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### Exploring Criminal Thinking Patterns and Cognitions in High Risk Sexually and Non-Sexually Violent Offenders

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CRIMINAL THINKING PATTERNS & COGNITIONS

**Exploring Criminal Thinking Patterns and Cognitions in High Risk Sexually and Non-Sexually Violent Offenders**

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**Abstract**

The current understanding of shared offense supporting attitudes between different offender types is limited. This study compares criminal thinking styles and rape supportive attitudes between high-risk offenders who have engaged in either sexual or violent behavior. A sample of 237 incarcerated male high risk sexually violent and non-sexually violent offenders participated in a study where they completed a series of self-report questionnaires including the Psychological Inventory of Criminal Thinking Styles (PICTS) (Walters, 1995) and Bumby's (1996) MOLEST and RAPE scales. Significant differences in criminal thinking between offender types was hypothesized. Significant overlap of rape supporting cognitive distortions, regardless of offender type was hypothesized. Hypotheses were partially supported. Implications for assessment and prevention are discussed.

*Keywords:* criminal thinking styles, cognitive distortions

It is estimated that each year 15% of Americans are victims of crimes, with between 1-3% being victims of violent crimes (Gallup, 2020). Specifically, in 2019 1.2 million people in the United States (U.S.) were victims of violent crime excluding simple assault and 168,860 people were victims of sexual assault or rape (Morgan & Truman, 2020). There are serious long-term consequences of violent and sexual violent crime to the victim. Victims of both violent and sexually violent crime are at increased risk for developing post-traumatic stress disorder (PTSD), depression, anxiety, suicidal feelings and self-harm and victims of sexual violence are also more likely to experience chronic physical health issues (Dinisman et al., 2017; Lefebvre et al., 2020). Given the scope of the problem and consequences to the victims, it is important to develop targeted prevention and intervention programs. As such, researchers are working to better understand the unique causes and risk factors that contribute to the perpetration of violent and sexually violent crimes. One area that has been explored are the thinking styles or cognitive processes that may be crime specific (Walters, 2020). Several models have emerged to identify offense-specific paradigms of criminal thinking processes and further explore the underlying processes that facilitate and perpetuate criminal behaviors.

### **General Criminal Thinking Styles**

Yochelson and Samenow (1976) conceptualized criminal thinking styles as “the criminal thought process from idea through execution” (p.19) of the crime and hypothesized that those who engaged in criminal activity demonstrated commonalities within their thinking. It was theorized that an accumulation of these thoughts was followed by criminal behaviors and that in order to create change in criminal behavior, one must alter such thinking patterns. They constructed a conceptual framework to understand criminal thought processes and compiled a list

of “automatic errors of thinking” intended to conceptualize thinking patterns stemming from a criminal personality or criminal brain (Yochelson & Samenow, 1976, p. 34).

Yochelson & Samenow (1976) theorized that criminal thinking and subsequent behaviors occurred as a result of a criminal personality whereas in 1990, Walters shifted his lifestyle model of criminal conduct away from the theory of a criminal personality and towards a multifaceted system of influential interactions that result in the formation and continuation of criminal behavior. This model emphasized the impact of a multitude of factors in an individual's life that leads to criminal thinking styles and continued criminal behaviors. Walters (1990) theorized that there are three interconnecting and fluctuating factors that influence criminal behavior: conditions, choice, and cognition. Conditions refer to elements that can be internal, such as genetics or intelligence; external, such as family or friends; or interactive, that intersect the individual with another person. These aspects of an individual's life set parameters for possible exposure to criminal involvement (Walters, 1990). Although Yochelson and Samenow acknowledged crime as a lifestyle with correlating belief systems of justifications, support or rationalizations, Walters posited that the antisocial behaviors of those who engage in criminal practices are based on free choice and that the continuation of criminal thinking is an essential expression of free choice (Walters, 2006; Yochelson & Samenow, 1976). Walters developed the Psychological Inventory of Criminal Thinking Styles (PICTS; 1990) to assess the final factor in his model of criminal behavior: cognition. According to Walters (1990), cognitions emerge through and support the lifestyle that follows the choices one makes within the parameters of their conditions. Cognitions, choices, and conditions become dynamic and interacting determinants of each other (Walters, 1990). Walters and White (1989) maintained that criminal behavior is a derivative of distinct cognitive patterns and proposed eight criminal thinking styles

(*Mollification, Cutoff, Entitlement, Power Orientation, Superoptimism, Sentimentality, Cognitive Indolence and Discontinuity*) which Walters incorporated into the PICTS, as shown in Table 1 (Walters & White, 1989; Walters, 1990). Within this framework, the role of criminal thinking can be broken into two or more dimensions to support, reinforce and maintain adult criminal behaviors (Walters, 2020).

