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Domestic violence offending behaviors: A review of the literature examining childhood exposure, implicit theories, anger rumination and trait aggression as predictive factors.

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Abstract

The prevalence of domestic violence (DV) is an increasing public health concern globally. This paper outlines the current literature on what is known about DV proclivity, with particular attention to predictors for DV perpetration from childhood. We begin by reviewing key methodological issues that are inherent within DV literature and hinder the development of interventions and treatments for DV offenders. The main body of this article provides an overview of four main predictive components for DV perpetration: (1) developmental risk factors for DV offending (e.g. childhood exposure to DV); (2) specific implicit theories related to sexual, violent and DV offenders; (3) the role of anger rumination as a psychological process of DV offending; and (4) an exploration of the role of trait aggression in increasing DV Proclivity. Finally, it was concluded that there is a need for the development of a psychometric measure to encompass these four key predictors of DV Proclivity and future offending.

Keywords: Domestic violence proclivity; Trait aggression; Anger rumination; Implicit theories

Introduction

Domestic violence (DV) is an increasing, and complex global public health concern. Research on its prevalence and associated costs to the victims has thrived. Reports by the World Health Organization found the lifetime prevalence of physical and sexual DV to be between 15 and 71% for women across 10 different countries (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006). Similarly, other studies have reported a prevalence of DV homicide to reach 13.5% across 66 countries (Stockl et al., 2013). The majority of instances of DV are cases of revictimization (Kershaw, Nicholas & Walker, 2008); in the UK alone in 2012, 63% of reported cases of DV involved repeat victims (Flatley, Kershaw, Smith, Chaplin, & Moon, 2010). Common consequences of DV for the victims include Post Traumatic Stress Disorder (PTSD), depression, anxiety and physical injuries (e.g. Coker, Smith, Bethea, King, & McKeown, 2000; Taft, Vogt, Mechanic, & Resick, 2007). These consequences significantly impact the overall psychological well-being of an individual and can be difficult to identify and address without seeking professional help. Although research on DV has historically focused on victims, researchers and practitioners have more recently shifted attention to its perpetrators. Thus, research has begun to explore the consequences of DV for the perpetrators (Walker et al., 2010), the role that implicit theories of DV might play on predicting violence among male and female offenders (Weldon & Gilchrist, 2012), and how clinicians and practitioners could support perpetrators, alongside victims of DV (Larkins et al., 2015).

The increased focus towards DV perpetrators has been predominantly due to high recidivism rates, which strongly suggests that this type of violence is a serious issue that requires large resources to address. For example, the risk of repeat assault from DV perpetrators who had received no treatment reached a staggering 68% (Dobash, Dobash, Cavanagh & Lewis, 1999); and for individuals who had been engaged in an intervention,

recidivism estimates had been approximately 30% (e.g. Babcock, Green & Robie, 2004). This suggests that current DV assessments and rehabilitation programs need more research attention in order to reduce reoffending. As a result, researchers need to engage in more comprehensive and in-depth consideration and examination of the factors related to DV. One way that the current paper addresses this is to identify prevalent DV predictors from previous DV research, and introduce new predictors suggested to contribute to the onset of DV perpetration and proclivity, that could develop as a result of being exposed to DV during childhood. This approach aims to build on current research and reflect the growing diversity among offender types (i.e. female perpetrators), with the aim of informing practice, treatment programs, and future research. Currently, many treatment programs rely on tools and measures that are based on literature over three decades old (Hilton, Harris, Rice, Houghton & Eke, 2008); relying on such outdated measures could contribute to the high recidivism rates.

Thus, the current paper has three primary goals: 1) to outline the literature on developmental risk factors of DV perpetration; 2) introduce and discuss factors that have, hitherto, received relatively little attention in the literature, namely, implicit theories of DV, trait aggression, and angry rumination; and 3) propose and discuss how these factors may be inter-related to influence DV perpetration. More specifically, we propose that angry rumination is an important factor linking developmental risk factors (e.g., early exposure to violence) to other psychological factors involved in domestic violence.

Before discussing the previously-listed factors, however, we discuss the difficulties and issues with developing a proper and complete definition of domestic violence. Such a discussion is important because the lack of a consensus on what defines DV can, and has, impeded progress towards a more complete understanding and treatment of this offending behavior. In addition, it is important to note that this review was based on a thematic

approach to encompass these four inter-related domains and used the following search terms ,various combinations of them and related concepts: ‘domestic violence’; ‘intimate partner violence’; ‘childhood exposure’; ‘abuse/abuser’; ‘implicit theories’; ‘cognitive distortions’; ‘anger/angry rumination’; ‘generalized trait aggression’; ‘predictors’; ‘risk factors’; ‘developmental’; ‘offender/offending’; ‘perpetrator’ and ‘recidivism’.

1. Defining domestic violence

There has been a lack of consensus among researchers and practitioners regarding a universal definition for DV. This has been an ongoing problem that hinders the development of valid etiological theories and effective interventions (Bowen, 2011), and could be due to the variability in interpersonal behavior, individual and situational factors related to DV. For instance, the term ‘domestic violence’ has been used to encapsulate all forms of violence and abuse that occur within a familial household (see Langlands, Ward, & Gilchrist, 2009; Klopper, Schweinle, Ractliffe, & Elhai, 2014; Ogonnaya & Pohle, 2013), but, specific behaviors that constitute DV are not made explicit (e.g. physical violence). This introduces some ambiguity in how DV is interpreted and understood, and reduces the consistency and reliability across DV studies. In turn, this inconsistency has led to less reliable findings on public perceptions, attitudes and behavior of DV (Hegarty et al., 1999). For example, previous studies have found some individuals to report emotionally abusive behavior, such as giving their spouse the silent treatment or telling them to stay at home as “sometimes” spouse abuse (Johnson & Sigler, 1995).

Some researchers have tried to overcome this confusion by using different terms that represent the individuals involved in DV. For example, for physical and/or sexual violence and psychological abuse between past or current intimate partners the term ‘intimate partner violence’ is commonly used (e.g. Carpenter & Stacks, 2009; Ernst et al., 2009; Hester, 2012; Roehl & Guertin, 2014; Whitfield, Anda, Dube, & Felitti, 2003). Other researchers have

stated that 'DV' should be used as an umbrella term to refer to what occurs when one partner is abused by another in an intimate context; this includes both male and female victims and same sex partner violence (Holt, Buckley, & Whelan, 2008). Notably, however, this approach does not mention the occurrence of DV towards children within the home, and thus, limits the impact of research that aims to address DV on a broader, all-inclusive level.

