity of the PAS as a statistically and conceptually valid measure that can be used across a wide range of populations (Ruddle, 2017).

Chapter Six: Discussion

19.0 Introduction

This chapter synthesises the key findings from the four main chapters of this thesis and their overall contribution to the literature, both individually and as a whole. The limitations of the thesis, along with the wider implications for future research and practice will also be discussed. The aim of this thesis was to improve the current understanding and knowledge of the relationship between IPV, stalking and IBSA and likely characteristics of such perpetrators as the overlap between these behaviours was yet to be adequately understood. The thesis findings offer insight into the treatment needs and risk factors for individuals with an increased propensity towards IPV, stalking and IBSA perpetration.

The aims of this thesis were:

1. To systematically review the prevalence and characteristics of co-occurring IPV and stalking perpetration in adult offenders.
2. To explore the association between the propensity to engage in IPV, stalking and IBSA.
3. To examine the impact of aversive and general personality traits, attachment style and moral disengagement on IBSA proclivity.
4. To critically evaluate the PAS (Dutton, 1995) in terms of its psychometric properties and research uses for assessing propensity for IPV perpetration.

19.1 Summary of thesis findings

Chapter two contained a systematic review and narrative synthesis of the prevalence and characteristics of co-occurring IPV and stalking perpetration in

adult offenders. Previous reviews had not systematically reviewed the research investigating this topic, and it was deemed important to enhance our understanding of co-occurring IPV and stalking perpetration for the purposes of improving assessment and management of these perpetrators, in addition to identifying individuals at risk of engaging in both behaviours. Inclusion and exclusion criteria were applied to studies to minimise reviewer bias and quality assessment was conducted to ensure that relevant studies of a good standard were included in the review.

The results indicated that rates of co-occurring IPV and stalking perpetration differed across studies, ranging between 24% to 96.8%. However, the discrepancies between the definition and measurement of IPV and stalking across studies made it difficult to establish a reliable estimate of prevalence rates. Some studies did not capture other forms of IPV asides from physical violence in their measurement of IPV, therefore prevalence rates would possibly be higher if studies included psychological abuse in reported estimates. Nonetheless, the review highlighted the high rates of stalking in intimate relationships that occur in the context of an abusive relationship.

The review also highlighted that there appear to be some characteristics that are exclusive to co-occurring IPV and stalking perpetrators in comparison to IPV-only or stalking-only offenders, including a history of general violence and offending behaviour, along with more severe personality difficulties. There was some indication of SCID-II Cluster B personality disorder traits and diagnoses differentiating co-occurring IPV and stalking perpetrators, with antisocial and sadistic personality traits being linked to an increased severity in stalking behaviours (Norris *et al.,* 2011). Further, the findings suggest that the increased use of alcohol and drug use might increase the risk of stalking behaviours in IPV

offenders. It remains unclear whether these findings are unique to co-occurring perpetrators for some studies resulting from a lack of control or comparison group being employed, and it is noted that studies which highlighted differences between co-occurring IPV and stalking perpetrators from IPV-only or stalking-only perpetrators were modest (Gerbrandij *et al*., 2018). Other factors relevant to co-occurring IPV and stalking perpetration included a history of being assaulted, a history of committing assault, and stalking other victims, sharing children with the victim, living alone, perceived victim provocation, living with children, being single, separated or divorced.

This chapter confirmed that the main limitation was the varying operationalisation of variables and methodologies of studies restricted the ability to meaningfully compare results across studies. Future research in this field will need to standardise how IPV and stalking are defined and operationalised to increase the quality of studies. There is a variety of methodologies that researchers employ when conducting surveys to determine rates of IPV and stalking, making it difficult to compare rates across surveys, countries and time. Therefore, it is important to carefully consider the methodology used in studies before generalising figures to represent the target population. Researchers would be in a position to produce comparable studies and prevalence rates if the literature consisted of agreed definitions, terms and consistency in methodological approach (Dixon & Bowen, 2012). Due to the scarcity of robust comparator groups employed in relevant studies, tentative conclusions were made and recommendations provided for future research on this topic. The findings from the review suggest that co-occurring IPV and stalking perpetrators may not be qualitatively different from IPV-only or stalking-only perpetrators, but simply that they differ in severity. This implies that co-occurring IPV and stalking perpetrators

would likely benefit from the same interventions as IPV-only or stalking-only perpetrators, however, co-occurring IPV and stalking perpetrators would likely need longer-term and more intensive interventions taking into account the severity of characteristics.

Chapter three presented the first empirical study which examined the association between IPV, stalking and IBSA proclivity through an online survey. To the author's knowledge, this was the first empirical study that investigated the propensity of males from the general population towards engaging in each behaviour. The results suggested that there was a significant relationship between the propensity to engage in each behaviour, with the strongest association being between higher levels of IPV propensity and higher levels of stalking propensity. However, the strength of the relationships between the propensity to engage in each behaviour only ranged from very weak to moderate. The established association between the propensity to engage in all three behaviours supports previous research (Almendros *et al*., 2009; Borrajo *et al.*, 2015; Harris, 2016; Schnurr *et al*., 2013) that has proposed them to be related constructs, and it was considered whether the significant associations could be explained by the power and control that likely underpins the perpetration of each behaviour (Felson & Messner, 2000). It was emphasised that future research should consider factors and characteristics which might explain the conceptual link between these behaviours.

Further analyses also identified that there were significant differences between the propensity to engage in IPV, stalking and IBSA, with participants self-reporting being most likely to perpetrate IPV, and least likely to perpetrate IBSA. This finding highlighted that there are factors that significantly differentiate between individuals being likely engaging in each type of abuse; lending support

to previous research (Basile & Hall, 2011; Dempsey *et al*., 2011; Hand *et al.,* 2009; Watkins *et al*., 2018) that has called for IPV, stalking and IBSA to be conceptualised as distinct constructs that are distinguishable from one another.

It was recommended that future research gives more consideration to the behavioural and psychological correlates of IPV, stalking and IBSA for individuals who endorse these behaviours in order to determine the similarities and differences between each behaviour. This would help to determine which individuals are most at risk for engaging in more than one of these behaviours in order to identify strategies for prevention, intervention and management. Although this study employed a sample of males from the general population, it was hypothesised that there would be stronger significant relationships between all three behaviours in perpetrators of these offences. Therefore, when working with individuals for convictions for these behaviours, practitioners need to be aware of the other offences they might be likely to commit.

Chapter four comprised the second empirical study which also used an online survey to investigate the impact of aversive and general personality traits, attachment style and moral disengagement on the prediction of IBSA proclivity. It was found that 29.3% of participants reported at least some proclivity to perpetrating IBSA. Furthermore, 92% of participants reported some endorsement of IBSA enjoyment, and 98.7% of participants expressed at least some approval of IBSA in the scenarios. The results suggested that the Dark Triad traits, Honesty-Humility, Agreeableness, Conscientiousness, Openness to Experience, moral disengagement, attachment avoidance and attachment anxiety were significantly related to increased IBSA proclivity. The results also indicated that the regression model explained 35% of the variance in IBSA proclivity, with Machiavellianism,

Openness to Experience, moral disengagement and attachment anxiety being significant independent predictors of IBSA proclivity.

Further exploratory analyses found that the psychopathy and moral disengagement were the only independent significant predictors of IBSA enjoyment, with agreeableness being the only significant predictor of IBSA approval. Overall, the significance of moral disengagement in the regression models for IBSA proclivity and enjoyment implies that the perpetration and enjoyment of IBSA are underpinned by the tendency for individuals to disengage from their moral beliefs to justify their engagement in and approval of online immoral and antisocial behaviour (Bandura, 2016).

This study provided a unique contribution to the IBSA literature by finding significant predictors of IBSA proclivity that have not yet been considered. The identification of such characteristics is important for the classification of these acts in order to benefit preventative and rehabilitative methods, and allow important insight into the use of technology to facilitate violence. It was concluded that further research is required to increase our understanding of the characteristics associated with IBSA perpetration.

Chapter five was a critical evaluation of a psychometric measure, the Propensity for Abusiveness Scale (PAS; Dutton, 1995), which was used as a measure in the empirical study in Chapter Three. The purpose of this chapter was to examine the reliability and validity of the measure for assessing the propensity to engage in IPV. Dutton (1995) developed the PAS in response to concerns around accurately assessing perpetrator reports of abusiveness with the tendency for responses to be affected by socially desirable responding and reactivity (Arias & Beach, 1987). This chapter highlighted the benefits of using this tool within research and clinical practice due to its short length, along with the inclusion of

static and dynamic risk factors that have been empirically associated with abusiveness (Dutton & Kropp, 2000). It was considered that a benefit of using the PAS is that, at face value, it does not appear to assess an individual's propensity to abusiveness which may increase reduce reactivity and increase accurate responding (Taft *et al*., 2017).

Although the PAS would benefit from revision due to being relatively dated, several studies that have since evaluated its psychometric properties have reported that the PAS is an effective measure for assessing the prediction of future perpetration of psychological and physical abuse. The chapter concluded that the reliability and validity of the PAS is well supported across a range of populations. It has achieved high internal reliability (Dutton, 1995) and long-term test-retest reliability (Clift *et al.*, 2005). The PAS has achieved moderate to strong correlations with other validated IPV scales and has correctly discriminated IPV perpetrators with 82.2% accuracy (Dutton, 1995). Further support for its reliability comes from the strong relationship between the PAS with partner reports of emotional and physical abuse (Dutton, 1995). However, this chapter highlighted that there could be aspects of IPV that the PAS fails to capture, as IPV perpetration is likely to be driven by additional factors other than the psychopathology of perpetrators, which is the notion that the PAS is based on.

Although the PAS has proved useful for assessing IPV propensity or perpetration in both offender and non-offender populations, it may be that employing an alternative established and validated measure may be more applicable for clinical and forensic populations as they capture factors that refer to prior abusive behaviour. A limitation of the PAS is that it fails to distinguish what type of IPV behaviours respondents are predisposed to, therefore making it unclear whether the PAS is comprehensive enough to encompass the full range of

IPV behaviours (Murphy & Hoover, 1999). Regardless, the overall conclusion of the PAS was that it has maintained good psychometric properties across diverse samples and is therefore a helpful tool for measuring the propensity for IPV perpetration.

19.2 Contribution to literature

This thesis has identified explored the relationship between a range of adverse behaviours in intimate relationships, along with characteristics that contribute to an increased propensity towards IPV, stalking and IBSA. This thesis is the first piece of research, to the author's knowledge, to empirically examine the overlap between the propensity to engage in IPV, stalking and IBSA. The main contribution to the literature is improving insight into what increases the likelihood of individuals engaging in IBSA, and how this might relate to IPV and stalking perpetration.

Previous systematic reviews have tended to focus on factors relevant to the perpetration of either IPV-only or stalking-only. The systematic review in this thesis was the first to combine the two behaviours and consider co-occurring IPV and stalking perpetration in intimate relationships. Therefore, this systematic review is considered to be a valuable contribution to the literature by exploring the prevalence rates of and characteristics that are distinct to co-occurring IPV and stalking perpetration. These findings are important for improving assessment and management when working with this sub-group of offenders. Further, identifying factors relevant to co-occurring IPV and stalking perpetration is important for identifying those at risk of stalking victimisation if they terminate an abusive relationship. The review also has implications for practitioners in

determining appropriate interventions and management strategies that are likely to target the criminogenic needs of co-occurring IPV and stalking offenders.

The first empirical study attempted to bridge a gap in the literature by focusing on the association between IPV, stalking and IBSA. The results from this study revealed that although there was a significant relationship between the propensity to engage in all three behaviours, there were also significant differences between the propensity to engage in each behaviour. These findings also addressed a gap in the literature by being the first empirical study to investigate all three behaviours in a single study, and served as a guide for further research exploring the similarities and differences between engaging in IPV, stalking and IBSA.

The second empirical study extended previous work by Pina *et al.* (2017) to continue identifying characteristics that may be relevant to increased IBSA proclivity. The identification of further characteristics relevant to IBSA proclivity indicates that this study contributed to the emerging evidence base on perpetrator characteristics. Such research is important for researchers and practitioners to determine preventative and rehabilitative methods. This study highlighted areas of further research in order to continue developing our understanding of factors that increase IBSA proclivity, including considering other factors that might contribute to IBSA proclivity.

The psychometric critique contributed to the literature by increasing our understanding of the effectiveness of the PAS for researchers and practitioners in relation to the perpetration of abuse in intimate relationships. It also identified areas for future research, namely the need to revise the PAS to account for developments in research regarding IPV perpetration since it was first established in 1995.

Overall, this thesis has provided an original contribution to the literature by advancing current knowledge about characteristics of co-occurring IPV and stalking perpetrators and increased IBSA proclivity. As a result, the findings from this thesis seek to support an understanding of relevant factors to consider when working with such offenders, along with the development of appropriate treatment pathways and risk management plans. Further, this thesis has also offered insight into the relationship between three types of adverse behaviours in intimate relationships which have yet to be included in one study. It is hoped that this thesis can be a foundation for future research that seeks to address the issues and recommendations that have been raised throughout the current thesis.