Criminal thought process reflects *how* an offender thinks and can be divided into overlapping but distinct dimensions of 1) *proactive* and 2) *reactive* criminal thinking (Walters, 2006). The proactive dimension includes planned, calculative, and amoral cognitive patterns while the reactive dimension cognitive patterns are impulsive, emotion-based, and expressive patterns of thought. The eight thinking styles associated with the criminal thought process became the core components of the PICTS with seven of the eight loading onto either the proactive (mollification, entitlement, power orientation and superoptimism) or reactive (cutoff, cognitive indolence, discontinuity) factors (Walters, 1990, 2012, 2020).

According to Walters, criminal thinking also includes criminal thought content which emphasizes negative attitudes towards authority, positive attitudes towards deviance and the criminal identity (Walters & Morgan, 2018). In previous studies, measures of thought content such as the Criminal Sentiments Scale-Modified (CSS-M:Simourd; 1997) were found to correlate with the PICTS proactive criminal thinking score which provides support that criminal thought content may be involved more with proactive criminal thinking (Morgan et al., 2010). These concepts have continued to be expanded upon to clarify the role of criminal thinking patterns in offending behaviors. However, reactive criminal thinking and criminal identity can serve as both an influencer and result of criminal behavior. The impulsivity associated with reactive criminal thinking and the confidence brought on by a criminal identity share the

potential to stimulate and be stimulated by criminal behaviors. As reactive criminal thinking and criminal identity can encourage engaging in offending behaviors, participating in such behaviors can strengthen impulsivity and criminal identity (Walters, 2016a, 2016b).

Although reactive and proactive criminal thinking have some intersections, they are thought to be distinct concepts and processes linked to specific outcomes. The reactive scale of the PICTS (1990) is associated with increased criminal risk, such as a higher-than average number of prior convictions as well as an earlier age of initial conviction, indications of prior substance abuse and mental illness as well as an increased likelihood of future arrests (Walters, 2020). Reactive criminal thinking has also been supported as a function of both low self-control and serious offending (Walters, 2017). The proactive scale is associated with a lower number of prior convictions with an older age of first conviction and significantly higher levels of institutional infractions, but evidence of substance abuse, and mental illness is relatively lower when compared to the reactive scale (Walters, 2020).

There have been several studies exploring the criminal thought process in relation to the moderation of certainty of punishment and crime (Walters et al., 2019, 2021). In one study, scores of proactive criminal thinking indicated that likelihood of antisocial behaviors was highest when there was increased proactive criminal thinking as well as significant elevated probability to engage in antisocial and criminal behavior as the risk of apprehension decreases (Walters et al., 2019). Results from this study emphasized the likelihood that those with elevated levels of calculated, planned, and amoral features of proactive criminal thinking are more likely to engage in antisocial activities as the certainty of getting caught decreases. It also provided support that proactive criminal thinking is more successful at moderating the effect of certainty on likelihood

of antisocial behaviors than the more impulsive or unplanned thinking associated with reactive criminal thinking (Walters et al., 2021)

Specifying these concepts by offense type can highlight the link between cognitive structures and distinct behaviors as existing literature has established the role of cognitive structures in violent and sexual offenses (Helmond et al., 2015; Yates, 2013; Walters, 2007, Walters, 2009). Additional studies have found that antisocial attitudes and cognitions are more prevalent in violent offenders than nonoffenders (Van der Put, et al., 2020) Furthermore, violent offenders are more likely to endorse distortions supportive of violence (Chereji et al., 2012)