Generally, previous definitions are found to not adequately represent DV. More precisely, (1) they are too specific in their depiction of DV behavior and do not include information about persons involved or the context (e.g. Wilt & Olson, 1996), and/or (2) they present a broad representation of DV that provides no conceptual information about DV predictors or behavior (e.g. Dutton et al., 2006). Therefore, DV perpetration research lacks consensus due to differing definitions used and this, in turn, can pose methodological issues that produce poor empirical data.

In addition, differences in the definition of DV employed across studies and the specific type of behavior and perpetrator that they reflect means that significant numbers of participants and researchers may misinterpret what is meant by abuse, violence, or offender. As a substantial amount of information learnt about DV perpetration is achieved through the use of self-report measures and assessments, it is assumed that, if these tools are varied in their conceptual depiction of DV, then the information gained, although valuable, is limited. There is little certainty that across numerous samples, the participants have interpreted DV in the same way, or indeed, that researchers and clinicians have used the same definitions/terminology or have conceptualized DV in the same way, as a universal definition does not exist. This may be one explanation for the gaps in our knowledge of DV perpetration, which is used to inform DV perpetration treatment programs. As a result, this could have an impact on high DV recidivism rates.

In light of these issues, in order to increase the conceptual clarity of DV, this paper will use the term domestic violence (DV) for which the definition will encapsulate all documented forms of DV (i.e. emotional/ psychological, physical violence, sexual assault/abuse, controlling/threatening behavior, and coercion), that occurs predominantly between intimate partners (e.g. boyfriend and girlfriend, married, long-term relationships), and towards children both within and outside the household by a parent/primary caregiver (biological or non-biological).

2. Predictors of DV perpetration

Researchers have identified key risk factors for DV perpetration, which include: family/developmental factors (e.g. attachment styles, poor family relationships, witnessing parental violence, developmental psychopathology); individual/behavioral factors (e.g. generalized trait aggression, positive attitudes towards violence, substance abuse); contextual factors (e.g. poor relationships/networks with peers, low socio-economic status); and cognitive factors (e.g. distorted cognitions about relationships, hostile attitudes and beliefs) (e.g. Capaldi et al., 2012; Costa et al., 2015; Eckhardt & Cane, 2014; Ernst et al., 2007; Howard et al., 2010; Mbilinyi et al., 2012; Murrell, Christoff, & Henning, 2007; Roehl & Guertin, 2014; Stuart et al., 2013; Trevillion, Oram, Feder, & Howard, 2012; Whitfield et al., 2003). Among these factors, the exposure to DV during childhood has been one of the most prevalent predictors for DV perpetration (e.g. Capaldi et al., 2012; Carpenter & Stacks, 2009; Mbilinyi et al., 2012; Milaniak & Widom, 2015; Whitfield et al., 2003).

Researchers examining the consequences of DV exposure during childhood have found that these experiences have adverse psychosocial, cognitive (e.g. memory, learning) and behavioral outcomes (Stemberg et al., 1993). In particular, mental health problems (e.g. depression and anxiety), poor emotional regulation, a tendency towards aggression and

violence, and having positive attitudes towards violence are important outcomes (Card, Stucky, Sawalani, & Little, 2008; Malinosky-Rummell & Hansen, 1993; Tony Ward, 2000). Researchers have suggested that these consequences may originate from forming poor attachments to parents/primary caregivers (e.g. Dutton & White, 2012), and acquiring negative behavior and attitudes through social learning processes that have been reinforced by like-minded peers (e.g. Dodge, Pettit, Bates, & Valente, 1995). The current research presents additional explanations for why and how some individuals acquired these attitudes, thinking processes and justification for their actions.

In addition, other studies have found that early abusive experiences affect children differently, especially across gender and age (e.g. Costa et al., 2015). It was noted that children as young as 1 year (Department of Health, 2013) are vulnerable to lasting effects on their development from experiencing domestic abuse. According to relatively recent statistics, 34- 54% of male victims of childhood abuse are likely to become DV perpetrators themselves (Margolin & Gordis, 2004). This suggests that for some individuals, exposure to DV during childhood places them in a developmental path that enhances their proclivity towards engaging in DV in later life.

Further, victims of childhood abuse are more likely to subsequently become re-victimized (Whitfield, Anda, Dube, & Felitti, 2003) or develop a history of engaging in DV offending behaviors in adulthood (Murrell et al., 2007). These findings highlight the importance of identifying predictors of DV perpetration and proclivity that may develop during childhood in order to understand the processes that bring about perpetration and recidivism. However, it is worth noting that the nature of the exposure to DV (i.e., whether individuals experienced or witnessed the abuse) can lead to different life trajectories that impact violent tendencies. However, this paper focuses primarily on the factors influencing DV perpetration.

The key predictors of DV perpetration found to develop specifically during childhood (among individuals exposed to DV) and negatively influence important developmental processes will be reviewed. These are: 1) developmental and social processes (e.g. social information processing); 2) physical and psychological processes, such as emotional regulation, which is the ability to cope with extreme emotions such as anger and jealousy (Cook et al, 2005; Cole, Martin, & Dennis, 2004); 3) interpersonal skills (Davies & Cummings, 1994); and cognitive processes, such as executive functioning, spatial working memory (Gould, Clarke, Heim, Harvey, Majer & Nemeroff, 2012) and other cognitive deficits, visual impairments and language difficulties (Carpenter & Stacks, 2009; Huth-Bocks & Hughes, 2007). In the next section, we discuss some of the more important outcomes of childhood exposure to DV.

2.1. Developmental and social processes

2.1.1. Ineffective social processing

A developmental outcome linked to individuals who have been exposed to DV during childhood is ineffective social processing; i.e. impaired social cognition and problem solving (Azar et al., 2016). Poor social processing has been observed to negatively affect levels of social competency, academic performance and social interactions in victims of childhood abuse (Wolfe, Crooks, Lee, McIntyre-smith, & Jaffe, 2003). In the absence of care and adequate nurturing from a primary caregiver, as is common in DV households, a child does not have the opportunity to learn how to suitably engage in social interactions, in which emotional regulation plays a key role. Investigations into the effects of childhood DV have found that through poor social processing, individuals experience more internalizing behavioral problems (e.g. anxiety), and are more at risk of being re-victimized in adulthood (Carpenter & Stacks, 2009; Moylan et al., 2010). The extent to which revictimization occurs is also partly dependent on other factors, such as gender, family and individual characteristics.

According to McFall's (1982) social informational processing model, in order for an individual to become socially competent within their environment they must learn how to skillfully navigate each of three stages of processing social information (i.e., decoding, decision-making and enactment). Researchers have found that exposure to childhood abuse impairs the ability to carefully process their environment, as individuals become hyper vigilant to possible threats. As a result, they are often prone to acting aggressively (Dodge, Pettit, Bates, & Valente, 1995).