It is hypothesised that there are some similarities between IPV, stalking and IBSA perpetration. Considering the thesis as a whole, the findings suggest that the overlap between IPV, stalking and IBSA could partly be explained by the presence of Cluster B (antisocial, borderline, narcissistic and histrionic) personality traits and disorders. The systematic review highlighted that co-occurring IPV and stalking perpetrators tend to present with more severe Cluster B personality traits and diagnoses, and the findings from Chapter Four indicated that features of IBSA proclivity could also be understood in terms of Cluster B personality traits, given the significance of the Dark Triad. This is likely due to these personality traits being characterised by being deceitful, manipulative, lacking empathy, grandiosity, as well as experiencing difficulties with emotions and interpersonal relationships.

Support for this link comes from Vossen, Coolidge, Segal and Muehlenkamp (2017) who explored relationships between the Dark Triad traits and Cluster B personality disorders and found significant associations between the Dark Triad

traits and each Cluster B personality disorder (antisocial, borderline, narcissistic and histrionic personality disorder), with at least one Dark Triad trait being a significant predictor of each type of personality disorder. As each Cluster B personality disorder is characterised by different features, it would be beneficial for future research to explore how dysfunctional personality traits or diagnoses might contribute to IPV, stalking and IBSA perpetration. Although IPV, stalking and IBSA seem to be linked by certain personality characteristics, it is possible that individuals with an increased propensity to engage in these behaviours are just more likely to possess problematic personality traits which also influence their susceptibility towards different behaviours outside of the focus of this thesis.

This thesis has determined that IPV, stalking and IBSA significantly overlap in their constructs. Given the association between the likelihood of engaging in IPV, stalking and IBSA, it is possible that individuals with convictions for one of these offences would be likely to engage in other types of abusive behaviours in intimate relationships, and that each behaviour may be a precursor to other types of abusive or controlling behaviours. However, further research is needed to examine how different IPV, stalking and IBSA behaviours might be related to one another.

Future research should consider additional factors and characteristics which might explain the conceptual link between these behaviours, and what factors place individuals at increased risk of engaging in a greater range of abusive behaviours. The thesis findings indicate that IPV, stalking and IBSA are conceptually linked behaviours with some common features. However, there also appear to be differences between the three behaviours which indicates that each behaviour is underpinned by different characteristics and factors.

19.3 Theoretical and practical implications

The findings from each chapter contribute to and have implications for the field of research into the perpetration of adverse behaviours in intimate relationships. Implications for practice and recommendations for future research have been highlighted in each chapter.

The findings and conclusions highlighted throughout this thesis have identified several factors that are likely to increase an individual's likelihood of engaging in co-occurring IPV and stalking behaviours, as well as IBSA. The findings from the systematic review in Chapter Two and the empirical study in Chapter Four indicate that practitioners should be aware of the characteristics that can explain co-occurring IPV and stalking perpetration, as well as an increased likelihood of perpetrating IBSA. It is recommended that intervention pathways be tailored to the specific needs of individuals in order to ensure treatment effectiveness. However, further research is needed that explores other potentially relevant characteristics for the propensity towards or perpetration of these behaviours. Although this thesis was not able to infer causality of the relationships between relevant characteristics and co-occurring IPV and stalking perpetration or IBSA proclivity, the current findings still hold some importance in indicating factors that increase the risk of individuals engaging in these behaviours and should be considered in the planning of interventions.

Due to research into IBSA perpetration being in its infancy, there is a lack of typologies and theoretical understanding of such perpetrators. Future research should start attempting to establish profiles or typologies of IBSA perpetrators, as classifying these perpetrators will help to develop theoretical explanations and interventions for IBSA.

Developing a better understanding of the factors that contribute to co-occurring IPV and stalking perpetration could enable practitioners to identify individuals at risk of engaging in stalking behaviours upon the termination of an abusive relationship, potentially saving further harm to victims of IPV. Further, the significant association between the propensity to engage in IPV, stalking and IBSA indicates that some individuals may be predisposed to engaging in more than one of these behaviours. It is recommended that practitioners working with perpetrators of IPV, stalking and IBSA take into account the findings of this thesis when working with these offenders to protect individuals from victimisation or re-victimisation. The findings from this thesis also suggest that IPV and stalking should be considered as distinct but related offences, which has important implications for researchers and practitioners in considering IPV and stalking as heterogeneous offences.

Regarding implications for research, the systematic review identified the need for more high quality research into the co-occurrence of IPV and stalking perpetration and a uniformed approach to defining and operationalising each behaviour. Chapter one discussed typologies of IPV and stalking, as well as theoretical frameworks that seek to understand and explain IPV, stalking and IBSA perpetration.

The findings are applied to existing literature regarding theories and typologies of abusive and controlling behaviours in intimate relationships, with a few similarities emerging. Synthesising the findings of this thesis suggests that the propensity for and perpetration of IPV, stalking and IBSA are underpinned by a range of factors which cannot be fully accounted for by a theory that focuses on a single factor, in support of O'Leary, Smith Slep and O'Leary (2007) recommending that researchers adopt an integrated approach by drawing upon

several theories. Therefore, it is considered that aspects of IPV, stalking and IBSA perpetration can be explained by attachment theory (Bowlby, 2969), control balance theory (Tittle, 1995), the nested ecological theory of IPV (Dutton, 1988) and the integrative developmental model of stalking (White & Kowalski, 1998).

Using the nested ecological theory of IPV and integrated developmental model of stalking, the findings of this thesis indicate that it is predominantly factors in the microsystem and ontogenetic levels are important for understanding the perpetration of IPV, stalking and IBSA in intimate relationships. At the microsystem level, co-occurring IPV and stalking perpetrator are more likely to present with a history of general violence and offending behaviour, a history of being assaulted and committing assault and perceived victim provocation. At the ontogenetic level, relevant factors that are more prevalent in co-occurring IPV and stalking perpetrators include personality difficulties in line with SCID-II Cluster B traits and diagnoses, increased alcohol and drug use. Some factors identified at the exosystem level for co-occurring IPV and stalking perpetrators included sharing children with the victim, living alone, living with children, or being single, separated or divorced. However, the findings suggest that clinicians and researchers should consider a variety of factor at each level of the ecological model, as well as the relationship between factors.

Individuals who may be inclined to engage in IBSA are more likely to possess characteristics at the microsystem level which include: moral disengagement; personality traits in line with the Dark Triad traits; personality traits of Honesty-Humility, Agreeableness, Conscientiousness, Openness to Experience; and attachment difficulties associated with avoidance and anxiety. Although it was not within the scope of this thesis to include variables from all four ecological levels, it is hoped that future research will build on the current findings

by exploring other factors that cover the macrosystem and exosystem levels which may be relevant in understanding IPV, stalking and IBSA. It is recommended that researchers and practitioners consider a range of factors and the interplay between these at each level of the nested ecological model to continue improving our understanding of these behaviours. These findings are also reflected in the integrative developmental model of stalking in terms of interpersonal, dyadic, situational and intrapersonal factors.

The findings from chapter four also indicate that IBSA proclivity can be explained by both attachment theory and control balance theory. IPV, stalking and IBSA are all behaviours that can be used as strategies for maintaining control in relationships, particularly when feeling rejected or disrespected, as well as in response to conflict or ruptures in intimate relationships.

Attachment theory is considered relevant in understanding IPV perpetration due to attachment styles regulating distance and proximity in intimate relationships (Hazan & Shaver, 1987). For instance, Dutton (1998) proposed that IPV behaviours are reflective of insecure attachment styles that formed in childhood which lead to anger and abandonment anxiety. Support for this claim comes from Dutton, Saunders, Starzomski and Bartholomew (1994) who found that male IPV perpetrators are more likely to present with insecure attachment styles.

Attachment theory has also been used to conceptualise stalking behaviours, with unwanted pursuit being described as an attachment behaviour (Dixon & Bowen, 2012). Meloy (1996) first introduced the idea of obsessional following being proximity seeking towards an individual who negatively responds to being followed. In line with this, Spitzberg and Cupach (2007) suggested that anxious attachment could be viewed as an antecedent that drives stalking behaviours,

which has been supported by empirical findings. Research (Davis, Ace, & Andra, 2000; Dye & Davis, 2003; Langhinrichsen-Rohling & Rohling, 2000) has also established a relationship between anxious attachment and stalking of an ex-intimate partner following a breakup. For example, Barbara and Dion (2002) found that anxiously attached individuals experienced greater distress following the breakup of a relationship and struggle to adjust to the breakup.

The significance of attachment anxiety as a predictor of IBSA proclivity lends support to previous research that has considered the relevance of attachment theory in relation to IPV and stalking. It also supports the idea that individuals who are more likely to engage in IBSA experience heightened distress and negative emotional reactions in response to interpersonal conflict, resulting in the use of IBSA to reduce distress (Crittenden & Ainsworth, 1989; Mikulincer & Shaver, 2007). Therefore, engaging in IPV, stalking and IBSA behaviours may be more likely in individuals with insecure attachment styles (namely anxious attachments) who react negatively to conflict, rejection or abandonment in intimate relationships, which manifests as abusive and controlling behaviours. As discussed in Chapter Five, factors which the PAS (Dutton, 1995) is based on include personality traits, trauma symptoms and adult attachment styles; all of which appear to be associated with an increased propensity towards stalking and IBSA.

Similarly, it was discussed in chapter one that moral beliefs impede individuals from engaging in deviant behaviours when in a control imbalance (Lowry *et al*., 2017). Therefore, the significance of Machiavellianism and moral disengagement in predicting IBSA proclivity suggests that the control balance theory has value in explaining increased IBSA proclivity. For instance, Rauthman and Will (2011) highlighted that individuals with Machiavellian traits are believed

to be disinhibited to IBSA by disengaging from their moral standards. It is possible that IPV, stalking and IBSA are linked by a perpetrator's need for power and control, however, this will need to be empirically tested in future studies.

Collectively, the findings of this thesis could contribute to the existing typologies and theories outlined in Chapter One. The findings from the review contained in chapter two can be considered using Holtzworth-Munroe and Stuart's (1994) IPV typologies in that co-occurring IPV and stalking perpetrators can be understood in the context of their proposed dysphoric/borderline perpetrator typology, who tend to engage in violence and criminality both within and outside the family, as well as possess the highest levels of psychopathology and borderline personality traits (Dixon & Bowen, 2012). In terms of Zona et al.'s (1998) stalker-victim typology, co-occurring IPV and stalking perpetrators could be classified into their simple obsessional subgroup of perpetrators, who tend to present with difficulties associated with substance misuse and personality disorder.

Individuals with increased IBSA proclivity could fit into either Holtzworth-Munroe and Stuart's (1994) dysphoric/borderline or generally violent/antisocial typologies, given the significance of attachment anxiety, moral disengagement and Machiavellianism identified in Chapter Four. It is hypothesised that online and offline abuse share similar characteristics, particularly when applying Johnson's (2006) typology of intimate partner terrorism to these offences (Crisafi, Mullins & Jasinski, 2016).

19.4 Limitations

Whilst this thesis has contributed to the existing literature, it has also been highlighted in each chapter that there are limitations of this thesis that warrant consideration as they will impact on the results, conclusions and recommendations

made. The majority of studies in the systematic review and data for both empirical studies consisted only of self-report data which may have increased the likelihood of socially desirable responding from participants.

Further, the empirical study in chapter three did not specify the type of IPV that participants would be most likely to perpetrate due to the PAS only providing an overall propensity score for IPV. These data would have enabled the study to conduct more thorough analyses and consider the relationship between different types of IPV with stalking and IBSA. Both empirical studies were also not longitudinal which limited the ability to make causal interpretations in relation to the findings. Employing a longitudinal study design with individuals who have committed these offences would allow researchers to better understand which abusive behaviours might lead to or increase the likelihood of perpetrating other types of abuse. This would help with identifying risk factors for individuals who are at risk for perpetrating other types of abuse and control. This would also enable practitioners to develop management and intervention strategies to prevent individuals from engaging in additional abusive behaviours.

In chapter two, the systematic review was impacted upon by the methodological issues regarding studies that were included in the review, such as using heterogeneous definitions and measurements of IPV and stalking. Further research in this area would benefit from using standardised definitions and measurements of variables in order to increase the reliability and validity of findings and conclusions. The review also excluded studies that were not written in English which potentially reduced the generalisability of the findings. Although chapter two included literature that drew on a range of samples and settings, the empirical studies contained in chapter's three and four provided insight for a

general population which limits the generalisability of the findings to perpetrators of IPV, stalking and IBSA.

Asides from the studies included in the systematic review, both empirical studies were conducted in the United Kingdom, which limits the generalisability of the results to other countries. Finally, both empirical studies were limited to male participants which excluded the consideration of female propensity towards IPV, stalking and IBSA. Despite the gendered nature of IPV, stalking and IBSA, these behaviours are also known to be perpetrated by females and this should be considered in future research.

19.5 Conclusions

In conclusion, this thesis has provided an original contribution to existing literature on IPV, stalking and IBSA by expanding knowledge about the relationship between these behaviours and likely characteristics of such perpetrators.. The remaining gaps in the literature have been highlighted and recommendations have been made with regards to how future research in this area can address the limitations of existing research.