### **Cognitions Associated with Violent Behavior**

Several meta-analyses have found strong associations between cognitive distortions and externalized violent behaviors. Cognitive distortions were defined by Beck (1963) as “idiosyncratic thought content indicative of distorted or unrealistic conceptualizations (Beck, 1963, p. 324). Serin and Kuriychuk (1994) hypothesized that consistently violent men have developed self-schemas or cognitive structures that are comprised of stable beliefs and assumptions about the self, others, and the world. They are developed and cemented through a social learning process which allows for a predisposition to hostile attributions during interpersonal interactions. Implicit theory was later applied to violence-supporting cognitions in which perpetrators experience violent acts as normal (Polaschek et al., 2009). Using the grounded theory model, authors of this study proposed several structures that determine and guide offenders of a violent crime. First, that these offenders have normalized violence as both an effective and acceptable method to meet needs with no long-term consequences. Secondly, which operates from the first construct, violence is necessary to protect agency and supports a “beat or be beaten” mentality. This endorses the hostile world concept and includes subtypes of

self enhancement in which the social self-image is dependent on the use of violence to demonstrate success or self-preservation, and that violence is the only means to protect oneself from a world that intends to victimize or exploit. Individuals also may operate off an “I am the Law” implicit theory wherein violence is utilized to help others or maintain a social order. Finally, that violence occurs because of uncontrollable circumstances, or that self-regulation is inadequate (Polaschek et al., 2009).

Hostile thinking is one of the main cognitive mechanisms to be involved in violent behaviors (Chereji et al., 2012). Hostile attribution bias or style is the tendency to attribute hostile intent to others and is linked to reactive aggression in adults (Lobbestael et al., 2013; Walters, 2007). These schemata are then reinforced through learned aggressive responses to their perceptions of hostility from others. These interactions perpetuate and solidify schemas for aggression and intensify the potential for violent social interactions. Individuals with elevated levels of aggression are more likely to make hostile interpretations of the behaviors of others and have aggression-supporting cognitions such as hostile attributions and entitlement (Hutchings et al., 2010). In accordance with this concept, Copello and Tata (1990) found that justice involved individuals were more likely than nonoffenders to demonstrate hostile attribution bias following an interpersonal provocation. Research has found that hostile thinking is one of the key cognitive mechanisms involved in violent behaviors (Baker et al., 2008; Lobbestael et al., 2013).

Research supports the conceptualization of proactive and reactive aggression within the same framework of proactive and reactive criminal thinking styles as both proactive and reactive criminal thinking and proactive and reactive aggression share distinctive cognitive processing patterns (Carroll et al., 2018; Walters, 2020). Reactive aggression has been theorized to be related to difficulties in encoding cues whilst proactive aggression is related to expectancies of

positive outcomes through aggression such as personal gain (Crick and Dodge, 1996). It is theorized that cognitions involved in aggression can be divided by function; defensive or reactive aggression can be differentiated from instrumental or proactive aggression and may serve as a link to understanding social situations that involve violent crime (Oostermeijer, et al., 2017; Lobbestael et al., 2013; Walters, 2012, 2015a). Reactive or defensive aggression has been theorized to stem from hostile attributions while proactive or instrumental aggression originates from learning with desired outcomes (Vitiello & Stoff, 1997). Cornell (1996) noted that the latter offender type, those who engage in criminality with a specific goal, were more likely to aggress against strangers with prior planning in contrast to reactive offenders who were more likely to aggress against acquaintances and report provocation from their victims.

Studies suggest that individuals who engage in violent behavior can develop cognitive distortions to protect themselves from self-blame or a negative self-concept and reinforce anti-social behaviors (Helmond et al., 2015). Research indicates that proactive thinking can be a “cause” or antecedent but not a consequence of criminal behaviors. Therefore, cognitive distortions such as moral disengagement and neutralization may encourage criminal behaviors but are not reinforced by criminal activities (Walters, 2017b).