Other researchers have examined two main types of social information processing, hostile attribution biases and negative emotional responses that influence aggression in adulthood (Chen, Coccaro, Lee & Jacobson, 2012). They found that individuals who had experienced more severe childhood maltreatment and emotional abuse/neglect were aggressive in adulthood when they reported having more negative emotional responses, in comparison to those who experienced little/no abuse. Instead, individuals who experienced less childhood maltreatment and reported being aggressive in adulthood were found to show more hostile attribution biases.

2.2. Psychological processes

2.2.1. Self-regulation and emotional self-regulation

The examination of how the trauma and stress caused from exposure to DV is vital in understanding the impact it has on an individual's development and adjustment in adulthood. Another crucial developmental factor linked to DV offending is the inability to emotionally regulate (Beech, Ward, & Fisher, 2006; Carpenter & Stacks, 2009). This factor is important because it plays an essential role in facilitating problem solving, attentional focus, and developing and maintaining social relationships (Cole et al., 2004). For instance, it has been shown that some individuals are abusive towards their partners as a way of expressing

negative emotions (e.g., anger), which they have not learnt how to appropriately regulate (for a review, see Langhinrichsen-Rohling, McCullars, & Misra, 2012).

One explanation of the relationship between exposure to DV and future DV perpetration is that these abusive experiences augment the amount of trauma and stress infants undergo (Koenen, Moffitt, Caspi, Taylor, & Purcell, 2003; Pepler et al., 2000), which is sometimes exacerbated by the fact that they may not have been taught how to self-regulate by their primary caregivers due to neglect (McIntosh, 2002). For some DV victims (usually the mother) who have developed a mental health condition (e.g., depression), the level of proper attention and care they are able to provide to the infant is significantly reduced. In other words, mental health conditions can leave primary caregivers emotionally unequipped to provide the necessary support that infants need in order to learn how to self-regulate. As a result, infants are likely to grow up with poor emotional regulation and other behavioral and developmental impairments that reduce normal functioning later in life. In particular, impairments in an individual's ability to regulate their own emotions influence how a person interacts with others (e.g. Carpenter & Stacks, 2009), particularly during negative or ambiguous situations.

Past researchers have shown that from a young age, poor emotional-regulation has a negative impact on how an individual interprets social interactions among their peers (Moynan et al., 2010), which can influence their future behavior. For instance, due to limited emotional regulation, some individuals may be more prone to engaging in externalizing and/or internalizing behaviors that have been associated with DV perpetration. For example, links have been found between individuals who have poor emotional regulation and attention deficits due to childhood DV (i.e. either witnessed/experienced abuse), and a higher likelihood of developing aggressive tendencies in later life (Carpenter & Stacks, 2009). The next section will discuss the internalizing and externalizing behaviors in more depth.

2.2.2. Externalizing and internalizing processes

Victims of abuse during childhood are more likely to display higher levels of externalizing and internalizing behavior than those who have not (Holt et al., 2008). It has been suggested that those who experience child abuse, display externalizing behaviors (e.g. delinquency and violence perpetration) and internalizing behaviors (e.g. withdrawal) as a way of processing/coping with the abuse (Stemberg et al., 1993; Wolfe et al., 2003). Some researchers have attributed the externalization/internalization of maladaptive processes and attitudes to whether an individual would be more likely to become a DV perpetrator or become revictimized in adulthood, if exposed to DV during childhood (Baldry, 2003; Holt et al., 2008). Therefore, it can be assumed that how individuals interpret their abusive experiences could be an indication of whether they are more likely to internalize or externalize these experiences. For instance, some researchers have noted girls to engage in more internalizing behavior to reflect on the abusive experiences and process feelings of self-blame. Whereas, boys tend to display more externalizing behavior as a way of processing feelings of being threatened, as a result of the abuse (Holt et al., 2008). This may explain the higher prevalence of male instances of DV and intimate partner aggression among individuals with a history of childhood abuse, compared to females (Office of National Statistics, 2015).

Subsequently, given that membership of and identification with social groups is an essential aspect of the transition from childhood to adulthood, it is important to consider how these externalizing and internalizing behaviors impact an individual's primary social interactions (e.g., peer group relations). For instance, Holt and colleagues (2008) found that in addition to poor emotional regulation during social interactions, individuals who have been abused during childhood have a higher tendency to engage in internalizing behavior, which makes some more vulnerable to bullying from their peer groups. While this research suggests there are links to childhood victims of DV being more vulnerable to revictimization from

their peers, it also explains why some childhood victims are more likely to be victims of DV later in life.

Other researchers have looked at children who are victims of DV and display more maladaptive externalizing behavior and have found that they tend to engage in peer bullying (Corvo & deLara, 2010), which is a predictor of DV perpetration (Baldry, 2003). Among these individuals, those who are also part of a deviant peer group are more likely to engage in DV perpetration (e.g. injuring their partner) in adulthood (Ehrensaft et al., 2003). Researchers have attributed this association between childhood victimization, externalizing behavior and adult DV perpetration to how an individual reacts to the aggressive cues from their peer group. Specifically, individuals who get angry and engage with aggressive cues, tend to become bullies following positive feedback from others; alternatively, those who dismiss and do not react to cues are at risk of being bullied themselves (Bowes et al., 2009; Cunningham & Baker, 2004).

As childhood is a crucial period of an individual's development, the feedback individuals receive from their peers and a variety of social interactions play a vital role in how they choose to act in similar situations in future. In particular, during instances where an individual has acted aggressively towards another person, and the behavior is interpreted as favorable by their peers, one can expect the aggressive act to be positively reinforced. As a result, aggression may be perceived as normal behavior, which increases the risk, that aggression or violence will be a more habitual, common response to future negative interactions. Another form of reinforcement is through the formation of aggressive scripts, which occurs following instances when individuals act aggressively out of anger or as an expression of negative emotions and interpret this behavior as context-appropriate (Birkley & Eckhardt, 2015).

Other researchers have pointed out that children can be exposed to more than one form of DV at a time (Boudouris, Straus, Gelles, & Steinmetz, 1982), which is likely to exacerbate the negative outcomes of victimization. Despite this possibility, some researchers tend not to consider how experiencing multiple types of abuse affects individuals. It has been suggested that children who do experience more than one form of abuse, whether they are directly victimized or witness another family member being abused, are the most at risk of engaging in internalizing and externalizing behavior (Stenberg et al, 1993). It is individuals who match these criteria that are at higher risk of facing a variety of severe social, behavioral and cognitive problems in the future. Seemingly, the type of attachment formed between a child and their mother/primary caregiver, has been also shown to influence whether they are more likely to process past events through internalization or externalization.