This thesis offers insight into the treatment needs and risk factors in order to benefit assessment, intervention and management for perpetrators of co-occurring IPV and stalking, and individuals with an increased propensity towards IBSA. Overall, each chapter is considered to have improved our knowledge of different types of adverse behaviours that occur in intimate relationships.

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Appendices

Appendix 1. Search syntax

ASSIA, NCJRS

noft(domestic* violen* OR domestic* abus* OR domestic* abus* OR batter* OR intimate partner violence OR IPV OR DV OR intimate partner abuse OR partner* NEAR/4 violen* OR partner* NEAR/4 abus* OR marital violence OR marital abuse OR marital conflict* OR spous* NEAR/4 violen* OR spous* NEAR/4 abus* OR spous* NEAR/4 assault* OR inter partner violence OR dating violence OR interpersonal violence OR relationship* NEAR/3 violen* OR dating relationship violence OR romantic partner* OR current partner* OR prior partner* OR former partner* OR ex-intimate* OR dating OR marital NEAR/2 abuse OR intimate partner NEAR/2 maltreat* OR intimate partner NEAR/2 mistreat* OR maltreat* OR mistreat* OR physical NEAR/1 abus* OR emotional* NEAR/1 abus* OR psychological* NEAR/1 abus* OR sexual* NEAR/1 abus*) AND noft(stalk* OR harass* OR pursui* OR fixat* OR obsess* OR cyberstalk* OR cyber-stalk* OR technology facilitated stalk* OR cyber harass* OR surveillance OR unwanted attention OR predatory pursuit OR intrusive behavio?r OR intrusive harassment OR simple obsessional stalking OR rejected NEAR/3 stalk* OR relational stalk* OR ex-partner NEAR/3 harass* OR relational intrusion OR non-consensual contact) AND noft(personality OR personality profile OR profile* OR personality typ* OR typolog* OR personality trait* OR personality characteristic* OR characteristic* OR attachment* OR attachment style* OR risk* OR risk factor* OR criminogenic need* OR predict* OR static risk factor* OR dynamic risk factor* OR pathway* OR correlat* OR factor* OR marker* OR associated factor* OR related factor* OR indicator* OR recidiv* OR variable* OR predispos* OR trigger*) AND noft(concurren* OR overlap* OR compar* OR co-occur* OR occur* OR differentiat* OR link* OR prevalen* OR associat* OR correlat* OR similar* OR differ* OR pattern* OR relationship*) AND noft(perpetrat* OR offend* OR aggress* OR arrest* OR crim* OR antisocial* OR prison* OR inmate* OR felon* OR court* OR imprison* OR incarcerat* OR custod* OR convict* OR forensic* OR charg* OR alleged)

Criminal Justice Database

noft(domestic* violen* OR domestic* abus* OR domestic* abus* OR batter* OR intimate partner violence OR IPV OR DV OR intimate partner abuse OR (partner*) n4 (violen*) OR (partner*) n4 (abus*) OR marital violence OR marital abuse OR marital conflict* OR (spous*) n4 (violen*) OR (spous*) n4 (abus*) OR (spous*) n4 (assault*) OR inter partner violence OR dating violence OR interpersonal violence OR (relationship*) n3 (violen*) OR dating relationship violence OR romantic partner* OR current partner* OR prior partner* OR former partner* OR ex-intimate* OR dating OR (marital) n2 (abuse) OR (husband OR wife OR intimate partner) n2 (maltreat* OR mistreat*) OR maltreat* OR (physical) n1 (abus*) OR (emotional*) n1 (abus*) OR (psychological*) n1 (abus*) OR (sexual*) n1 (abus*)) AND noft(stalk* OR harass* OR pursui* OR fixat* OR obsess* OR cyberstalk* OR cyber-stalk* OR technology facilitated stalk* OR cyber harass* OR surveillance OR unwanted attention OR predatory pursuit OR intrusive behavio?r OR intrusive harassment OR simple obsessional stalking OR (rejected) n3 (stalk*) OR relational stalk* OR (ex-partner) n3 (harass*) OR relational intrusion OR non-consensual contact) AND (personality OR personality profile OR profile* OR

personality typ* OR typolog* OR personality trait* OR personality characteristic* OR characteristic* OR attachment* OR attachment style* OR risk* OR risk factor* OR criminogenic need* OR predict* OR static risk factor* OR dynamic risk factor* OR pathway* OR correlat* OR factor* OR marker* OR associated factor* OR related factor* OR indicator* OR recidiv* OR variable* OR predispos* OR trigger*) AND noft(concurren* OR overlap* OR compar* OR co-occur* OR occur* OR differentiat* OR link* OR prevalen* OR associat* OR correlat* OR similar* OR differ* OR pattern* OR relationship*) AND noft(perpetrat* OR offend* OR aggress* OR arrest* OR crim* OR antisocial* OR prison* OR inmate* OR felon* OR court* OR imprison* OR incarcerat* OR custod* OR convict* OR forensic* OR charg* OR alleged)

EMBASE

1. exp domestic violence/
2. exp partner violence/
3. exp battered woman/
4. exp physical abuse/ or exp abuse/ or exp sexual abuse/ or exp emotional abuse/
5. domestic* violen*.mp.
6. domestic* abus*.mp.
7. batter*.mp.
8. intimate partner violence.mp.
9. IPV.mp.
10. DV.mp.
11. intimate partner abuse.mp.
12. (partner* adj4 violen*).mp.
13. (partner* adj4 abus*).mp.
14. marital violence.mp.
15. marital abuse.mp.
16. marital conflict*.mp.
17. (spous* adj4 violen*).mp.
18. (spous* adj4 abus*).mp.
19. (spous* adj4 assault*).mp.
20. inter partner violence.mp.
21. dating violence.mp.
22. interpersonal violence.mp.
23. (relationship* adj3 violen*).mp.
24. dating relationship violence.mp.
25. romantic partner*.mp.
26. current partner*.mp.
27. prior partner*.mp.
28. former partner*.mp.
29. ex-intimate*.mp.
30. dating.mp.
31. (marital adj2 abuse).mp.
32. ((husband or wife or intimate partner) adj2 (maltreat* or mistreat*)).mp.
33. maltreat*.mp.
34. (physical* adj1 abus*).mp.
35. (emotional* adj1 abus*).mp.
36. (psychological* adj1 abus*).mp.
37. (sexual* adj1 abus*).mp.
38. exp stalking/

39. exp non-sexual harassment/ or exp harassment/ or exp sexual harassment/ or exp online harassment/
40. stalk*.mp.
41. pursui*.mp.
42. fixat*.mp.
43. obsess*.mp.
44. cyberstalk*.mp.
45. cyber-stalk*.mp.
46. technology facilitated stalk*.mp.
47. cyber harass*.mp.
48. surveillance.mp.
49. unwanted attention.mp.
50. predatory pursuit.mp.
51. intrusive behavio?r.mp.
52. intrusive harassment.mp.
53. simple obsessional stalking.mp.
54. (rejected adj3 stalk*).mp.
55. relational stalk*.mp.
56. (ex-partner adj3 harass*).mp.
57. relational intrusion.mp.
58. non-consensual contact.mp.
59. concurren*.mp.
60. overlap*.mp.
61. compar*.mp.
62. co-occur*.mp.
63. occur*.mp.
64. differentiat*.mp.
65. link*.mp.
66. prevalen*.mp.
67. associat*.mp.
68. correlat*.mp.
69. similar*.mp.
70. differ*.mp.
71. pattern*.mp.
72. relationship*.mp.
73. exp association/
74. exp prevalence/
75. exp personality/
76. personality.mp.
77. personality profile.mp.
78. profile*.mp.
79. personality typ*.mp.
80. typolog*.mp.
81. personality trait*.mp.
82. personality characteristic*.mp.
83. characteristic*.mp.
84. attachment*.mp.
85. attachment style*.mp.
86. exp risk factor/ or exp risk/
87. risk*.mp.
88. risk factor*.mp.
89. criminogenic need*.mp.

90. predict*.mp.
91. static risk factor*.mp.
92. dynamic risk factor*.mp.
93. pathway*.mp.
94. correlat*.mp.
95. factor*.mp.
96. marker*.mp.
97. associated factor*.mp.
98. related factor*.mp.
99. indicator*.mp.
100. recidiv*.mp.
101. variable*.mp.
102. predispos*.mp.
103. trigger*.mp.
104. exp offender/
105. perpetrat*.mp.
106. offend*.mp.
107. aggress*.mp.
108. arrest*.mp.
109. crim*.mp.
110. prison*.mp.
111. inmate*.mp.
112. felon*.mp.
113. court*.mp.
114. imprison*.mp.
115. incarcerat*.mp.
116. custod*.mp.
117. convict*.mp.
118. forensic*.mp.
119. charg*.mp.
120. alleged.mp.
121. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37
122. 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58
123. 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74
124. 75 or 76 or 77 or 78 or 79 or 80 or 81 or 82 or 83 or 84 or 85 or 86 or 87 or 88 or 89 or 90 or 91 or 92 or 93 or 94 or 95 or 96 or 97 or 98 or 99 or 100 or 101 or 102 or 103
125. 104 or 105 or 106 or 107 or 108 or 109 or 110 or 111 or 112 or 113 or 114 or 115 or 116 or 117 or 118 or 119 or 120
126. 121 and 122 and 123
127. 121 and 122 and 123 and 124
128. 121 and 122 and 123 and 124 and 125

MEDLINE
1. exp Domestic Violence/
2. exp Spouse Abuse/ or exp Intimate Partner Violence/ or exp Battered Women/
3. domestic* violen*.mp.
4. domestic* abus*.mp.

5. batter*.mp.
6. IPV.mp.
7. DV.mp.
8. intimate partner abuse.mp.
9. (partner* adj4 violen*).mp.
10. (partner* adj4 abus*).mp.
11. marital violence.mp.
12. marital abuse.mp.
13. marital conflict*.mp.
14. (spous* adj4 violen*).mp.
15. (spous* adj4 abus*).mp.
16. (spous* adj4 assault*).mp.
17. inter partner violence.mp.
18. dating violence.mp.
19. interpersonal violence.mp.
20. interpersonal violence.mp.
21. (relationship* adj3 violen*).mp.
22. dating relationship violence.mp.
23. romantic partner*.mp.
24. current partner*.mp.
25. prior partner*.mp.
26. former partner*.mp.
27. ex-intimate*.mp.
28. dating.mp.
29. (marital adj2 abuse).mp.
30. ((husband or wife or intimate partner) adj2 (maltreat* or mistreat*)).mp.
31. maltreat*.mp.
32. (physical* adj1 abus*).mp.
33. (emotional* adj1 abus*).mp.
34. (psychological* adj1 abus*).mp.
35. (sexual* adj1 abus*).mp.
36. exp Obsessive Behavior/ or exp Stalking/
37. stalk*.mp.
38. harass*.mp.
39. pursui*.mp.
40. fixat*.mp.
41. obsess*.mp.
42. cyberstalk*.mp.
43. cyber-stalk*.mp.
44. technology facilitated stalk*.mp.
45. cyber harass*.mp.
46. surveillance.mp.
47. unwanted attention.mp.
48. predatory pursuit.mp.
49. intrusive behavio?r.mp.
50. simple obsessional stalking.mp.
51. (rejected adj3 stalk*).mp.
52. relational stalk*.mp.
53. (ex-partner adj3 harass*).mp.
54. relational intrusion.mp.
55. non-consensual contact.mp.
56. Personality/

57. personality profile.mp.
58. profile*.mp.
59. personality typ*.mp.
60. typolog*.mp.
61. personality trait*.mp.
62. personality characteristic*.mp.
63. characteristic*.mp.
64. attachment*.mp.
65. attachment style*.mp.
66. risk*.mp.
67. exp Risk Factors/
68. criminogenic need*.mp.
69. predict*.mp.
70. static risk factor*.mp.
71. dynamic risk factor*.mp.
72. pathway*.mp.
73. correlat*.mp.
74. factor*.mp.
75. marker*.mp.
76. associated factor*.mp.
77. related factor*.mp.
78. indicator*.mp.
79. recidiv*.mp.
80. variable*.mp.
81. predispos*.mp.
82. trigger*.mp.
83. concurren*.mp.
84. overlap*.mp.
85. compar*.mp.
86. co-occur*.mp.
87. occur*.mp.
88. differentiat*.mp.
89. link*.mp.
90. prevalen*.mp.
91. associat*.mp.
92. correlat*.mp.
93. similar*.mp.
94. differ*.mp.
95. pattern*.mp.
96. relationship*.mp.
97. exp Association/
98. perpetrat*.mp.
99. offend*.mp.
100. aggress*.mp.
101. arrest*.mp.
102. crim*.mp.
103. antisocial*.mp.
104. prison*.mp.
105. inmate*.mp.
106. felon*.mp.
107. court*.mp.
108. imprison*.mp.