Reactive aggression, however, is marked by a perceived threat and subsequent defensiveness which fits with the cognitive distortion of blaming others which, by default, is reactionary (Oostermeijer, 2017). Minimizing/Mislabeled is defined as conceptualizing anti-social behavior as acceptable or even necessary in order to achieve goals as well as a method of belittling and dehumanizing others, linking this module to proactive aggression (Crick & Dodge, 1996). Assuming the Worst is similar to hostile attribution bias in that an individual perceives negative intent from others and considers a worst-case scenario to be inevitable (Gibbs, 1991;

Gibbs et al., 1995). It is a valuable endeavor to compare different offender types by proactive and reactive scales as even though proactive criminal thinking is less likely to lead to immediate negative consequences and therefore is more likely to go undetected, it may be more problematic than reactive criminal thinking (Walters, 2020). Proactive thinking was shown to be a mediator in the relationship between core personality features of psychopathy and violent criminal behavior (Walters & Delisi, 2015). As efforts to evaluate criminal thinking styles progress, the relationship of offense supportive cognitions and offending behaviors can be conceptualized within a larger framework of individualized and environmental factors that allow for certain thinking styles to be maintained and reinforced.

### **Cognitions Associated with Sexual Offending**

Although pro-criminal attitudes are a primary risk factor for offending and reoffending, general sexual offending attitudes as well as rape specific attitudes were predictors of violent and/or any recidivism of offending behaviors (Andrews, 2010; Helmus et al., 2013). Research examining cognitions related to offending also extends to offenders convicted of a sexual crime and the influence of attitudinal and belief systems that impact sexual offending behaviors (Mann & Hollin, 2010; Murphy, 1990; Ward & Beech, 2006). Following a study distinguishing rape supportive attitudes from distorted views of rape, Nunes et al., (2016) demonstrated that both positive implicit evaluations of rape or unconscious assessments of a psychological concept or object and explicit or deliberative positive evaluations of rape separately predict future sexual aggression. There is considerable evidence to suggest a relationship between attitudes supportive of sexual offending and sexual recidivism (Maruna & Mann, 2006; Mann et al., 2010; Szumski et al., 2018). Additionally, such attitudes are psychologically meaningful risk factors for individuals convicted of a sexual offense to reoffend (Andrews & Bonta, 2010; Helmus et al.,

2013). Szumski and colleagues (2018) developed a study exploring the maintenance of sexual offending behaviors in males and found that cognitive distortions supportive of the rape and sexual assault of women and children are considered a critical factor in the etiology and maintenance of sexual offending behaviors. There has been prior evidence of individuals convicted for a sex crime distorted offense-supportive thinking patterns and are regarded as important dynamic risk factors for sexual offending (Beech et al., 2012).

Abel and colleagues (1984) developed a theory of cognitive distortions in persons sentenced for a sex crime that justify inappropriate actions and rationalize ongoing offending behaviors. Although the impact on the development of sex offender research is notable; this theory was only partially supported in that individuals who have sexually offended against children hold more distortions than non-sexual offenders (Bumby, 1996; Tierney & McCabe, 2001). However, the role of cognitive distortions and their involvement in sexual offending is not limited to those who offend against children (Beech et al., 2006; Mann & Hollin, 2001; O'Ciardha & Gannon, 2011; Ward, 2000).

Subsequently, Ward (2000) postulated that cognitive distortions result from theories an individual holds about victims, offenses, and the general external world, which are categorized as maladaptive implicit theories. Implicit theories can be defined as cognitive structures that originate with biased cognitive processing, such as erroneous interpretations of social cues (Ward et al., 1997). The Implicit Theory (IT) conceptualization of cognitive distortions has received the most empirical attention and has been assessed with individuals who have sexually offended against children (SOC), rapists and sexual murders of women (Beech et al., 2005, 2006; Marziano et al., 2006; Polaschek & Gannon, 2004).

IT can structure beliefs at a general level (ex: about people or the world on a mass scale), the middle level (beliefs about categories of people such as women or children) and a specific level (ex: a distinct victim). It is noted that general and middle beliefs are most integral to the formation of offender interpretations of a victim's actions or mental state (Ward, 2000). There have been additional indications that middle level beliefs in child molesters and rapists are related to their respective offense (Beech et al., 2006).

SOCs and individuals convicted for a sexual offense against women have demonstrated *Dangerous World* IT in that the world is an inherently dangerous place. For SOCs this can be manifested as viewing children as less threatening than adults or thinking that it is necessary to dominate and fight others, including children (Ward & Keenan, 1999). Rapists and sexual murderers demonstrate a generalized hostility towards others (Beech et al., 2005; Polaschek & Ward, 2002).