2.2.3. Disorganized attachment style

Given that attachment styles are not the main focus of this review, we only discuss the form of attachment that has been specifically linked to DV. Attachment is an important developmental process that influences the way individuals interact socially, learn how to self-regulate and adapt to different environments, from childhood to adulthood. Attachment type is also one of the main influences of an individual's life trajectory following DV experiences (Levendosky, Huth-Bocks, Shapiro & Semel, 2003). The type of attachment previously associated with DV (either witnessing or experiencing abuse) is termed, 'disorganized' attachment, also referred to as 'disorientated' or 'Type D' attachment. Infants who have formed this attachment style tend to show fear-related behavior towards their caregiver; they tend to freeze or stay still around their caregiver, are likely to seek out attachment from others in the presence of their caregiver, and show contradictory behavior, such as seeking comfort, followed by avoiding their caregiver (Breidenstine, Bailey, Zeanah, & Larrieu, 2011). This form of attachment has been shown to develop between an infant and their primary caregiver

as a result of a chaotic environment, usually involving fear, unresolved trauma or rejection (Alexander, 1992). Other research has noted that a disorganized attachment style is associated with an infant being more at risk of developing PTSD and other anxiety disorders in later childhood, as well as future psychopathy (Breidenstine et al., 2011). These findings are supported by associations between DV and mental health conditions (e.g. Coker et al., 2002).

Research into predictive factors of DV in adulthood suggest that children who were classified as having had a ‘disorganized’ attachment style are most likely to be affected by long lasting outcomes of childhood DV when compared to those who had formed secure attachments. It is among this group of individuals, for example, that the most common types of externalizing behavior displayed towards their peers at school, included forms of aggression and violence (Dozier, Stovall, Albus, & Bates, 2001; Weldon & Gilchrist, 2012). The type of feedback these individuals received from their peers would predict the extent to which aggressive and violent behavior is reinforced or discouraged. Similarly, this feedback could contribute to the formation of aggressive scripts or schemata related to undesirable behavior (i.e. DV). A more in-depth discussion of aggression in relation to DV perpetration will be presented later in this review.

Another important factor in DV perpetration involves the role of implicit theories, which have relatively recently received research attention in this area. In the next section, we discuss how exposure to early abuse may influence the development of implicit theories, which in turn, can trigger, facilitate, and maintain future DV.

2.2.4. Implicit theories (ITs)

2.2.4.1. Definitions of implicit theories in relation to offending behavior

The most widely used definition of implicit theories (ITs) incorporates the mental schemas or cognitive scripts that individuals construct about the world, which they use to predict, rationalize and explain interpersonal interactions (Ward & Keenan, 1999). From the cognitive developmental research, offender-related ITs have generally been defined as cognitive distortions, interlocking ideas and concepts individuals use to navigate their social environment (Pornari, Dixon, & Humphreys, 2013; Ward & Keenan, 1999; Ward, 2000). The process by which ITs develop has been previously suggested to parallel how children acquire the 'theory of mind' (Gopnik & Wellman, 1992).

Others have referred to ITs as maladaptive beliefs and attitudes (Dempsey & Day, 2011), and in the context of offenders, as offense-supportive cognitions (Ó Ciardha & Gannon, 2012). Offenders who hold specific ITs, which have been suggested to relate to their offending behavior, use these distorted schemas to rationalize their offending behavior. ITs may also be directly involved in producing negative behavior.

The authors propose that the formation of ITs could explain the distorted beliefs that some individuals have towards their partners. Previously, researchers have suggested that ITs could be used to explain offending behavior (Polaschek & Ward, 2002), as offenders have previously, through their life course, formed these schemata/cognitive associations to explain and make sense of their own and others actions (Ward & Keenan, 1999). It has also been posited that individuals may use ITs to save on cognitive resources, which would mean that in instances that may be anxiety inducing or demand more cognitive/information processes, an individual would be more likely to use an IT to interpret specific behavior or solve problems (Ó Ciardha & Gannon, 2012). It can be theorised therefore, that individuals could form these distorted thoughts during childhood, as a result of experiencing DV and constructing explanations for the abuse they are directly experiencing or are witnessing. Thus, in the following section, we review the main ITs thought to be involved in violent and

sexual offences, in addition to DV-related ITs, as these two offending populations share similarities with DV perpetrators.

2.2.4.2. Implicit theories of DV perpetrators

A considerable majority of research investigating ITs held by offenders has focused on individuals who have committed sexual and violent crimes (e.g., child molesters). Only over the last decade has researchers' focus shifted to other offender groups, such as firesetters (see Gannon & Barrowcliffe, 2012) and DV perpetrators (see Gilchrist, 2009). Past research with DV offenders has primarily involved male offenders who have served a sentence, and to date, these findings are mainly reliant on self-reports. This section reviews previous research into how specific ITs have been associated with DV offending behavior. There have been a number of suggestions to facilitate the notion that ITs develop during childhood. For instance, it is possible that children form theories during childhood to explain and consequently predict the abuse they are exposed to or witness by a parent or caregiver.

Ward (2000) initially proposed that ITs could develop from childhood by suggesting that it is during the crucial developmental stages that children begin to form cognitive scripts to explain and predict behavior between the self and others. It is through this that they are able to understand the world around them, and thus, successfully conform to behavioral norms. Expanding on this explanation, researchers who have applied Ward's principle to adult offenders have found that many tend to view their victims in a self-serving and distorted manner (Ward & Keenan, 1999). They are more likely to use set ITs to rationalize their offending behavior, as these distorted cognitions and beliefs about their interactions with the victim appear to make sense to them. They are able to achieve this through interpreting the victim's reaction to the abuse, based on the specific belief systems they have in relation to a particular social interaction.

Applying this explanation to DV perpetration, the authors propose the possibility that children exposed to DV vary in how they process the abuse, and in some instances, try to justify the abusive behavior and blame themselves for provoking the abuser. In instances when children have witnessed their mother being abused, they may form a distorted view of females (e.g. as weak, deserving of this treatment). As a result, they may build a relationship based on what they have learnt from observing an abusive relationship (Margolin & Gordis, 2004).

Research also shows that these individuals are likely to form an insecure attachment with their primary caregiver (Ward, Hudson & Marshall, 1996), which may negatively influence their interpretation of any inter-parental conflict they witness. Another finding supporting the influence of these interpretative biases came from a comparative study between offenders and non-offenders and their childhood histories. The researchers found that offenders acquired 'theory of mind' later than non-offenders (Gilchrist, 2009). As a result, this could have led to an increased likelihood of individuals having been exposed to a degree of social exclusion and interpersonal stress (Ward, 2000) during their early life experiences due to poor social skills, linked with impaired theory of mind. Thus, being socially excluded could make a child more likely to develop/display externalizing and/or internalizing behavior (e.g., aggression, withdrawal), which would have an impact on their overall adjustment and transition into adulthood.