109. incarcerat*.mp.
110. custod*.mp.
111. convict*.mp.
112. forensic*.mp.
113. charg*.mp.
114. alleged.mp.
115. exp Criminals/
116. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35
117. 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55
118. 56 or 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74 or 75 or 76 or 77 or 78 or 79 or 80 or 81 or 82
119. 83 or 84 or 85 or 86 or 87 or 88 or 89 or 90 or 91 or 92 or 93 or 94 or 95 or 96 or 97
120. 98 or 99 or 100 or 101 or 102 or 103 or 104 or 105 or 106 or 107 or 108 or 109 or 110 or 111 or 112 or 113 or 114 or 115
121. 116 and 117 and 118
122. 116 and 117 and 118 and 119
123. 116 and 117 and 118 and 119 and 120

PsycInfo
1. domestic* violen*.mp.
2. domestic* abus*.mp.
3. batter*.mp.
4. exp Intimate Partner Violence/
5. exp Domestic Violence/
6. IPV.mp.
7. DV.mp.
8. intimate partner abuse.mp.
9. (partner* adj4 violen*).mp.
10. (partner* adj4 abus*).mp.
11. marital violence.mp.
12. marital abuse.mp.
13. marital conflict*.mp.
14. (spous* adj4 violen*).mp.
15. (spous* adj4 abus*).mp.
16. (spous* adj4 assault*).mp.
17. inter partner violence.mp.
18. dating violence.mp.
19. interpersonal violence.mp.
20. (relationship* adj3 violen*).mp.
21. dating relationship violence.mp.
22. romantic partner*.mp.
23. current partner*.mp.
24. prior partner*.mp.
25. former partner*.mp.
26. ex-intimate*.mp.
27. dating.mp.
28. (marital adj2 abuse).mp.
29. ((husband or wife or intimate partner) adj2 (maltreat* or mistreat*)).mp.

30. maltreat*.mp.
31. (physical* adj1 abus*).mp.
32. (emotional* adj1 abus*).mp.
33. (psychological* adj1 abus*).mp.
34. (sexual* adj1 abus*).mp.
35. exp Battered Females/
36. exp Emotional Abuse/ or exp Physical Abuse/ or exp Sexual Abuse/
37. exp Stalking/
38. stalk*.mp.
39. harass*.mp.
40. pursui*.mp.
41. fixat*.mp.
42. obsess*.mp.
43. cyberstalk*.mp.
44. cyber-stalk*.mp.
45. technology facilitated stalk*.mp.
46. cyber harass*.mp.
47. surveillance.mp.
48. unwanted attention.mp.
49. predatory pursuit.mp.
50. intrusive behavio?r.mp.
51. intrusive harassment.mp.
52. simple obsessional stalking.mp.
53. (rejected adj3 stalk*).mp.
54. relational stalk*.mp.
55. (ex-partner adj3 harass*).mp.
56. relational intrusion.mp.
57. non-consensual contact.mp.
58. exp Harassment/
59. exp Personality/ or exp Personality Correlates/ or exp Personality Processes/ or exp Personality Traits/
60. personality.mp.
61. personality profile.mp.
62. profile*.mp.
63. personality typ*.mp.
64. typolog*.mp.
65. personality trait*.mp.
66. personality characteristic*.mp.
67. characteristic*.mp.
68. attachment*.mp.
69. attachment style*.mp.
70. exp Risk Factors/
71. risk*.mp.
72. risk factor*.mp.
73. criminogenic need*.mp.
74. predict*.mp.
75. static risk factor*.mp.
76. dynamic risk factor*.mp.
77. pathway*.mp.
78. factor*.mp.
79. marker*.mp.
80. associated factor*.mp.

81. related factor*.mp.
82. indicator*.mp.
83. recidiv*.mp.
84. variable*.mp.
85. predispos*.mp.
86. trigger*.mp.
87. concurren*.mp.
88. overlap*.mp.
89. compar*.mp.
90. co-occur*.mp.
91. occur*.mp.
92. differentiat*.mp.
93. link*.mp.
94. prevalen*.mp.
95. associat*.mp.
96. correlat*.mp.
97. similar*.mp.
98. differ*.mp.
99. pattern*.mp.
100. relationship*.mp.
101. perpetrat*.mp.
102. offend*.mp.
103. aggress*.mp.
104. arrest*.mp.
105. crim*.mp.
106. antisocial*.mp.
107. prison*.mp.
108. inmate*.mp.
109. felon*.mp.
110. court*.mp.
111. imprison*.mp.
112. incarcerat*.mp.
113. custod*.mp.
114. convict*.mp.
115. forensic*.mp.
116. charg*.mp.
117. alleged.mp.
118. exp Perpetrators/
119. exp Female Criminal Offenders/ or exp Criminal Offenders/ or exp Male Criminal Offenders/
120. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36
121. 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58
122. 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74 or 75 or 76 or 77 or 78 or 79 or 80 or 81 or 82 or 83 or 84 or 85 or 86
123. 87 or 88 or 89 or 90 or 91 or 92 or 93 or 94 or 95 or 96 or 97 or 98 or 99 or 100
124. 101 or 102 or 103 or 104 or 105 or 106 or 107 or 108 or 109 or 110 or 111 or 112 or 113 or 114 or 115 or 116 or 117 or 118 or 119

125. 120 and 121 and 122
126. 120 and 121 and 122 and 123
127. 120 and 121 and 122 and 123 and 124

Web of Science
1. TS=domestic* violen*
2. TS=domestic* abus*
3. TS=batter*
4. TS=intimate partner violence
5. TS=IPV
6. TS=DV
7. TS=intimate partner abuse
8. TS=(partner* NEAR/4 violen*)
9. TS=(partner* NEAR/4 abus*)
10. TS=marital violence
11. TS=marital abuse
12. TS=marital conflict*
13. TS=(spous* NEAR/4 violen*)
14. TS=(spous* NEAR/4 abus*)
15. TS=(spous* NEAR/4 assault*)
16. TS=inter partner violence
17. TS=dating violence
18. TS=interpersonal violence
19. TS=(relationship* NEAR/3 violen*)
20. TS=dating relationship violence
21. TS=romantic partner*
22. TS=current partner*
23. TS=prior partner*
24. TS=former partner*
25. TS=ex-intimate*
26. TS=dating
27. TS=(marital NEAR/2 abuse)
28. TS=(husband OR wife OR intimate partner NEAR/2 maltreat* OR mistreat*)
29. TS=maltreat*
30. TS=(physical* NEAR/1 abus*)
31. TS=(emotional* NEAR/1 abus*)
32. TS=(psychological* NEAR/1 abus*)
33. TS=(sexual* NEAR/1 abus*)
34. TS=stalk*
35. TS=harass*
36. TS=pursui*
37. TS=fixat*
38. TS=obsess*
39. TS=cyberstalk*
40. TS=cyber-stalk*
41. TS=technology facilitated stalk*
42. TS=cyber harass*
43. TS=surveillance
44. TS=unwanted attention
45. TS=predatory pursuit
46. TS=intrusive behavio?r
47. TS=intrusive harassment

48. TS=simple obsessional stalking
49. TS=(rejected NEAR/3 stalk*)
50. TS=relational stalk*
51. TS=(ex-partner NEAR/3 harass*)
52. TS=relational intrusion
53. TS=non-consensual contact
54. TS=personality
55. TS=personality profile
56. TS=profile*
57. TS=personality typ*
58. TS=typolog*
59. TS=personality trait*
60. TS=personality characteristic*
61. TS=characteristic*
62. TS=attachment*
63. TS=attachment style*
64. TS=risk*
65. TS=risk factor*
66. TS=criminogenic need*
67. TS=predict*
68. TS=static risk factor*
69. TS=dynamic risk factor*
70. TS=pathway*
71. TS=factor*
72. TS=marker*
73. TS=associated factor*
74. TS=related factor*
75. TS=indicator*
76. TS=recidiv*
77. TS=variable*
78. TS=predispos*
79. TS=concurren*
80. TS=overlap*
81. TS=compar*
82. TS=co-occur*
83. TS=occur*
84. TS=differentiat*
85. TS=link*
86. TS=prevalen*
87. TS=associat*
88. TS=correlat*
89. TS=similar*
90. TS=differ*
91. TS=pattern*
92. #33 OR #32 OR #31 OR #30 OR #29 OR #28 OR #27 OR #26 OR #25 OR #24 OR #23 OR #22 OR #21 OR #20 OR #19 OR #18 OR #17 OR #16 OR #15 OR #14 OR #13 OR #12 OR #11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5 OR #4 OR #3 OR #2 OR #1
93. #53 OR #52 OR #51 OR #50 OR #49 OR #48 OR #47 OR #46 OR #45 OR #44 OR #43 OR #42 OR #41 OR #40 OR #39 OR #38 OR #37 OR #36 OR #35 OR #34

94. #78 OR #77 OR #76 OR #75 OR #74 OR #73 OR #72 OR #71 OR #70 OR #69 OR #68 OR #67 OR #66 OR #65 OR #64 OR #63 OR #62 OR #61 OR #60 OR #59 OR #58 OR #57 OR #56 OR #55 OR #54
95. #91 OR #90 OR #89 OR #88 OR #87 OR #86 OR #85 OR #84 OR #83 OR #82 OR #81 OR #80 OR #79
96. #95 AND #94 AND #93 AND #92

Appendix 2. **PICO inclusion/exclusion criteria form**

	Inclusion	**Exclusion**	**Criterion met?**
Population	Males and females aged 18 and above that have currently or previously perpetrated both IPV and stalking, with samples being linked to the Criminal Justice System or recognised by agencies as engaging in both IPV and stalking. Studies included if samples have previous conviction(s) or a history of IPV-only or stalking-only but are being assessed for perpetrating the other behaviour.	Males and females aged 17 and under. Studies that don't include samples with conviction(s) or history of IPV or stalking perpetration (i.e. university students, general population). Studies that focus on victims' self-report and experiences of IPV and stalking victimisation.	Yes Unclear Discuss No
Intervention	Studies assessing the prevalence and/or characteristics associated with co-occurring IPV and stalking perpetration. Self-report, psychometric measures, risk assessment tools or official records of co-occurring IPV and stalking perpetration will be included.	Studies do not focus on the prevalence of or explore characteristics associated with co-occurring IPV and stalking perpetration. Studies that focus on general violence or offending of a different nature.	Yes Unclear Discuss No
Comparator	No comparator.	No comparator.	Yes Unclear Discuss No
	Prevalence of co-occurring IPV and stalking perpetration and the measures of	Studies that explore the perpetration of IPV-only or stalking-only.	Yes Unclear Discuss No

Outcomes	association between these and/or related characteristics that link the perpetration of both behaviours. Studies must consider IPV and stalking perpetration in the context of intimate relationships. Studies do not have to be limited to any single form of IPV or stalking, but must refer to a definition of IPV or stalking.	Studies that consider IPV and stalking perpetration in different relationship contexts outside of intimate partners (i.e. family member, stranger, celebrity). Studies do not examine the prevalence and/or characteristics associated with co-occurring IPV and stalking perpetration. Studies that do not refer to a definition of IPV or stalking.	
Study Design	Any study design will be included. Use of descriptive and/or inferential statistics. Studies that do not conflate IPV and stalking.	Reviews; book chapters; commentaries; literature reviews; editorials; discussion/opinion pieces; case studies; qualitative studies. Studies that conflate IPV and stalking.	Yes Unclear Discuss No
Additional Criteria	Studies only included if they are available in English. Eligible studies may be either published or unpublished. Year of publication 1989 (to coincide with emergence of anti-stalking legislation) – 2020.	Studies not written in English.	Yes Unclear Discuss No

If all questions answered with yes, then include study.

Appendix 3. Quality assessment tool

Quality Assessment Tool

Study ID:

Full reference:

Question	Score				Comments
	Y (2)	P (1)	N (0)	U (?)	
Initial Screening					
1. Were the research aims/objectives clear?					
2. Does the study address the prevalence and/or characteristics of co-occurring IPV and stalking perpetration?					
3. Was there a clear definition of IPV and stalking?					
Study Design					
4. Was the study design (i.e. cross-sectional, cohort, case control) appropriate for the study aims?					
Sampling and selection bias					
5. Was the method of selection/recruitment and study population/setting clearly described and appropriate?					
6. Was a sample size justification, statistical power description, or variance and effect estimates provided?					
7. Was a sufficient sample size used?					
8. Was a satisfactory response rate achieved (i.e. participation rate of eligible persons at least 50%)?					
9. Were all the participants selected or recruited from the same or similar populations (including the same time period)?					
10. Was there a comparison group (non-IPV/stalking sample or IPV-only/stalking-only sample)?					
Measurement/performance bias					
11. Were the exposure(s) of interest measured prior to the outcome(s) being measured?					
12. Was the follow up of participants long enough (timeframe was sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed)?					
13. Was loss to follow-up after baseline 20% or less?					
14. Were the exposure measures (IVs) clearly defined, valid, reliable and					

implemented consistently across all study participants?					
15. Was the exposure(s) assessed more than once over time?					
16. Were the outcome measures (DVs) clearly defined, valid, reliable and implemented consistently across all study participants?					
17. Was missing information dealt with appropriately?					
Statistical bias					
18. Were the statistical tests used to assess the outcomes clearly described and appropriate for the study design, and the measurement of the association is presented, including confidence intervals and the probability level (p value)?					
19. Are the results reliable?					
20. Were potential confounding variables identified?					
21. Were potential confounding variables controlled for?					
22. Have the methods/results been clearly reported?					
Attrition bias					
23. Were rates and/or reasons for drop-out/non-completion recorded?					
Applicability of Findings					
24. Can the results be applied to the target population?					
25. Does the research offer valuable contribution to the literature?					