ITs can be applicable to specific offender types; SOCs are thought to believe that children are sexual objects capable of desiring and enjoying sex with adult sexual motivation. Keown et al. (2010) found that SOCs endorse items related to *Children as sexual beings*, *Nature of Harm* and *Uncontrollability* significantly more than non-sexual offenders. This is somewhat related to an IT *Nature of Harm* which allows the individual to perceive that sexual molestation is not harmful and is beneficial to the child. Rapists and sexual murderers of women hold a similar IT, *Women as sex objects* which encourages the belief that women constantly desire sex regardless of consent. However, both offender types are thought to hold the *Women are dangerous* IT which maintains the belief that women are deceitful by nature.

The ITs that apply to beliefs about the self are primarily based in entitlement and control. The *Entitlement* IT has been theorized to be applicable for both SOCs and those who have

sexually offended against women and holds that one is superior to others and is able to do what they want. SOCs are also presumed to hold the *Uncontrollability* IT and believe that their behaviors are outside of their control. Similarly, rapists hold the *Male sex drive is uncontrollable* IT (Szumski, et al., 2018; Polaschek & Ward, 2002).

Similar to Implicit Theories, a schema-based model of sexual offending focuses on the idea that cognitive distortions arise from erroneous interpretations of reality caused by categorical or belief-specific maladaptive schemas interacting with an individuals' life events. Categorical schemas are related to types of people such as women or children and belief schemas refer to assumptions of the self and the world. Prior research on child and women related ITs can also be supportive of category schemas about children in SOCS and women in rapists. When conducting a qualitative analysis, Milner and Webster (2005) found that relative to SOCs and violent offenders, rapists demonstrated a stronger *Hostility/Distrust of women* schemas. Rapists also showed a stronger *Sexual Entitlement* (belief) schema than the other two groups. These are incredibly similar to rape related ITs (*Women are Dangerous* and *Entitlement* (O'Ciardha & Ward, 2013)

Entitlement is a cognitive element (ex: sexual needs must be filled regardless of whether a partner is willing) in the attitudes of both child molesters and rapists. However, attitudes of child molesters can be discerned from rapists, but rape attitudes cannot necessarily be differentiated. Therefore, there is research to suggest the attitudes of rapist may be applicable to child molesters but not in reverse (Pemberton & Wakeling, 2009). Sigre-Leiros et al. (2015b) found that rapists hold an entitlement schema that significantly predicts cognitive distortions that justify rape. While the differences between each offending group remain significant, the

specification or lack thereof is a critical aspect in the development of theories on criminal behaviors (Polaschek, 2019).

Although there is considerable emphasis placed on the role of cognitive distortions in sexual offending literature, there is also evidence suggesting that the dichotomous proactive and reactive criminal thinking is involved in sexual offending (Walters, 2009; Walters et al., 2014). Walters evaluated the PICTS with a sample of individuals convicted for sexual offenses and found that the proactive-reactive model is appropriate for evaluating the criminal thinking styles of offenders sentenced for crimes of a sexual nature as well as demonstrated support that proactive thinking has more involvement in sexual offending than reactive criminal thinking (Walters, 2009). A later study exploring the use of the PICTS for predicting recidivism in persons convicted of a sexual offense found that General Criminal Thinking (GCT), Reactive (R) and Entitlement (En) scores all correlated significantly with general recidivism (Walters, et al., 2014).

Although offense supportive cognitive distortions and criminal thinking styles are distinct modalities of interpreting stimuli they become interactive determinants of each other through an individual's distinct cognitive patterns or belief systems (Walters, 1990; Helmus et al., 2013). Cognitive distortions and criminal thinking styles can be defined by offense specific behaviors as well as how they predict, perpetuate, and maintain criminal behaviors such as violent or sexual offenses (Helmond et al., 2015; Polaschek et al., 2009; Oostermeijer, 2017). They each can be placed in the same context, such as violence. For instance, reactive thinking can be conceptualized within reactionary aggression, which is perpetuated by defensiveness, and possibly encouraged by cognitive distortions such as blaming others or assuming the worst.