Furthermore, other studies have shown that distorted thoughts, if reinforced over time and across similar situations (i.e., relationships), can lead to the development of ITs related to DV (Polaschek, Calvert, & Gannon, 2009; Polaschek & Ward, 2002). Similarly, even during instances where there is no interpersonal physical violence, but unresolved conflict, ITs linked to overly hostile attributions and aggressive behavior towards others outside the household are likely to develop (McDonald et al., 2007).

Most ITs are formulized as a single statement and generally contain abstract assumptions about the victim and their capabilities, and to some extent dictate how the victim's behavior will be interpreted. One example is 'women as objects', which is related to the objectification of women using female characteristics based on gender role beliefs (Gilchrist, 2009). It has been suggested that these ITs are commonly presented as though they only exist to support offending behavior and that in changing them, the offender will not reoffend (Drake, Ward, Nathan, & Lee, 2001). If this logic is supported in practice, then it can be assumed that by identifying ITs related to DV perpetration, and understanding how these ITs develop, more efforts could be targeted towards developing interventions that cognitively restructure these distorted belief systems. Thus, it is proposed here that the presence of ITs related to DV are an additional predictive factor of DV perpetration and proclivity.

Although, the literature is not expansive in this domain, the ITs which have been initially linked to DV perpetration include; '*violence is acceptable*', 'women are to blame/at fault', 'out of control', 'need for control/man in control', 'women are objects/women are owned', 'entitlement/respect', 'uncontrollable sexuality', 'real man', 'win or lose', and 'nature of harm' (Gilchrist, 2009). Subsequently, in similar research that involved responses given to semi-structured questions by male DV offenders, three additional key ITs were reported 'abandonment/rejection', 'need for control' and 'male sex drive is uncontrollable/policing partner' (Dempsey & Day, 2011; Weldon & Gilchrist, 2012).

In addition, Pornari and colleagues (2013) identified additional ITs held by both male and female heterosexual IPV offenders. Among the males, the following ITs yielded the highest positive results: 'opposite sex is dangerous', 'normalization of relationship violence', 'normalization of violence', and 'it's not my fault'. There was moderate support for the IT's: 'relationship entitlement', 'general entitlement' and 'I am the man'. Comparatively, among

females the hypothesized IT ‘relationship entitlement’ was the most prevalent within the sample, and moderate support for the ‘opposite sex is dangerous’ IT (Pornari et al., 2013). These researchers conceptualize ITs as core beliefs people develop of the world based on previous life experiences and suggest that some of these ITs have developed as early as childhood, when the individuals witnessed or were victims of DV. It is during the exposure of DV that they form beliefs about gender roles, violence and social interactions between intimate partners. It can therefore be hypothesized that individuals who are exposed to one or more forms of DV, and who have been part of a deviant peer group during childhood, are more likely to develop distorted ways of viewing intimate relationships/partners.

Although the literature on the link between ITs and violence, particularly DV, is limited, it is evident that the findings are valuable in suggesting important paths for future research. From this short review, it is evident that more research needs to be conducted into investigating how cognitive distortions are formed among DV offenders. In addition, the IT’s discussed above are focused on heterosexual male and female DV offenders, and to our knowledge have not been explored across wider samples. Thus, much more work is required in this area also.

Another important factor in the perpetration of DV is rumination, particularly angry rumination, which is a strong predictor of aggressive behavior (see Denson, 2013). In the next section, we discuss in much more detail the role of rumination in facilitating aggression, and how it may be involved in linking early exposure to abuse and DV to future perpetration of domestic abuse.

3.2.5. Rumination

Rumination is a multidimensional construct which has attracted interest from researchers and clinicians over the past two decades (De Lissnyder et al., 2012; Smith & Alloy, 2009). It has been defined as “a class of conscious thoughts that revolve around a

common instrumental theme and that recur in the absence of immediate environmental demands requiring the thoughts” (Martin & Tesser, 1996, p.7). In other words, rumination refers to having unwanted intrusive repetitive thoughts revolving on a common theme (Sukhodolsky, Golub, & Cromwell, 2001; Whitmer & Banich, 2007). Some have termed rumination as a ‘maladaptive, trait-based coping strategy’ (Borders, & Giancola, 2010, p. 546) or as an ‘emotion-regulation strategy’ (De Lissnyder et al., 2012, p.519).

Following this, it is possible that some individuals who experience DV during their childhood develop ruminative tendencies as a way of processing the abuse and regulating their emotions as a coping mechanism. There are different types of rumination shown to influence an individual’s responses towards others. These include depressive rumination (Baer & Sauer, 2011), angry rumination (see Denson, 2013; Lyubomirsky & Nolen-Hoeksema, 1995), and hostile rumination (Borders, et al., 2010). However, this paper will focus on angry rumination and its relation to DV perpetration, as this form of rumination has been previously linked to forms of interpersonal aggression that could be applied to a DV context. Angry rumination refers to prolonged, pervasive thinking about anger-inducing events or situations (see Bushman, Bonacci, Pedersen, Vasquez & Miller, 2005). It has also been defined as “self-focused attention towards one’s thoughts and feelings,” in this case, in the context of anger (Lyubomirsky & Nolen-Hoeksema, 1995). Both types of anger-related ruminative thinking have been linked to aggression (Barber et al., 2005; Bushman, 2002; Bushman et al., 2005; Denson, Pedersen, & Miller, 2006; Pedersen et al., 2011; Vasquez, Osman, & Wood, 2012; Vasquez, Pedersen, Bushman, Kelley, Demeestere, & Miller, 2013) and punishment for violent crime (Vasquez, Bartsch, Pedersen, & Miller, 2007).

Angry rumination augments aggressive behavior because it increases and maintains anger following a provoking event (Bushman et al., 2005; Rusting & Nolen-Hoeksema, 1998). More specifically, following an instigation, anger dissipates after 10- 15 min

(Fridhandler & Averill, 1982; Tyson, 1998), but ruminating about the event prolongs the experience of anger and aggressive priming, which involves activation of aggression-related affect, cognitions, and arousal (i.e., the psychological readiness to aggress; Bushman et al., 2005; Pedersen et al., 2011). In addition, engaging in rumination can decrease self-control because individuals may attempt to stop ruminating but use up cognitive resources (Denson, Pedersen, Friese, Hahm, & Roberts, 2011). As a result, they are momentarily left with few mental resources to inhibit impulsive behavior, including aggression, and are more likely to aggress towards strangers and domestic partners (Denson, DeWall, & Finkel, 2012).