Summed Quality Score (50 maximum): _____

No. of Unclear: _____

Scoring:

0 = Condition not met

1 = Condition partially met

2 = Condition met

U = Unclear/insufficient information

Above 50%? Yes/No

If yes included in the final articles

Appendix 4. Quality assessment tool guidance

Quality Assessment Tool Guide

1. Were the research aims/objectives clear?

- The aim(s) of the study tells us if the study addresses an appropriate and clearly focused question. If the aim is not clearly stated or not stated at all, it will be difficult and in some cases impossible to assess the extent to which the study objectives were achieved.
- Did the authors describe their goal in conducting this research? Is it easy to understand what they were looking to find? Higher quality scientific research explicitly defines a research question.

2. Does the study address the prevalence and/or characteristics of co-occurring IPV and stalking perpetration?

- The study needs to address a clearly focused issue/question that relates to the review question. Only studies that include measures of the prevalence and/or characteristics (exposure) of co-occurring IPV and stalking (outcome) should be included in the review. Also, relevant populations need to be defined, and for this study that includes adult males and females that are linked to the Criminal Justice System. Only studies measuring the prevalence/characteristics and outcomes in relevant populations should be included in the review.
- Regarding generalisability, the study population should part of the wider population of interest. This issue concerns the relevance of the study to the review, not the quality of the study. If the study population is not part of the wider population of interest, the study should not be included in the review at all.

3. Was there a clear definition of IPV and stalking?

- It is useful to determine if participants were included in the study based on either a specified diagnosis or definition. This is more likely to decrease the risk of bias. Characteristics are another useful approach to matching groups, and studies that did not use specified diagnostic methods or definitions should provide evidence on matching by key characteristics.

4. Was the study design (i.e. cross-sectional, cohort, case control) appropriate for the study aims?

- The reader should try and decipher if the study design is appropriate for the study aims/questions being asked by the researcher.
- If the study is exploring risk factors, then the reader needs to identify studies with appropriate time-ordered data. Establishing precedence is important, because only risk factors that precede the outcome can cause the outcome. Three types of data are rated in order of increasing confidence that conclusions about risk factors are justified:
    1) Cross-sectional data: Cross-sectional studies measure risk factors and outcomes at one point in time with no reference to the time-ordering of events. Data from cross-sectional studies yield no information about precedence and cannot be used to draw conclusions about risk factors.
    2) Retrospective data: Time-ordered retrospective data can be collected by asking people to remember past events. Self-reported retrospective data yield some information about precedence. However, because of retrospective recall bias, self-reported data about past events can be very unreliable.
    3) Prospective data: The best way to determine the time-ordering of variables is to collect prospective data where the risk factor is measured before the outcome. Prospective data can be collected in a longitudinal study following people over time. If researchers measure a risk factor at one point in time and wait and measure the outcome at a later point in time, confident conclusions

can be drawn about risk factors. Confident conclusions about risk factors can also be drawn from prospective data in the form of archival records.

5. Was the method of selection/recruitment and study population/setting clearly described and appropriate?

- This question is used to establish how the researchers got from the sample frame to the participants in the study. It examines the potential for selection bias and how the researcher developed methods to deal with this. The sample selection process is important in determining to what extent the results of the study are generalizable to the target population. The target or reference population is the overall population that the research is directed towards to make conclusions about or the population at risk of acquiring the condition being investigated. As a reader you need to determine if the sample frame being used is representative of the target population. The sampling frame is the list or source of the study population that the researcher has used when trying to recruit participants into the study. Ideally it should be exactly the same composition or structure as the target population. In practice it is generally much smaller, but should still be representative of the target population. This should be clearly defined in the study. It is important that this is understood both by the researcher and the reader; if it is not clearly defined then inferences made by the researcher may be inappropriate. It is very important that the sampling frame is representative of the target population as results from the study are going to be used to make assumptions about the target population.
- For this question we are looking in depth at how the sample (study participants) was selected from the sampling frame. The authors should provide a clear description of the population from which the study participants were selected or recruited, including demographics, location, and time period. If you were to conduct this study again, would you know who to recruit, from where, and from what time period? Is the cohort population free of the outcomes of interest at the time they were recruited? In cohort studies, it is crucial that the population at baseline is free of the outcome of interest. This information is usually found either in descriptions of population recruitment, definitions of variables, or inclusion/exclusion criteria.
- Was an adequate sampling method used? Appropriate samples are needed, so that results can be generalized to populations from which samples are drawn. Some sampling methods provide more representative results than other methods and can be used to draw more confident conclusions about prevalence/correlates in relation to whether they represent that population (i.e. total population sampling, random sampling, stratified random sampling). However, when convenience (non-randomised) samples are used, findings can rarely be generalised with confidence. Retrospective case–control samples, which separately sample cases and controls and compare them on previous exposure to risk factors, are also unreliable for making inferences about correlates in the population. This is because populations can change in composition from the time of risk exposure to the time of sampling.
- It is important to know if there were any inclusion or exclusion criteria used, as inappropriate criteria can dramatically shift how representative the sample is of the target population. Were the inclusion and exclusion criteria developed prior to recruitment or selection of the study population? Were the same underlying criteria used for all of the subjects involved? The authors should provide clear inclusion and exclusion criteria that they developed prior to recruitment of the study participants. The inclusion/exclusion criteria should be specified with sufficient detail and all the necessary information critical to the study.

6. Was a sample size justification, statistical power description, or variance and effect estimates provided?

- Did the authors present their reasons for selecting or recruiting the number of people included or analysed? Do they note or discuss the statistical power of the study? This question is about whether or not the study had enough participants to detect an association if one truly existed. A paragraph in the methods section of the article may

explain the sample size needed to detect a hypothesized difference in outcomes. You may also find a discussion of power in the discussion section. Sometimes estimates of variance and/or estimates of effect size are given, instead of sample size calculations. In any of these cases, the answer would be "yes."
- However, observational cohort studies often do not report anything about power or sample sizes because the analyses are exploratory in nature. In this case, the answer would be "no." This is not a "fatal flaw." It just may indicate that attention was not paid to whether the study was sufficiently sized to answer a prespecified question–i.e., it may have been an exploratory, hypothesis-generating study.
- Sample size justification is crucial as sample size profoundly affects the significance of the outcomes of the study. If the sample size is too small then the conclusions drawn from the study will be under powered and may be inaccurate. This can occur by failing to detect an effect which truly exists (type II error) or drawing significant conclusions when no real difference exists and is a function of the p-value (type I error).
- In some cases clustering of observations within groups can occur (e.g. patients within hospitals) and this should be taken into account if sample size has been determined. If sample size justification isn't given or restrictions make it difficult to reach the desired sample size then this should be declared in the text.

7. Was a sufficient sample size used?
- Larger samples produce more precise estimates of association and allow more confident conclusions to be drawn about correlates. Sometimes, studies with small samples fail to detect an association just because they do not have enough statistical power. An adequately sized sample ought to be able to detect small effect sizes (d=.2, r=0.1). In a 2×2 table, approximately 400 participants are required to detect such small effect sizes (in a two-tailed test, with P=0.05 as the cut off for significance). Therefore, we define an adequate sample size as 400 or more participants. Note, it is the size of the achieved sample (used in analyses) that is important here, not the size of the target sample. The achieved sample can be considerably smaller than the sample targeted for inclusion in a study, because of poor response rates or high attrition.

8. Was a satisfactory response rate achieved (i.e. participation rate of eligible persons at least 50%)?
- Poor response rates can bias results and reduce the generalizability of findings. Therefore, the researcher needs adequate response rates to draw confident conclusions about correlates.
- If fewer than 50% of eligible persons participated in the study, then there is concern that the study population does not adequately represent the target population. This increases the risk of bias.
- In longitudinal studies, retention rates also need to be high, and attrition should not differ too much between groups. As in experimental studies, differential attrition between participants who are exposed or not exposed to the correlate can cause bias in the estimated relationship between the correlate and the outcome.

9. Were all the participants selected or recruited from the same or similar populations (including the same time period)?
- Most cohort studies begin with the selection of the cohort; participants in this cohort are then measured or evaluated to determine their exposure status. However, some cohort studies may recruit or select exposed participants in a different time or place than unexposed participants, especially retrospective cohort studies–which is when data are obtained from the past (retrospectively), but the analysis examines exposures prior to outcomes. If the study recruits groups from different populations, this question would get a "no."

10. Was there a comparison group (i.e. non-IPV/stalking sample or IPV-only/stalking-only sample)?

- An issue that is critical to the investigation of causal effects in non-randomised studies is controlling for confounding variables. Confounding occurs because risk factors are not randomly distributed in the population. Often, individuals who are exposed to a risk factor differ from unexposed individuals in many other ways that might influence the outcome. Therefore, even if the outcome increases/occurs after individuals' exposure to a risk factor, other confounding variables might explain this relationship. To control for confounding variables, studies need to include a comparison group and balance risk-exposed and unexposed individuals on confounding variables.
- Some studies investigate outcomes in among exposed individuals but do not include a comparison group and do not include data on change in outcome from before to after exposure. For example, a study might investigate delinquency among children after parental divorce but not include pre-divorce data or a comparison group of children whose parents are not divorced. This study design yields no information at all about the causal effects of the risk factor.
- Some studies compare delinquency between risk-exposed individuals and a comparison group of unexposed individuals but do not investigate changes in delinquency or control for confounding factors. For example, a cross-sectional study might compare rates of delinquency between children living in broken homes and children living in intact homes, with no attempt to control for confounding factors such as family environment. Given the frequent inter-correlations between risk factors in psychosocial research, studies without adequate control for confounding variables, and no analysis of change in outcome from before to after the risk factor, cannot be used to draw conclusions about causal risk factors.

11. Were the exposure(s) of interest measured prior to the outcome(s) being measured?

- This question is important because, in order to determine whether an exposure causes an outcome, the exposure must come before the outcome.
- For some prospective cohort studies, the investigator enrols the cohort and then determines the exposure status of various members of the cohort. However, for other cohort studies, the cohort is selected based on its exposure status. With either of these types of cohort studies, the cohort is followed forward in time (i.e., prospectively) to assess the outcomes that occurred in the exposed members compared to nonexposed members of the cohort. Therefore, you begin the study in the present by looking at groups that were exposed (or not) to some biological or behavioural factor, intervention, etc., and then you follow them forward in time to examine outcomes. If a cohort study is conducted properly, the answer to this question should be "yes," since the exposure status of members of the cohort was determined at the beginning of the study before the outcomes occurred.
- For retrospective cohort studies, the same principal applies. The difference is that, rather than identifying a cohort in the present and following them forward in time, the investigators go back in time (i.e., retrospectively) and select a cohort based on their exposure status in the past and then follow them forward to assess the outcomes that occurred in the exposed and nonexposed cohort members. Because in retrospective cohort studies the exposure and outcomes may have already occurred (it depends on how long they follow the cohort), it is important to make sure that the exposure preceded the outcome.
- Sometimes cross-sectional studies are conducted (or cross-sectional analyses of cohort-study data), where the exposures and outcomes are measured during the same timeframe. As a result, cross-sectional analyses provide weaker evidence than regular cohort studies regarding a potential causal relationship between exposures and outcomes. For cross-sectional analyses, the answer should be "no."

12. Was the follow up of participants long enough (timeframe was sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed)?

- Did the study allow enough time for a sufficient number of outcomes to occur or be observed, or enough time for an exposure to have an effect on an outcome?

- The issue of timeframe is important to enable meaningful analysis of the relationships between exposures and outcomes to be conducted. This often requires at least several years, especially when looking at health outcomes, but it depends on the research question and outcomes being examined.
- Cross-sectional analyses allow no time to see an effect, since the exposures and outcomes are assessed at the same time, so those would get a "no" response.

13. Was loss to follow-up after baseline 20% or less?

- It is important in a cohort study that a greater percentage of people are followed up. As a general guideline, at least 80% of patients should be followed up whose exposures were measured at baseline. Generally a dropout rate of 5% or less is considered insignificant. A rate of 20% or greater is considered to significantly impact on the validity of the study. However, in observational studies conducted over a lengthy period of time a higher dropout rate is to be expected. A decision on whether to include or exclude a study because of a high dropout rate is a matter of judgement based on the reasons why people dropped out, and whether dropout rates were comparable in the exposed and unexposed groups. Reporting of efforts to follow up participants that dropped out may be regarded as an indicator of a well conducted study. Look for clear and justifiable description of why people were left out, excluded, dropped out etc. If there is no clear description or a statement in this regards, this will be a 'No'.

14. Were the exposure measures (IVs) clearly defined, valid, reliable and implemented consistently across all study participants?