### **Current Study**

While there appears to be underlying schemas or thinking styles that are supportive of criminal behavior in general, identifying such thinking processes is integral to the prevention and treatment of violent and sexual crimes. It has been observed that attitudes supportive of sexual offending and/or rape significantly predict violent and general recidivism (Helmus et al., 2013) and therefore merit further exploration. Many sex offender treatment programs focus on the concept of cognitive distortions and dismantling excuses, justifications, denial, attitudes, and information processing errors while most violent offender programs address aggression and offense supportive cognitions (Murphy, 1990; O’Ciardha & Ward, 2013; Polaschek et al., 2010; Papalia et al., 2019). It appears equally as relevant to explore cognitive distortions in the management of individuals convicted of a sexual offense as it is to those convicted of a non-sexual violent offense (Mann & Shingler, 2006; Ward, 2000). Exploring cognitive distortions within an offender context offers significant benefit in that they describe beliefs and attitudes that may be targeted and if there are cognitions shared between offender types, understanding those cognitive elements may influence the effectiveness of treatment (Mann et al., 2010). As there has been prior demonstration of the shared cognitive patterns present in both populations it seems likely that there would be overlap of offense supportive cognitions as well as criminal thinking styles.

The current study seeks to address a gap in literature between high risk violent sexual and non-sexually violent offenders thinking styles through the exploration of cognitive distortions and criminal thought process that may be unique to each specific crime. Proactive and reactive criminal thinking may be key to understanding criminogenic needs of each type of offender (Mann et al., 2010; Walters, 2006, 2007, 2008; 2016, 2020; Walters, et al., 2009). Additionally,

previous research suggests that cognitive distortions assist in perpetuating offending behaviors as well as moderately support attitudes endorsing rape and/or sexual assault across offender type (Chambers et al., 2008; Maruna & Mann, 2006; Sigre-Leiros, 2014; Mann et al., 2010).

The purpose of the study is twofold: 1) to compare proactive and reactive criminal thinking styles between high-risk offenders who engage in non-sexually violent and sexually violent crimes; and 2) to assess if there are differences in cognitive distortions of women and children between those convicted of non-sexual violent offenses and those convicted of sexual offenses. It is hypothesized that offenders convicted of a non-sexual violent crime will endorse more items on the reactive scale while violent offenders convicted of a sexual crime will endorse more items on the proactive scale. It also hypothesized that violent and sexual offenders will not have significant differences in cognitive distortions supportive of rape.

## **Method**

### **Description of Sample**

Participants included male violent offenders convicted of a sexual offense and a comparative sample of non-sexual violent offenders matched on demographic and risk level variables. The total sample was comprised of 237 high risk offenders housed in a maximum-security prison in a Northeastern U.S. state. All participants were incarcerated adult males (aged over 18) with a mean age of 38.15 years old ( $SD = 10.48$ ). Almost half of the individuals in this sample were Black/African American ( $n = 126, 48.5\%$ ) with the remainder of the sample identifying as White ( $n = 86, 33.1\%$ ), Asian ( $n = 4, 1.5\%$ ), or Native American ( $n = 2, 0.8\%$ ). Most participants had never married ( $n = 141, 54.2\%$ ) or had separated or divorced from their partner ( $n = 49, 18.8\%$ ) or were widowed ( $n = 4, 1.5\%$ ), while fewer were currently married ( $n =$

22, 8.5%) or in a long-term relationship ( $n = 24$ , 9.2%). More than half of the participants did not have children ( $n=163$ , 69.4%).

Over half of the sample had a twelfth-grade education or GED ( $n= 141$ , 54.2%) with the remaining individuals having completed some college or an associate's degree ( $n= 42$ , 16.2%), ninth through eleventh grade ( $n= 38$ , 14.6%), or grades eight or below ( $n = 16$ , 6.2%). There was a small number of individuals with some post-graduate studies ( $n = 5$ , 1.9%). Prior to incarceration most of this sample was employed full time ( $n = 129$ , 49.6%) while 14.2% ( $n = 37$ ) were employed part time. 15% of participants ( $n = 39$ ) were not employed and had been looking for work.