In the context of DV during adolescence and adulthood, angry rumination has been found to predict aggression towards romantic partners (Denson et al., 2011; Denson et al., 2006; Pedersen et al., 2011; Vasquez et al., 2012). That is, individuals who have a tendency to engage in angry rumination (i.e., are high trait ruminators) are more likely to aggress against partners. The reason for the link between rumination and inter-partner aggression is likely due to the priming effects of rumination (i.e., increasing/maintaining anger and aggression-related cognitions and arousal), as well as the decrease in self-regulation that results from ruminating. This may be particularly true in the context of displaced aggression, wherein a provoked individual who does not retaliate against the original source of the provocation, but instead, retaliates against an innocent other (see Dollard, Miller, Doob, Mowrer & Sears, 1939), or someone who does not deserve the level of punishment they receive (see Pedersen, Gonzales, & Miller, 2000; Vasquez, Denson, Pedersen, Stenstrom, & Miller, 2005).

For instance, an office worker may be reprimanded by their boss in a humiliating way, which angers the worker. Normally, the angered worker would calm down (i.e., their anger dissipates) within 15 min. However, they ruminate about the incident for over an hour, including while driving back home. In consequence, the worker remains angry and motivated

to aggress (i.e., is aggressively primed). When they arrive home, the spouse accidentally spills some juice on a newspaper, which the worker wanted to read. Although there is little damage to the paper, and the worker would not normally be upset by the incident, the previous provocation from the boss, and the rumination about the event has prolonged the worker's anger, and they react much more negatively to the spill. As a result, the worker shouts at the spouse and gives them a shove. In short, angry rumination has been shown to predict aggression towards strangers and romantic partners and is likely a factor in more extreme levels of aggression and violence.

The previous example illustrates the process through which rumination can lead to displacing aggression towards a romantic partner. Angry rumination, however, is also likely to facilitate direct aggression, wherein a provoked individual aggresses against the original source of the instigation (Archer & Webb, 2006). For instance, a person might annoy or offend their partner, who not only becomes angry but has a tendency to ruminate. Instead of forgetting about the provoking incident, the partner ruminates about it, which primes them for aggression over a prolonged period of time. Subsequently, when the angered partner perceives an opportune moment, or perhaps when they feel offended once again, their state of high aggressive priming leads them to lash out against the instigator.

Angry rumination may also play a more indirect role in DV by mediating the link between exposure to childhood abuse and engaging in future DV. It is proposed that following these trauma inducing experiences, an individual would need to cognitively process the abuse and try to make sense of the perpetrator's actions and somewhat justify them in a way that would minimise/reduce the onset of PTSD, depression or anxiety (common consequences for DV). Here, an individual could either develop ITs as a coping mechanism for the ongoing abuse, as a way of processing and explaining the perpetrators actions, or

alternatively, an individual could develop ruminative tendencies involving the unfairness, suffering, and anger that result from the abuse.

As previously stated, children exposed to DV (as a witness or a target of abuse) may be less likely to develop a secure attachment and more likely to develop insecure attachments. Individuals who have formed secure attachments are more likely to be forgiving following an incident that has made them angry, compared to someone who has formed an insecure attachment type (Burnette, Taylor, Worthington, & Forsyth, 2007). One explanation is that those who develop insecure attachments are also more likely to engage in angry rumination, making their ability to forgive others more difficult (Burnette et al., 2007). As a result, these children would be more susceptible to developing and engaging in angry rumination, and thus, in adulthood would be less forgiving of their partners following a provocative or anger inducing incident.

Another route through which rumination may link exposure to DV and future abuse involves the development and reinforcement of implicit theories. As previously proposed, children may develop ITs over time as they develop mental scripts and schemas about their world and other people (Ward, 2000). Among some of those who experience DV and abuse, the schemas they develop may be more negative and involve hostile/aggressive cognitions and associations. If they have developed a tendency to ruminate, the repetitive thinking about aggression and anger-related ideas, attributions (e.g., parents must hate the child because they often hit him), and affect may reinforce negative and hostile beliefs about others. Over time, these beliefs, due in part to angry rumination, become stronger and elaborate, which leads to stronger ITs. These stronger, more elaborate theories subsequently facilitate aggression towards partners.

More generally, research has been conducted into gender differences among those who are more likely to engage in rumination when compared to individuals who are prone to

distraction and do not ruminate. Researchers have noted that generally, women tend to opt into being distracted following an anger inducing incident whereas men were more likely to engage in rumination (Simpson & Papageorgiou, 2004). This may explain the historically high prevalence of male perpetrators of DV, and the link between developmental risk factors (e.g. poor emotional regulation) and subsequent DV.

In conclusion, angry rumination is likely to be a significant predictor of domestic violence and abuse for a number of reasons. It is linked to aggression through different routes (e.g., aggressive priming, reduced self-regulation), but also through its role in the development of negative beliefs, schemas, and implicit theories. The role that rumination plays in domestic abuse, however, is severely underdeveloped, and researchers should focus more attention to understanding how this factor influences the development and maintenance of the processes that cause and facilitate domestic abuse.

2.2.6. Aggression

Human Aggression is generally defined as any behavior directed at another individual with the intent to cause harm (Anderson & Bushman, 2002). For an act to be termed as aggressive, the perpetrator must believe that their actions will harm the other person and that the target wants to avoid them (Bushman & Anderson, 2001). There is a vast amount of literature that has shown exposure to DV during childhood to be a significant predictor of aggression in adulthood (e.g. Allen, 2011; Miller-Perrin, Perrin, & Kocur, 2009). For example, psychological abuse in childhood has been shown to predict overt forms of aggressive behaviors in adulthood (Else, Wonderlich, Beatty, Christie, & Staton, 1993; Smith, Rose & Schwartz-Mette, 2010); and parental rejection can lead to more physical and psychological forms of aggression towards intimate partners (DiLillo, Peugh, Walsh, Panuzio, Trask & Evans, 2009; Taft, Schumm, Marshall, Panuzio, & Holtzworth-Munroe, 2008). This is supported by previous studies that have found hostile attributions, and the

positive evaluation of aggressive responses during interactions to be predictors of DV (Capaldi et al., 2012).

Further investigation into childhood DV and aggression has found associations between direct forms of aggression and externalizing behavior; and indirect aggression and internalizing behavior among individuals who have been exposed to DV during childhood (Card et al., 2008). This is further supported by research which identified aggressive traits among many DV offenders that could have developed during childhood (Carpenter & Stacks, 2009; Kitzmann et al., 2003; Malinosky-Rummell & Hansen, 1993). For instance, studies that have explored gender differences in aggression within heterosexual relationships argue that general aggressive personality traits are a component of DV (Archer, 2000, 2004). Likewise, other researchers have found that males who viewed violence towards their partners as acceptable, and reported being dependent on their partners, were found to have higher levels of general aggression (Kane, Staiger, & Ricciardelli, 2000), then those who did not. As stated earlier, it is likely that these attitudes may have been formed during childhood and are reinforced by their peer groups who endorsed and therefore encouraged these negative attitudes as being acceptable (Ehrensaft et al., 2003).