- Were the exposure measures defined in detail? Were the tools or methods used to measure exposure accurate and reliable–for example, have they been validated or are they objective? The study should clearly describe the method of measurement of exposure. This issue is important as it influences confidence in the reported exposures. When exposures are measured with less accuracy or validity, it is harder to see an association between exposure and outcome even if one exists. Also as important is whether the exposures were assessed in the same manner within groups and between groups; if not, bias may result. For example, retrospective self-report of dietary salt intake is not as valid and reliable as prospectively using a standardized dietary log plus testing participants' urine for sodium content.
- This question is an attempt to gauge the measurement reliability and validity of the study measures. Measurement validity is a gauge of how accurately the study measurements used assess the concepts that the researcher is attempting to explore. Measurement reliability is a gauge of the accuracy of the measurements taken or the procedures used during the study. This question is used to address the appropriateness of the measurements being used. With this in mind, the measurements must be of international or globally accepted standards where possible and appropriate. If they are being used for the first time they must be trialled, or in the case of questionnaires, they should be piloted before being used.
- The importance of measurement validity is that it gives weight to applying the statistical inferences from the study to members of the target population. If inappropriate measures are used in the study it could lead to misclassification bias and it will be difficult to determine to what extent the study results are relevant to the target population.
- Studies should use measures that have been previously shown to have had high reliability and validity, or these should be demonstrated in new tests. Reliability can be assessed by the comparison of scores for different items on a scale (internal consistency), test scores over time (test–retest reliability), and test scores produced by different observers (inter-rater reliability). As a rule of thumb, reliability coefficients should be at least 0.75. Validity can be assessed by evaluation of whether test scores correlate with other measures of the same construct (criterion validity) and whether test scores correlate with other variables they are supposed to correlate with (convergent validity). As a rule of thumb, validity coefficients should be at least 0.30.

- To increase the quality of measurement, one can also use multiple measurement methods. Using multiple instruments or multiple informants allows researchers to distinguish between information relevant to the theoretical construct and bias attributable to the method of measurement. Confidence in results is generally increased when multiple instruments or informants are used and scores are combined. Hence, confidence in conclusions about correlates can be increased by the use of reliable and valid measures and multiple methods of measurement. Quite often, a study reports several results based on different measures of the same construct. For example, three separate results for delinquency might be reported based on self-reported delinquency questionnaires, arrest records and conviction records. In such situations we recommend that reviewers choose the result that is based on the highest quality measure (according to the criteria given above or topic-specific criteria determined by the reviewer) and include that in the review.

15. Was the exposure(s) assessed more than once over time?

- Was the exposure for each person measured more than once during the course of the study period? Multiple measurements with the same result increase our confidence that the exposure status was correctly classified. Also, multiple measurements enable investigators to look at changes in exposure over time, for example, people who ate high dietary sodium throughout the follow-up period, compared to those who started out high then reduced their intake, compared to those who ate low sodium throughout. Once again, this may not be applicable in all cases. In many older studies, exposure was measured only at baseline. However, multiple exposure measurements do result in a stronger study design.

16. Were the outcome measures (DVs) clearly defined, valid, reliable and implemented consistently across all study participants?

- Were the outcomes defined in detail? Were the tools or methods for measuring outcomes accurate and reliable–for example, have they been validated or are they objective? This issue is important because it influences confidence in the validity of study results. Also important is whether the outcomes were assessed in the same manner within groups and between groups.
- An example of an outcome measure that is objective, accurate, and reliable is death–the outcome measured with more accuracy than any other. But even with a measure as objective as death, there can be differences in the accuracy and reliability of how death was assessed by the investigators. Read the methods section of the paper. If for e.g. lung cancer is assessed based on existing definitions or diagnostic criteria, then the answer to this question is likely to be yes. If lung cancer is assessed using observer reported, or self-reported scales, the risk of over- or underreporting is increased, and objectivity is compromised. Importantly, determine if the measurement tools used were validated instruments as this has a significant impact on outcome assessment validity.
- Having established the objectivity of the outcome measurement (e.g. lung cancer) instrument, it's important to establish how the measurement was conducted. Were those involved in collecting data trained or educated in the use of the instrument/s? (e.g. radiographers). If there was more than one data collector, were they similar in terms of level of education, clinical or research experience, or level of responsibility in the piece of research being appraised?
- Please see Question 14 for further information regarding the assessment of measurement validity and reliability.

17. Was missing information dealt with appropriately?

- Information about the level of missing data should also be declared in the results. It is important to check that the numbers add up in the tables and the text. If the study has recruited 100 participants, the tables and the text should include data about 100 participants. If not, the missing data should be clearly declared and the reason for its non-appearance explained.

18. Were the statistical tests used to assess the outcomes clearly described and appropriate for the study design, and the measurement of the association is presented, including confidence intervals and the probability level (p value)?

- Consideration should be given to whether there was a more appropriate alternate statistical method that could have been used. The methods section should be detailed enough for reviewers to identify which analytical techniques were used (in particular, regression or stratification) and how specific confounders were measured. For studies utilising regression analysis, it is useful to identify if the study identified which variables were included and how they related to the outcome. If stratification was the analytical approach used, were the strata of analysis defined by the specified variables? Additionally, it is also important to assess the appropriateness of the analytical strategy in terms of the assumptions associated with the approach as differing methods of analysis are based on differing assumptions about the data and how it will respond.
- The statistical significance levels should be clearly stated even if the paper is just presenting descriptive statistics. The statistical significance level is usually described as a p-value. Confidence intervals should also be declared with p-values or instead of p-values as an indication of the precision of the estimates. This can be used to compare groups where an overlap would suggest no difference and a gap between confidence intervals would suggest a difference.

19. Are the results reliable?

- This question explores the basic data and asks that the reader spends some time exploring the numbers given in the results; in the text, figures and tables.
- Big effect is hard to ignore
- Can it be due to bias, chance or confounding variables?
- Are the design, methods or analysis of this study sufficiently flawed to make the results unreliable?

20. Were potential confounding variables identified?

- Confounding has occurred where the estimated intervention exposure effect is biased by the presence of some difference between the comparison groups (apart from the exposure investigated/of interest). A confounder is a difference between the comparison groups and it influences the direction of the study results. A high quality study at the level of cohort design will identify the potential confounders and measure them (where possible). This is difficult for studies where behavioural, attitudinal or lifestyle factors may impact on the results.
- Are there any confounding variables that the researcher missed which you think are important?

21. Were potential confounding variables controlled for?

- Strategies to deal with effects of confounding factors may be dealt within the study design or in data analysis. By matching or stratifying sampling of participants, effects of confounding factors can be adjusted for. When dealing with adjustment in data analysis, assess the statistics used in the study. Most will be some form of multivariate regression analysis to account for the confounding factors measured.
- Were key potential confounding variables measured and adjusted for, such as by statistical adjustment for baseline differences? Logistic regression or other regression methods are often used to account for the influence of variables not of interest.
- This is a key issue in cohort studies, because statistical analyses need to control for potential confounders, in contrast to an RCT, where the randomization process controls for potential confounders. All key factors that may be associated both with the exposure of interest and the outcome–that are not of interest to the research question–should be controlled for in the analyses.
- Look for restriction in design, and techniques e.g. modelling, stratified-, regression-, or sensitivity analysis to correct, control or adjust for confounding factors.

22. Have the methods/results been clearly reported?

- This question asks if the methods are sufficiently described to enable them to be repeated. If there are sections or even small pieces of information missing it could make a great difference for the reader when interpreting the results and the discussion as they may be unsure if the correct methods are being used.
- The reader should also look for a description of the basic data. Basic descriptive analysis aims to summarise the data, giving detailed information about the sample and the measurements taken in the study. Descriptive data of the measurements taken in the study give an overview of any differences between the groups, and may give insight into some of the reasons for statistical inferences that are made later in the paper.
- It is important to check that all the methods described previously lead to data in the results section. Sometimes the results from all analyses are not described. If this is noted it will be unclear whether the researcher found non-significant results or just didn't describe what was found. If there are results missing that you would expect to find, there is a concern that these missing results may not have been what the researcher wanted to see and hence the authors have omitted them.
- The discussion of a paper should summarise key results of the study objectives. It should give an overall interpretation of the results of the study keeping in mind the limitations and the external validity of the document. The discussion section should also address both significant and non-significant findings of the study and make comparisons with other research, citing their sources.

23. Were rates and/or reasons for drop-out/non-completion recorded?

- This question requires that there is some attempt made to quantify the level of non-response by the researchers and asks the reader to interpret if the response rate is likely to lead to non-response bias.
- The reader should also examine if any information on non-responders was available and if so were they comparable to those that did respond as this could help in answering this question. Non-response bias occurs if the non-responders are substantially different to the rest of the population in the sample.
- Non-response in cross-sectional studies is a difficult area to address. A non-responder is someone who does not respond either because they refuse to, cannot be contacted, or because their details cannot be documented. As a rule, if participants don't respond it is often difficult and sometimes impossible to gain any information about them. However other baseline statistics may exist that can be used as a comparator to assess how representative the sample is, e.g. age, sex, socio-economic classification. Methods used, if any, should be well described so that the results from the analyses can be interpreted. This is important as non-responders may be from a specific group, which can lead to a shift in the baseline data away from that group. This shift can lead to results that don't represent the target population.

24. Can the results be applied to the target population?

- Consider whether the study population/design was the appropriate method to answer this question, the subjects covered in this study could be sufficiently different from your population to cause concern or if your local setting is likely to differ much from that of the study.

25. Does the research offer valuable contribution to the literature?

- One observational study rarely provides sufficiently robust evidence to recommend changes to clinical practice or within health policy decision making. However, for certain questions observational studies provide the only evidence. Recommendations from observational studies are always stronger when supported by other evidence.

Appendix 5. **Data extraction form**

Data to be extracted	Study #
Title	
Authors/Year	
Country of Origin	
Publication Status	
Study Design	
Aims/Objectives	
Participants/Population	
Sampling Methods/Recruitment Procedure	
Inclusion/Exclusion Criteria	
Definitions/Forms of IPV and Stalking Considered in Study	
Measurement Tool/Methods Used	
Participant Characteristics	
Statistical Analyses Used	
Overview of Results	
Strengths and Weaknesses	
Authors' Conclusions	
Quality Assessment Score (%)	

Appendix 6. **Propensity for Abusiveness Scale (Dutton, 1995)**

Completely undescriptive of you = 1
Mostly undescriptive of you = 2
Partly undescriptive and partly descriptive of you = 3
Mostly descriptive of you = 4
Completely descriptive of you = 5

1. I can make myself angry about something in the past just by thinking about it.
2. I get so angry, I feel that I might lose control.
3. If I let people see the way I feel, I'd be considered a hard person to get along with.
4. I see myself in totally different ways at different times.
5. I feel empty inside.
6. I tend to feel things in a somewhat extreme way, experiencing either great joy or intense despair.
7. It is hard for me to be sure about what others think of me, even people who have known me very well.
8. I feel people don't give me the respect I deserve unless I put pressure on them.
9. Somehow, I never know quite how to conduct myself with people.
10. I find it difficult to depend on other people.
11. I worry that I will be hurt if I allow myself to become too close to others.
12. I am somewhat uncomfortable being close to others.

Beside each statement, please write in the number of the response listed below (1-4) that best describes how often the experience happened to you with your mother (or female guardian) and father (or male guardian). If you had more than one mother/father figure, please answer for the persons who you feel played the most important role in your upbringing.

Never occurred = 1
Occasionally occurred = 2

Often occurred = 3
Always occurred = 4

13. My parent punished me even for small offences.
14. As a child I was physically punished or scolded in the presence of others.
15. My parent gave me more corporal punishment than I deserved.
16. I felt my parent thought it was my fault when he/she was unhappy.
17. I think my parent was mean and grudging toward me.
18. I was punished by my parent without having done anything.
19. My parent criticised me and told me how lazy and useless I was in front of others.
20. My parent would punish me hard, even for trifles.
21. My parent treated me in such a way that I felt ashamed.
22. I was beaten by my parent.

How often have you experienced each of the following in the last two months? Please circle the appropriate number.

Never = 0
Occasionally = 1
Fairly often = 2
Very often = 3

23. Insomnia (trouble getting to sleep)
24. Restless sleep
25. Nightmares
26. Anxiety attacks
27. Fear of women
28. Feeling tense all the time
29. Having trouble breathing

Appendix 7. Stalking Propensity Scale (Palmieri & Giannini, 2010)

1. I cannot do without contact with my ex, either by telephone or email.
2. I cannot stand the idea of my ex seeing someone else.
3. I react aggressively if my ex ignores me.
4. I have difficulty controlling myself when angry.
5. I have (been known to stalk) stalked my ex.
6. When I am angry I do things without thinking.
7. If I am dumped I make every effort to get my ex back.
8. I cannot cope without a relationship.
9. I need a partner to go out with.
10. I act on impulse.
11. For me it is vital to have a relationship.
12. I have been known to attack or verbally abuse my ex.
13. I feel it is necessary to know where my ex is and what s/he is doing.
14. I am worth nothing without my partner's love.
15. I have hurt my ex.