There were more individuals convicted of a non-sexually violent crime ( $n = 139$ , 53.5%) while 40.8% ( $n = 106$ ;) of participants had been convicted for a sexually violent crime. The majority of the individuals incarcerated for a sexual offense for which data was available ( $n = 62$ ), had an acquaintance victim ( $n = 17$ , 27.4), followed by an extended family member ( $n = 11$ , 17.7%), friend of the family ( $n = 11$ , 17.7%) or a stranger ( $n = 12$ , 16.1%). There was a much smaller percentage of those who had offended within their family as either a step-parent ( $n = 6$ , 9.7%), parent ( $n = 5$ , 8.1%) or a sibling ( $n = 1$ , 1.6%).

## **Procedures**

Data was collected and interviews were conducted by a team of trained forensic psychology graduate students at the MA and PhD level with incarcerated individuals at a maximum-security prison in the Northeast United States who were anticipating release from custody. All eligible participants incarcerated for a sexual offense and the matched comparison sample were informed of the study by the site coordinators and upon agreement of participation, research assistants began the informed consent process. Participants completed self-report

measures including the Psychological Inventory of Criminal Thinking Styles (PICTS; Walters, 1995) as well as the MOLEST and RAPE scale (Bumby, 1996). At the time of interviews, incarcerated individuals were asked for consent to review electronic files and the information was coded by student research assistants. Participants received a debriefing form detailing the overall goals and purpose of the study.

### **Measures**

*Psychological Inventory of Criminal Thinking Styles (PICTS; Walters 1995).* The PICTS is an 80 item self-report scale that is rated on a 4-point Likert scale (strongly agree, agree, uncertain, disagree) The PICTS produces two eight item validity scales: Confusion revised (Cf-r) and Defensiveness-revised (Df-r) eight nonoverlapping 8-item thinking style scales: Mollification (Mo), Cutoff (Co) , Entitlement (En), Power Orientation (Po), Sentimentality (Sn), Superoptimism (So), Cognitive Indolence (Ci) and Discontinuity (Ds); four 10-item factor scales: Problem Avoidance (PRB), Infrequency (INF), Self-Assertion/Deception (AST), and Denial of Harm (DNH); two content scales: Current (CUR) and Historical (HIS); two composite scales: Proactive (P) and Reactive ( R ); and one general score: General Criminal Thinking (GCT). Seven of the eight PICTS thinking styles scales have been shown to load onto one of the two higher order factors identified as proactive (mollification, entitlement, power orientation, and superoptimism) and reactive (cutoff, cognitive indolence, and discontinuity). The reliability of the PICTS scales for incarcerated individuals is well established (Walters, 2002, 2006). Internal consistency (*a*) coefficient of .929 was obtained for the current study.

*The Bumby MOLEST and RAPE Scales.* Two lists of cognitive distortions that are derived from both clinical and research on the assessment and treatment of child molesters and rapists were

compiled in order to form the original 44-item MOLEST Scale and the 36-item RAPE Scale. Some of the items from the MOLEST and RAPE Scale were derivations from the Abel and Becker Cognitions Scale (Abel et al., 1989) and the Burt Rape Myth Scale (Burt, 1989) although none are exact replications. Items on the MOLEST and RAPE Scales are scores on a 4-point Likert-type scale ranging from “strong disagree” to “strongly agree”. This 4-point scale was chosen to prevent a neutral or indifferent response. Within each scale, responses are summed to a total score with high scores indicating more justifications, minimizations, rationalizations, and excuses for sexual interactions with children or the sexual assault of women. Bumby reported an internal consistency coefficient alpha of .97 for both the MOLEST and RAPE scales. Internal consistency (*a*) coefficient of .68 was obtained for the current study.

## Results

### Bumby MOLEST & RAPE

A series of independent-samples t-tests were run to determine if there were differences in cognitive distortions supportive of rape or molestation between high-risk violent sexual offenders and high risk non-sexually violent offenders. There were no significant differences in cognitive distortions supportive of rape between sexually violent offenders ( $M = 53.80$ ,  $SD = 14.95$ ) and non-sexually violent offenders ( $M = 49.11$ ,  $SD = 13.05$ ),  $M = 4.69$ ,  $CI [0.24, 9.14]$ ,  $t(153) = 2.08$ ,  $p = .039$ . Similarly, there were no significant differences in cognitive distortions supportive of molestation between sexually violent offenders ( $M = 54.70$ ,  $SD = 10.81$ ) and non-sexually violent offenders ( $M = 58.10$ ,  $SD = 14.06$ ),  $M = -3.39$ ,  $95\% CI [-7.36, .57]$ ,  $t(161) = -1.69$ ,  $p = .093$ .