Considering the strong evidence between childhood exposure to DV, and the associations this has on the development of aggressive tendencies in adulthood, the next section aims to review key types of aggression related to DV (i.e. instrumental and impulsive), in particular, Generalized Trait Aggression (GTA) as another main predictive factor of DV perpetration.

2.2.7. Types of aggression and their link to DV perpetration

2.2.7.1. Instrumental aggression

Instrumental aggression has been referred to as proactive or predatory aggression (Glenn & Raine, 2009), and commonly involves harming another, purposefully, with the intent of achieving a desired goal, or simply obtaining a desired outcome or object (Anderson & Bushman, 2002). There is evidence that suggests the act of following one's own interests as a result of personal desires, tends to be premeditated, and usually does not have strong emotional repercussions for the individual (Caprara, Paciello, Gerbino, & Cugini, 2007). Considering this, it could be assumed that individuals, who have ruminative tendencies, could display aggression towards their partners following an anger inducing incident that may or may not have involved their partner. This could help explain how instrumental aggression can be enacted within the context of DV relationships.

2.2.7.2. Impulsive aggression

Impulsive aggression is suggested to be anger-driven, and a result of poor self-control following an anger provoking incident, whereby an individual has aggressive urges (Denson, Pedersen, Friese, Hahm, & Roberts, 2011). Researchers have further explored the influence angry rumination has on impulsive aggression for individuals who have poor self-control. Impulsive aggression has been researched with angry rumination and poor self-control, in an attempt to explain the occurrence of aggression that follows a provocation (Denson, Capper, Oaten, Friese & Schofield, 2011; Denson, Pedersen, et al., 2011). Findings suggest that the processes involved in producing impulsive aggression have implications for domestic violence. This is because individuals who may have aggressive tendencies and are generally impulsive may be more prone to act aggressively towards another person, including romantic partners, following a provocation. Within the context of a relationship, situations that produce or facilitate impulsive aggression increase the risk of violence to potential victims because even seemingly innocent statements or incidents could trigger impulsive outbursts of verbal and physical aggression.

2.2.7.3. Triggered displaced aggression (TDA)

Another type of aggression with implications for DV perpetration is triggered displaced aggression (TDA; Miller, Pedersen, Earleywine, & Pollock, 2003; Pedersen et al., 2000), evidenced to be a well-established psychological process in the field (Miller et al., 2003). TDA is the aggression towards a person who is not the source of the initial provocation. It is usually due to something this individual does, whether trivial or ambiguous, that acts as a trigger for the aggressor to displace their original aggression felt towards something/someone different, onto this person (Denson, Pedersen & Miller, 2006; Vasquez et al., 2005). For instance, some people can displace aggression towards intimate partners following a trigger. Some acts of partner aggression may be attributed to displaced or triggered displaced aggression, as it explains why an individual may be aggressive towards their partner without sufficient justification or provocation, as a function of earlier instigations that prime the aggressor for subsequent aggressive behavior (Denson et al., 2006; Vasquez et al., 2005; Vasquez et al., 2012).

It is possible that the prevalence of TDA within an intimate relationship could lead to more prolonged and severe harm for victims, as researchers have found perpetrators who have been exposed to aggression during their childhood, are more likely to view aggression as normal behavior. For example, O'Leary, Smith Slep and O'Leary (2007)" (2007) found through an exploratory study that one important predictor of male and female partner aggression in relationships was the exposure to familial aggression. It could therefore be assumed that for some individuals, reacting aggressively towards their partners is normal, and therefore could become an automatic response across situations. This idea of normalized behavior could be reinforced through the development of ITs related to DV perpetration (or aggressive scripts), as previously discussed. For example, the 'normalization of violence' IT

(Pornari et al., 2013), as this would make the aggressor interpret their behavior as normal and therefore less likely to seek help to manage their inter-partner aggression.

It is evident that although the processes that lead to TDA explain the presence of partner aggression and DV in some situations, there are other contributing psychological processes that reinforce the expression of displaced aggression within this context. In addition to the possible exposure to DV during childhood and the development of distorted beliefs (i.e. ITs), other researchers have found that individuals who have consumed alcohol and engage in rumination are also more likely to display TDA (Denson, White, & Warburton, 2009).

2.2.7.4. Generalized Trait Aggression (GTA)

Within the context of DV, trait aggression is the most relevant form of aggression, supported by the prevalence of high trait aggression among samples of domestically violent males (e.g., Kane, Staiger, & Ricciardelli, 2000). In addition, trait aggression has also been associated with trait anger (Shorey, Brasfield, Febres, & Stuart, 2011), emotional difficulties (Mathis & Mueller, 2015), and anger ruminative tendencies (e.g. Pedersen et al., 2011; Verona, 2005) in adulthood. All of these attributes have been associated with childhood exposure to DV and DV perpetration. Trait aggression is commonly defined as having the tendency to engage in verbal and/or physical aggressive behavior, having hostile cognitions, and to show anger (Anestis, Anestis, Selby, & Joiner, 2009; Webster et al., 2013).

Previous research that has found links between trait aggression and DV, specifically the role of a prior interpersonal provocation (Denson, Pedersen, et al., 2011; Denson, Pedersen, & Miller, 2006; Pedersen et al., 2011) as a contributor in explaining aggressive behavior towards another individual. The role of provocation will be a common theme throughout the discussion of aggression as a predictor of DV perpetration as this is assumed to be a very important situational predictor within intimate relationships. This is supported by

research which showed that aggressive tendencies were found among individuals who are highly sensitive to provocations (Lawrence & Hodgkins, 2009). From this, it is apparent that through the understanding of developmental factors linked to DV perpetration, the justification and interpretation for DV behavior would in most instances follow a provocation, whether intentional or not, by the less/non-abusive partner.

Other researchers have investigated how GTA interacts with other individual factors (e.g. self-esteem, gender), previously linked explicitly to DV perpetration. For instance, previous researchers have found that individuals who are generally aggressive and are more **sensitive to provocations** tend to process aggressive stimuli faster than those who are not (Lawrence & Hodgkins, 2009). Relating this to DV, this may explain why some individuals are more likely to interpret behavior from their partners as a provocation and may retaliate, depending on their level of trait aggression, as compared to individuals who are less sensitive to provocations. Individuals could also form associations between their partner and specific behavior that may lead to inter-partner aggression through these automated associations, whether interpreted wrongly as a result of ITs related to DV (e.g. violence is normal) or other contributing factors.

Similarly, the presence of **expectation biases**, and the susceptibility to interpret social interactions as hostile have been observed among individuals with high trait aggression (Dill, Anderson, Anderson, & Deuser, 1997). This further supports the association between individuals who are high in trait aggression and their increased likelihood to act more aggressively than those who are lower in trait aggression.