Appendix 8. Revenge Porn Proclivity Scale (RPPS; Pina, Holland & James, 2017)

(Each vignette to be followed by the seven questions listed)

Please read the following text carefully and imagine yourself in the situation presented:

1. You have recently begun dating someone. During this time you have been out for meals, to the cinema and for social occasions, just as many couples do. One evening whilst you are out for a meal, your partner goes to the toilet leaving their phone on the table. Whilst waiting for them to return you notice they have received a message from a name you recognise as their ex-partner. Curious, you check to see what the message says and find that multiple messages have been exchanged. You place the phone back and continue the evening as normal. Over the next few days you begin to think more about how this has made you feel. You then decide to upload onto the internet a photo of your naked partner that they sent to you when you first begun dating.
2. You and your partner have been together for a few years, but recently they have become distant with you. You try to do things to make them happy but they respond with little interest. A few days later, your partner arranges to meet up with you. Here they explain that they no longer want to be in a relationship, saying that they no longer love you. Afterwards you begin to think about all of the lost time and effort you have invested into this ended relationship. Whilst going through photos on your phone, you come across a naked photo that your now ex-partner sent to you during the relationship. You then decide to upload this photo onto the internet.
3. You have been in a happy relationship for some time now. You rarely argue with each other and seem to have a good relationship, often spending time with your partner. One evening whilst socialising with a friend, your friend tells you that they believe your partner is cheating on you. That evening you confront your partner, questioning whether this is true, upon which they confess it is. You consequently abruptly end the relationship. You soon hear that your friends are gossiping that you have been cheated on, causing

you to avoid socialising. You react by uploading a naked photo to the internet of your now ex-partner that they previously sent to you.

4. You and your friends often communicate via social media or through text. Most weeks you will send each other messages, which often include images that you both find amusing. One evening your friend sends you a message which includes a nude photo of one of their previous partners. Although you didn't know this ex-partner, you decided to upload this onto the internet so that your other friends can see it.
5. You are currently in a relationship and have been for a few months. It doesn't always run as smoothly as you would like but you feel a relationship is something that should be worked on. One evening an argument begins over your partner's friend who has recently been flirting with them and sending them text messages. One of these messages included a nude photo of the friend. In reaction to this, you send this photo of their friend to your own phone so that you can then upload it onto the internet for others to see.

1. In this situation, would you have done the same? (P)

    1=Definitely would not have done the same

    2=Probably would not have done the same

    3=Don't know

    4=Probably would have done the same

    5=Definitely would have done the same

2. In this situation, how excited would you be? (for these questions 1=not at all, 2=not particularly, 3=don't know, 4=fairly, 5=very)
3. In this situation, how in control would you feel?
4. In this situation, how much would you blame the person who initially sent the photo?
5. In this situation, how amused would you be?
6. In this situation, how angry would you be?
7. In this situation, how regretful would you be? (R)

P= proclivity item

R=reverse scored

Appendix 9. Marlowe-Crowne Social Desirability Scale – 13 Item Version (MCSDS; Reynolds, 1982)

1. It is sometimes hard for me to go on with my work if I am no encouraged.
2. I sometimes feel resentful when I don't get my own way.
3. On a few occasions, I have given up doing something because I thought too little of my ability.
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.
5. No matter who I'm talking to, I'm always a good listener.
6. There have been occasions when I took advantage of someone.
7. I'm always willing to admit when I make a mistake.
8. I sometimes try to get even, rather than forgive and forget.
9. I am always courteous, even to people who are disagreeable.
10. I have never been irked when people expressed ideas very different from my own.
11. There have been times when I was quite jealous of the good fortune of others.
12. I am sometimes irritated by people who ask favours of me.
13. I have never deliberately said something that hurt someone's feelings.

Appendix 10. **Participant Information Sheet and Consent Form**

Participant Information Sheet

Name of Researcher(s): Kate Phipps and Dr Simon Duff

You have been invited to take part in a research study. Before you decide whether to take part it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully before deciding whether or not to take part.

What is the purpose of the study?
The purpose of this study is to explore male views towards certain behaviours in intimate relationships, in order to fill a gap in existing research and knowledge. We would also hope to be able to identify the impact of several personality and psychological factors on the differences between individuals' views towards these behaviours. It is hoped that the findings will contribute to the limited research in this area, to develop our understanding of what may increase someone's likelihood to commit acts of intimate partner violence, stalking and revenge porn. Due to the severity of the consequences of these behaviours, there is a focus on establishing the pathways to the perpetration of such acts to aid in the tailoring of interventions for perpetrators.

Why have I been invited to participate?
You have been invited to take part because we are looking to recruit as many males as possible from the public to ask your opinions about certain behaviours in intimate relationships. You have to be age 18 or older to participate.

Do I have to participate?
It is up to you to decide whether or not to take part. You will be able to withdraw at any time and without giving a reason. You will not have to answer every questionnaire in the survey if you wish not to.

If I choose to participate, what is involved?
In order to participate, you must read and understand all the information on this page. If you do decide to take part, you will be asked to give your consent. You will then be asked to complete a survey that will take approximately 25 minutes. The first few questions will require you to give some details on your demographics. You will then be required to complete a series of questions about yourself by choosing the response boxes which you feel best represent your beliefs. You will then be asked to read through a variety of hypothetical scenarios and indicate your level of agreement or disagreement with a series of questions. It is acknowledged that people have different views and thus, there is no right or wrong answer and you are encouraged to be as honest as possible.

Expenses and payments
Participants will not be paid to participate in the study. Your participation in this study is
voluntary.

What are the possible disadvantages and risks of taking part?

Some of the questions may relate to personal and sensitive topics, and therefore there is a possibility you may feel uncomfortable answering some questions. There are no other foreseeable disadvantages or risks to participating in this study, but please do contact the researcher if you have any concerns. You may skip any question you do not wish to answer, but it is advised that you attempt to answer every question. However, as with any online related activity the risk of a breach is always possible. We will do everything possible to ensure your answers in this study will remain anonymous. Should you feel affected by the questions or vignettes you can seek support and discuss your thoughts and feelings with the Revenge Porn Helpline on 0345 6000 459, the National Domestic Violence Helpline on 0808 2000 247, or contact your GP.

Will my taking part in the study be kept confidential?
You will not be required to give any personal information that can identify you at any point throughout this study, in order for you to remain anonymous. All information will be kept strictly confidential, with the survey data being password protected and only accessible to the researchers. Research will be written up for publication but all findings will be aggregated and therefore, no individual can be identified.

Under UK Data Protection laws the University is the Data Controller (legally responsible for the data security) and the Chief Investigator of this study (named above) is the Data Custodian (manages access to the data). This means we are responsible for looking after your information and using it properly. Your rights to access, change or move your information are limited as we need to manage your information in specific ways to comply with certain laws and for the research to be reliable and accurate.

The data collected for the study will be looked at and stored by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people from regulatory organisations to check that the study is being carried out correctly. All will have a duty of confidentiality.

What will happen to the results of the research study?
The findings will contribute to two empirical research reports which will be submitted by Kate Phipps as a doctoral thesis for the Doctorate in Forensic Psychology programme at University of Nottingham. The study findings may also be presented at a professional conference or appear in a professional journal at a later date. As stated above, all information you consent to be used will be used in confidence and anonymously. The research is being supervised by Dr Simon Duff, Director of Stage II Forensic Training at University of Nottingham. The research will be approved by the Faculty of Medicine and Health Sciences Research Ethics Committee (Research Ethics ref no: FMHS 290-1803).

What will happen after I've completed the study?
Upon completion of the survey, you will be directed to a debrief page which will give you
more details about the study as well as other important information. Anonymised research data will be retained securely for 7 years, in accordance with the University of Nottingham's Code of Research Conduct and Research Ethics. Following this period your data will be disposed of securely. During this period, only the researcher will have access to the anonymous research data we have

collected from you. However, the anonymised data may have to be made available at a viva examination if the examiner requests to see the raw data.

We would also like your permission to use your anonymised data in future studies during the 7 years it is kept, and to share it with other researchers in other Universities and organisations both inside and outside the European Union. This would be used for research in health and social care. Sharing research data is important to allow peer scrutiny, re-use (and therefore avoiding duplication of research) and to understand the bigger picture in particular areas of research.

What will happen if I no longer want to be involved?
Your participation is voluntary and therefore you have the right to participate, decline or withdraw from the research at any stage without giving a reason. You can withdraw at any point during the questionnaire for any reason, before submitting your answers by clicking the Exit button/closing the browser. The data will only be uploaded on completion of the questionnaire by clicking the SUBMIT button. You are still able to withdraw from the study if you have submitted your information. Each participant will be asked to provide a unique identifier code prior to starting the survey which you need to remember, in the event that you decide to withdraw the study at a later date. This will enable us to identify your data and erase in order for it to be excluded from the analysis. To withdraw your data please contact the researchers using the details at the bottom of this page by **1st February 2019**, quoting your unique identifier code and stating your wish to withdraw to ensure your data is disposed of. After this date, your data will have to be included in the analysis.

☐ **Please tick the box to give your consent to take part if you have read and accept the terms of your participation, and that you are aware that your participation is voluntary and you can withdraw at any stage of the study.**

Who should I contact if I have any questions or concerns about the study?
If you have any further questions regarding the study, please contact the researcher or supervisor via the email addresses below:

Kate Phipps
Email: msxkp5@exmail.nottingham.ac.uk

Dr Simon Duff
Email: mczsd@exmail.nottingham.ac.uk

If you remain unhappy and wish to complain formally, you should then contact the FMHS Research Ethics Committee Administrator, c/o The University of Nottingham, Faculty PVC Office, B Floor, Medical School, Queen's Medical Centre Campus, Nottingham University Hospitals, Nottingham, NG7 2UH. E-mail: FMHS-ResearchEthics@nottingham.ac.uk. Please quote ref no: FMHS 290-1803.

Appendix 11. **Debrief Form**

Participant Debrief

Thank you for your time and participation in this research. Your responses will contribute to two separate studies, the details of which are outlined below.

Title of study 1: The impact of aversive and general personality traits, attachment style and moral disengagement on image-based sexual abuse (IBSA) proclivity.

What is IBSA?
IBSA is the sharing of private, sexual materials, either photos or videos, of another person without their consent and with the purpose of causing embarrassment or distress. The images are sometimes accompanied by personal information about the subject, including their full name, address and links to their social media profiles. The law now makes it illegal to disclose a "private sexual photograph or film" without the consent of the person depicted in the content, and with the intent to cause them distress. Someone found guilty can go to prison for up to two years, plus a fine. The offence applies both online and offline and to images which are shared electronically or in a more traditional way so includes the uploading of images on the internet, sharing by text and e-mail, or showing someone a physical or electronic image.

What was the aim of this study?
This study was designed to address a major deficit in knowledge regarding IBSA proclivity, and more specifically, the characteristics that may increase an individual's likelihood to engage in such behaviours. Proclivity is described as having an inclination or predisposition towards a particular thing. This research aimed to explore the impact of aversive and general personality traits, attachment style and moral disengagement on the behavioural propensity of males to engage in IBSA. It is important to understand the role of personality and psychological factors that influence an individual's attitudes and decisions in reaction to difficulties within interpersonal relationships, due to the potential negative consequences such actions can have on others. By taking part you will have contributed toward the field of research in this area, and this may help to develop effective future interventions for those who engage in these behaviours.

How was this tested?
In this study, you were asked to complete an online survey which involved indicating how much you agreed with a variety of statements. Following this, you were presented with five vignettes each describing scenarios in which IBSA has occurred. You were then asked to answer questions about your thoughts and

feelings in relation to each scenario. All participants were asked to answer the same statements and questions throughout.

Hypotheses and main questions
We expect to find that there will be an association between IBSA proclivity, enjoyment, approval, and the following:

- Aversive personality traits (psychopathy, narcissism and Machiavellianism)
- General personality traits (Honesty-Humility and Agreeableness)
- Insecure attachment styles (particularly an anxious attachment style)
- Moral disengagement

This study is attempting to answer the following questions:

1. What is the relationship between IBSA proclivity and aversive and general personality traits, attachment style and moral disengagement?
2. Do aversive and general personality traits, attachment style and moral disengagement predict IBSA proclivity?
3. What are the best predictors of IBSA proclivity, enjoyment and approval amongst the independent variables?

Why is this important to study?
The questions of what characteristics increase someone's propensity to engage in IBSA and why these characteristics make someone more susceptible to committing these behaviours are still very much open to psychological research. The extensive consequences of IBSA on victims necessitates research into who is most likely to carry out such acts, in order to try and develop effective interventions with the intention of reducing IBSA recidivism.

Title of study 2: An exploration of the association between the behavioural propensity to engage in intimate partner violence, stalking and IBSA.

What was the aim of the study?
The aim of this study is to assess the association between the likelihood of individuals to engage in intimate partner violence (IPV), stalking and IBSA behaviours. There appears to be no study that has explored the relationship between these behaviours and the conceptual link between them. Research has largely overlooked technological advancements in social communication and the impact of these mediums on the relationship between IPV and stalking behaviours.

How was this tested?
In this study, you were asked to complete an online survey which involved indicating how much you agreed with a variety of statements. All participants were asked to answer the same statements and questions throughout.

Hypotheses and main questions
We expect to find that there will be an association between IPV, stalking and IBSA. This study is attempting to answer the following questions:

1. Are people more likely to engage in IPV, stalking or IBSA?
2. What is the relationship between IPV, stalking and IBSA?
3. Is there a significant difference between the type of abuse (IPV, stalking and IBSA) and the likelihood of someone engaging in that behaviour?