Other research suggests that **high or unstable self-esteem** influences individuals' aggressive tendencies, alongside being prone to anger (Bushman & Baumeister, 1998). These are both qualities that have been found among individuals exposed to childhood DV (Carpenter & Stacks, 2009; Holt et al., 2008). One explanation for this notion that aggressive

behavior is more prevalent within individuals who have been exposed to DV (whether witnessed or abused) during childhood is the General Aggression Model (GAM; Anderson & Bushman, 2002). This model posits that aggression is present when individual differences and situational factors interact, whereby an individual's cognitive functioning, physiological arousal and affective state create three main routes to aggression (Denson, 2013). However, it is important to note that individual differences when regulating these three components are determinant factors of how likely an individual is to have aggressive tendencies.

According to this model, an individual's behavior is interpreted through the use of cognitive scripts (Anderson & Bushman, 2002). In applying this to DV behavior, when violence has been witnessed, cognitive scripts representing aggression are activated which increase the probability of future aggressive behavior (Coyne, Archer, Eslea & Liechty, 2008). This would suggest that when an individual has been a childhood victim of DV or has witnessed a family member being violently abused, these scripts are strengthened and there is an increased likelihood that later in life these individuals would likely be aggressive in similar situations. This association between childhood exposure to DV aggression in adulthood and the formulation of distorted cognitive beliefs is further evidence for the role of ITs related to DV being crucial in understanding DV perpetration.

Additionally, previous studies have shown trait aggression to act as a way to regulate **negative emotions** (Bushman et al., 2001), and for some individuals trait aggression also increases the consequences of negative emotions (Anestis et al., 2009), and impulsivity (Dahlen et al., 2004) of individuals during aggressive interactions with others. Applying this to DV perpetrators it could be that these individuals view their abusive behaviors as a way to regulate their negative emotions, following a challenging situation depending on their level of trait aggressiveness. This could also explain instances where abuse has occurred following an

experience that has left the perpetrator feeling rejected or vulnerable, which may be feelings that they associate with childhood abuse.

Another individual factor influencing trait aggression is comprised of the **attitudes and beliefs** held by individuals. For instance, those who believe they have the confidence to effectively use aggression to achieve a desired outcome are more likely to aggress towards others (Anderson & Bushman, 2002). This is another personality variable that could have developed as a result to childhood exposure to DV, and through positive feedback following an aggressive act, has been sustained and is exemplified in DV perpetration. Similarly, there is evidence to show that those who have developed positive attitudes or associations with violence are more likely to aggress towards others (Anderson & Bushman, 2002). In the context of intimate relationships, research suggests that individuals who have formed positive attitudes of violence towards women, in particular, are more likely to engage in hostile aggression or sexual aggression in adulthood (Malamuth, Heavey, Linz, Barnes, & Acker, 1995). Throughout much of the literature, this has been found predominantly for males in heterosexual relationships.

A further individual factor related to GTA and DV perpetration is **gender**. Research into gender differences and aggressive tendencies has expanded over recent years. There appears a consensus throughout past research that males generally display more physical or direct aggression and females more indirect forms of aggression (Anderson & Bushman, 2002; Card, Stucky, Sawalani, & Little, 2008). However, the association between individual characteristics, situational cues, subtypes of aggression and nature of provocations (Bettencourt & Miller, 1996) and gender is not fully understood. For example, in the context of heterosexual relationships, females tend to use multiple forms of physical aggression more often, whereas males exert physical aggression less often, but result in more severe injury to

their female partners (Archer, 2000). It is mainly how these individual and situational factors interact, to result in aggression towards an intimate partner that is a focal point here.

5. Summary and conclusions

This paper has reviewed some key limitations surrounding the lack of a universal definition for DV, with particular emphasis on the impact this has on the development of effective early interventions for DV perpetration. Some introductory epidemiological factors of DV perpetration have been presented, where the main focus is on the high prevalence of DV in heterosexual relationships and the detrimental physical and mental health outcomes this has on victims. Also, previous research involving four key facets have been reviewed, and intertwined to make up four proposed predictive factors of DV perpetration and proclivity. These four facets were: (1) how childhood exposure to DV (both experiencing and/or witnessing abuse) influence DV perpetration; (2) the role of implicit theories in developing offense-supportive cognitions of DV; (3) the association of DV and Generalized Trait Aggression in explaining DV perpetration; and (4) how angry rumination influences DV perpetrating related behavior.

Following a discussion of how these four factors play a role in predicting DV perpetration, it is proposed that angry rumination could be a missing link between exposure to childhood abuse and DV perpetration in adulthood, when aggressive tendencies and ITs have developed and produce or facilitate DV offending behavior. It has also been proposed here that these processes and beliefs that have been formulated in childhood and reinforced in peer groups and social interactions, are then exacerbated through provoked angry rumination in adulthood.

The identification of these four components as predictors of DV perpetration enables future research to increase the predictive power of assessing DV perpetration and proclivity

at an early stage. The more we understand how an individual's behavioral, social and cognitive functions are impacted through the exposure to childhood DV, the closer we are to developing early interventions towards reducing DV proclivity and perpetration before more victims are claimed by this global public health problem. With this in mind, it is suggested that future researchers and practitioners consider these predictors as covariates in behavioral studies involving multivariate analyses. It is also encouraged that systematic reviews that focus on these factors and inter-related domains are conducted, in order to gain a more in depth understanding of how these factors relate to other constructs (e.g. personality, inhibitions). Additional research would also contribute to existing knowledge about how predictors develop during childhood, what inhibitory mechanisms may develop and identify contributory variables that influence DV proclivity and perpetration.

In addition, at present there are no psychometric tools that allow for the assessment of DV proclivity, and no tools that have included all four proposed predictors into one measure. The current tools that assess DV perpetration such as the commonly cited Spousal Assault Risk Assessment (Kropp, Hart, Webster & Eaves, 1994), the Conflict Tactics Scale (CTS; Straus, 1979), and the Revised Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy & Sugarman, 1996), primarily focus on historic risk factors that have been developed for heterosexual male offenders, and do not address the cognitive components that immediately preceded the DV event (e.g. distorted beliefs, ruminative tendencies).

From this review of four contributory predictors of DV proclivity and perpetration, future researchers can work towards developing tools based on the knowledge gained here. An investigation on how these four predictors may interact and influence other factors, or how they are influenced by other variables (e.g. gender beliefs), would contribute to our understanding of DV offending. In doing so, the lives of both victims and perpetrators could be improved through the development of targeted interventions modelled on the four

predictors proposed in this review. Overall, we conclude that DV is a growing public health problem that needs more informed interventions, and the predictors discussed in this review provide an innovative framework for future researchers to use, build on and incorporate into the field of DV.

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