Why is this important to study?
This study will help to lay the groundwork for future research on the perpetration of abuse towards women, by focusing upon the emerging trend of the use of electronic communication in perpetrating abuse towards women. Looking at the proclivity to commit these behaviours would offer the opportunity to test theoretical explanations in future studies, with a focus on the types of individuals who perpetrate these types of abuse. This study will allow us to start exploring whether we are looking at a range of behaviours that may be separate but also combined as a set of abuse tactics towards women.

Further information
All the information you have provided in the interview will be confidential, and there will be no way of identifying your responses. If you wish to withdraw your data from this study, then please contact the researchers using the details below by **1st February 2019**, quoting your unique identifier code and stating your wish to withdraw. After this date, your data will be included in the analysis.

You may have found some of the questions or the general topic of the survey being of a sensitive nature. If you feel you need to speak to someone, you can seek support from IBSA Helpline on 0345 6000 459, or contact your GP.

If you have any further questions or concerns about your rights as a participant in this study, please do not hesitate to contact the researcher or supervisor using the contact details listed below:

Kate Phipps
Email: msxkp5@exmail.nottingham.ac.uk

Dr Simon Duff
Email: mczsd@exmail.nottingham.ac.uk

Thank you again for your participation.

Appendix 12. Ethical Approval Form

University of Nottingham
UK | CHINA | MALAYSIA

Email: FMHS-ResearchEthics@nottingham.ac.uk

Faculty of Medicine & Health Sciences
Research Ethics Committee
c/o Faculty PVC Office
School of Medicine Education Centre
B Floor, Medical School
Queen's Medical Centre Campus
Nottingham University Hospitals
Nottingham, NG7 2UH

14 June 2018

Kate Phipps
DForenPsy Student
c/o Dr Simon Duff
Director of Stage II Forensic Training
Centre for Forensic & Family Psychology
Division of Pyschiatry and Applied Psychology
School of Medicine
BO5 YANG Fujia Building
Jubilee Campus
Nottingham, NG8 1BB

Dear Ms Phipps

Ethics Reference No: FMHS 290-1803 – **please always quote**	
New Combined Study Title: An exploration of the association between the behavioural propensity to engage in intimate partner violence, stalking and revenge porn. (Abuse in intimate relationships study). **Original Study Title:** The impact of aversive and general personality traits, attachment style and moral disengagement on revenge porn proclivity (Revenge porn proclivity study).	
Chief Investigator/Supervisor: Dr Simon Duff, Director State II Forensic Training, Centre for Forensic and Family Psychology, Division of Psychiatry and Applied Psychology, School of Medicine.	
Lead Investigators/student: Kate Phipps, DForenPsy Student, School of Medicine	
Type of Study: PhD, pilot study, questionnaire-based	
Proposed Start Date: 01/07/2018	**Proposed End Date:** 01/07/2019 12mths
No of Subjects: 29	**Age:** 18+years

Thank you for responding the issues raised by the Committee and notifying the Committee of amendment no 1: 08/06/2018 in summary as follows:

- Two studies are being combined and run as a single study. All measures from both studies will be completed by the same participants at the same time and the results divided into two separate studies using different methods of analyses.

The following documents were received:

- FMHS REC Application form and supporting documents for Revenge,porn proclivity study version 1.0: 27.03.2018.
- Notice of Amendment Form and supporting documents for new combined study Abuse in intimate relationships study, version 1.0 07/06/2018.

These have been reviewed and are satisfactory and the study and amendment no 1: 08/06/2018 has been given a favourable opinion.

A favourable opinion has been given on the understanding that:

1. The protocol agreed is followed and the Committee is informed of any changes using a notice of amendment form (please request a form).

Appendix 13. The Short Dark Triad (SD3: Jones & Paulhus, 2014)

Machiavellianism subscale

1. It's not wise to tell your secrets.
2. I like to use clever manipulation to get my way.
3. Whatever it takes, you must get the important people on your side.
4. Avoid direct conflict with others because they may be useful in the future.
5. It's wise to keep track of information that you can use against people later.
6. You should wait for the right time to get back at people.
7. There are things you should hide from other people because they don't need to know.
8. Make sure your plans benefit you, not others.
9. Most people can be manipulated.

Narcissism subscale

1. People see me as a natural leader.
2. I hate being the centre of attention. (R)
3. Many group activities tend to be dull without me.
4. I know that I am special because everyone keeps telling me so.
5. I like to get acquainted with important people.
6. I feel embarrassed if someone compliments me. (R)
7. I have been compared to famous people.
8. I am an average person. (R)
9. I insist on getting the respect I deserve.

Psychopathy

1. I like to get revenge on authorities.
2. I avoid dangerous situations. (R)
3. Payback needs to be quick and nasty.
4. People often say I'm out of control.
5. It's true that I can be mean to others.
6. People who mess with me always regret it.
7. I have never gotten into trouble with the law. (R)
8. I enjoy having sex with people I hardly know
9. I'll say anything to get what I want.

Appendix 14. HEXACO-60 (Ashton & Lee, 2009)

1. I would be quite bored by a visit to an art gallery.
2. I plan ahead and organize things, to avoid scrambling at the last minute.
3. I rarely hold a grudge, even against people who have badly wronged me.
4. I feel reasonably satisfied with myself overall.
5. I would feel afraid if I had to travel in bad weather conditions.
6. I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.
7. I'm interested in learning about the history and politics of other countries.
8. I often push myself very hard when trying to achieve a goal.
9. People sometimes tell me that I am too critical of others.
10. I rarely express my opinions in group meetings.
11. I sometimes can't help worrying about little things.
12. If I knew that I could never get caught, I would be willing to steal a million dollars.
13. I would enjoy creating a work of art, such as a novel, a song, or a painting.
14. When working on something, I don't pay much attention to small details.
15. People sometimes tell me that I'm too stubborn.
16. I prefer jobs that involve active social interaction to those that involve working alone.
17. When I suffer from a painful experience, I need someone to make me feel comfortable.
18. Having a lot of money is not especially important to me.
19. I think that paying attention to radical ideas is a waste of time.
20. I make decisions based on the feeling of the moment rather than on careful thought.
21. People think of me as someone who has a quick temper.
22. On most days, I feel cheerful and optimistic.
23. I feel like crying when I see other people crying.
24. I think that I am entitled to more respect than the average person is.
25. If I had the opportunity, I would like to attend a classical music concert.
26. When working, I sometimes have difficulties due to being disorganized.

27. My attitude toward people who have treated me badly is "forgive and forget."
28. I feel that I am an unpopular person.
29. When it comes to physical danger, I am very fearful.
30. If I want something from someone, I will laugh at that person's worst jokes.
31. I've never really enjoyed looking through an encyclopedia.
32. I do only the minimum amount of work needed to get by.
33. I tend to be lenient in judging other people.
34. In social situations, I'm usually the one who makes the first move.
35. I worry a lot less than most people do.
36. I would never accept a bribe, even if it were very large.
37. People have often told me that I have a good imagination.
38. I always try to be accurate in my work, even at the expense of time.
39. I am usually quite flexible in my opinions when people disagree with me.
40. The first thing that I always do in a new place is to make friends.
41. I can handle difficult situations without needing emotional support from anyone else.
42. I would get a lot of pleasure from owning expensive luxury goods.
43. I like people who have unconventional views.
44. I make a lot of mistakes because I don't think before I act.
45. Most people tend to get angry more quickly than I do.
46. Most people are more upbeat and dynamic than I generally am.
47. I feel strong emotions when someone close to me is going away for a long time.
48. I want people to know that I am an important person of high status.
49. I don't think of myself as the artistic or creative type.
50. People often call me a perfectionist.
51. Even when people make a lot of mistakes, I rarely say anything negative.
52. I sometimes feel that I am a worthless person.
53. Even in an emergency I wouldn't feel like panicking.
54. I wouldn't pretend to like someone just to get that person to do favours for me.
55. I find it boring to discuss philosophy.
56. I prefer to do whatever comes to mind, rather than stick to a plan.
57. When people tell me that I'm wrong, my first reaction is to argue with them.

58. When I’m in a group of people, I’m often the one who speaks on behalf of the group.
59. I remain unemotional even in situations where most people get very sentimental.
60. I’d be tempted to use counterfeit money, if I were sure I could get away with it.

Appendix 15. **Experiences in Close Relationships - Revised (ECR-R; Fraley, Waller & Brennan, 2000)**

1. I prefer not to show a partner how I feel deep down.
2. I worry about being abandoned.
3. I am very comfortable being close to romantic partners.
4. I worry a lot about my relationships.
5. Just when my partner starts to get close to me I find myself pulling away.
6. I worry that romantic partners won't care about me as much as I care about them.
7. I get uncomfortable when a romantic partner wants to be very close.
8. I worry a fair amount about losing my partner.
9. I don't feel comfortable opening up to romantic partners.
10. I often wish that my partner's feelings for me were as strong as my feelings for him/her.
11. I want to get close to my partner, but I keep pulling back.
12. I often want to merge completely with romantic partners, and this sometimes scares them away.
13. I am nervous when partners get too close to me.
14. I worry about being alone.
15. I feel comfortable sharing my private thoughts and feelings with my partner.
16. My desire to be very close sometimes scares people away.
17. I try to avoid getting too close to my partner.
18. I need a lot of reassurance that I am loved by my partner.
19. I find it relatively easy to get close to my partner.
20. Sometimes I feel that I force my partners to show more feeling, more commitment.
21. I find it difficult to allow myself to depend on romantic partners.
22. I do not often worry about being abandoned.
23. I prefer not to be too close to romantic partners.
24. If I can't get my partner to show interest in me, I get upset or angry.
25. I tell my partner just about everything.
26. I find that my partner(s) don't want to get as close as I would like.

27. I usually discuss my problems and concerns with my partner.
28. When I'm not involved in a relationship, I feel somewhat anxious and insecure.
29. I feel comfortable depending on romantic partners.
30. I get frustrated when my partner is not around as much as I would like.
31. I don't mind asking romantic partners for comfort, advice, or help.
32. I get frustrated if romantic partners are not available when I need them.
33. It helps to turn to my romantic partner in times of need.
34. When romantic partners disapprove of me, I feel really bad about myself.
35. I turn to my partner for many things, including comfort and reassurance.
36. I resent it when my partner spends time away from me.

Appendix 16. Moral Disengagement Scale (Detert, Treviño & Sweitzer, 2008)

1. It is alright to fight to protect your friends.
2. It's ok to steal to take care of your family's needs.
3. It's ok to attack someone who threatens your family's honor.
4. Sharing test questions is just a way of helping your friends.
5. Talking about people behind their backs is just part of the game.
6. Looking at a friend's homework without permission is just "borrowing it."
7. Damaging some property is no big deal when you consider that others are beating up people.
8. Stealing some money is not too serious compared to those who steal a lot of money.
9. Compared to other illegal things people do, taking some things from a store without paying for them is not very serious.
10. If people are living under bad conditions, they cannot be blamed for behaving aggressively.
11. If someone is pressured into doing something, they shouldn't be blamed for it.
12. People cannot be blamed for misbehaving if their friends pressured them to do it.
13. A member of a group or team should not be blamed for the trouble the team caused.
14. If a group decides together to do something harmful, it is unfair to blame any one member of the group for it.
15. You can't blame a person who plays only a small part in the harm caused by a group.
16. People don't mind being teased because it shows interest in them.
17. Teasing someone does not really hurt them.
18. Insults don't really hurt anyone.
19. If someone leaves something lying around, it's their own fault if it gets stolen.
20. People who are mistreated have usually done things to deserve it.
21. People are not at fault for misbehaving at work if their managers mistreat them.

22. Some people deserve to be treated like animals.
23. It is ok to treat badly someone who behaved like a “worm.”
24. Someone who is obnoxious does not deserve to be treated like a human being.

Appendix 17. **The PAS (Dutton, 1995)**

Item number	Item	Subscale
1	I can make myself angry about something in the past just by thinking about it	AL
2	I get so angry, I feel that I might lose control	AL
3	If I let people see the way I feel, I'd be considered a hard person to get along with	AL
4	I see myself in totally different ways at different times	AL
5	I feel empty inside	AL
6	I tend to feel things in a somewhat extreme way, experiencing either great joy or intense despair	AL
7	It is hard for me to be sure about what others think of me, even people who have known me very well	AL
8	I feel people don't give me the respect I deserve unless I put pressure on them	AL
9	Somehow, I never know quite how to conduct myself with people	AL
10	I find it difficult to depend on other people	AL
11	I worry that I will be hurt if I allow myself to become too close to others	AL
12	I am somewhat uncomfortable being close to others	AL
13	My parent punished me even for small offences	RNPT
14	As a child I was physically punished or scolded in the presence of others	RNPT
15	My parent gave me more corporal punishment than I deserved	RNPT
16	I felt my parent thought it was my fault when he/she was unhappy	RNPT
17	I think my parent was mean and grudging toward me	RNPT
18	I was punished by my parent without having done anything	RNPT
19	My parent criticised me and told me how lazy and useless I was in front of others	RNPT

20	My parent would punish me hard, even for trifles	RNPT
21	My parent treated me in such a way that I felt ashamed	RNPT
22	I was beaten by my parent	RNPT
23	Insomnia	TS
24	Restless sleep	TS
25	Nightmares	TS
26	Anxiety attacks	TS
27	Fear of women	TS
28	Feeling tense all the time	TS
29	Having trouble breathing	TS