### Psychological Inventory of Criminal Thinking Styles

A series of independent-samples t-tests were run to determine if there were differences in criminal thinking styles between high-risk violent sexual offenders and high risk non-sexually violent offenders. Violent non-sexual offenders had more proactive criminal thinking styles ( $M = 57.88$ ,  $SD = 17.22$ ) than violent sexual offenders ( $M = 50.14$ ,  $SD = 11.52$ ), a statistically significant difference,  $M = -3.39$ , 95% CI [-12.70, -2.80],  $t(-3.09)$ ,  $p = .002$ . There were no statistically significant differences for reactive criminal thinking styles between violent sexual offenders ( $M = 43.34$ ,  $SD = 12.57$ ) and violent non-sexual offenders ( $M = 46.60$ ,  $SD = 16.30$ ),  $M = -4.27$ , 95% CI [-9.14, .61],  $t(142) = -1.73$ ,  $p = 0.86$ .

**Table 1**

*Thinking Style Scales of the Psychological Inventory of Criminal Thinking Styles (PICTS) and Cognitive Distortions Supportive of Rape or Molestation (Bumby RAPE & MOLEST) by Offender Type*

Scale	Sexual Violent Offender M (SD)	Non-Sexual Violent Offender M (SD)	t- value	Significance
<b>Bumby RAPE</b>	53.80 (14.95)	49.11 (13.05)	2.08	0.039
<b>Bumby MOLEST</b>	54.70 (10.81)	58.10 (14.06)	-1.69	0.093
<b>PICTS Proactive</b>	50.13 (11.52)	57.88 (17.22)	-3.09	<b>0.002*</b>
<b>PICTS Reactive</b>	43.34 (12.57)	46.60 (16.30)	-1.73	0.086

\*  $p < .025$

### Discussion

The purpose of this research was to determine whether there were significant differences in psychological criminal thinking styles and cognitive distortions by offender type, specifically between high-risk offenders convicted for sexual and non-sexual violent crimes. Overall,

significant differences were observed between individuals convicted for a violent non-sexual crime and those convicted for a sexually violent crime on the Proactive scale, but no differences were found between offender types on the Reactive scale. Contrary to our hypothesis, we found that violent non-sexual offenders scored higher on the proactive scale of the PICTS than those who had committed sexually violent crimes. Prior studies utilizing the PICTS with individuals convicted for sexual offenses imply that proactive criminal thinking is more intimately involved in sexual offending than reactive criminal thinking and the differing findings from the current study indicate a need to understand factors that motivate offense-specific behaviors. Although the findings in the current study appear to contrast with prior research on proactive thinking associated with individuals who have committed sex crimes it also emphasizes the importance of differentiating offender types in efforts to identify underlying cognitive mechanisms of offense-supportive behaviors.

In previous studies, instrumental offenders were differentiated based on violent crime behavior and level of psychopathic traits, providing context for individuals convicted for a non-sexual violent crime in the current study to potentially be instrumental in nature as well as have high levels of psychopathic traits (Cornell et al., 1996). However, a lack of observed significant differences may also endorse prior studies that indicate reactive criminal thinking may have origins in low self-control or impulsivity, as such studies have found little group differences between adult males convicted of a non-sexual crime, those convicted of a sex crime against adults and individuals who have sexually offended against children (Perley-Robertson, 2016; Walters, 2017).

While the two-factor (proactive-reactive) model has been supported with a level of fit for modeling the criminal thinking of both non-sexually offending inmates and sexually offending

inmates, the results of the current study may provide further support for a lack of utility in the two-factor model to discern criminal thinking styles between those who sexually offend against children and those who are convicted of rape (Walters et al., 2009). Prior research has indicated that the PICTS scores do not successfully discriminate between current offense of child molestation and current adult rape/sexual assault (Walters, 2009). Rape and child molestation are not mutually exclusive crimes, as some individuals may commit both offenses. There is some evidence that individuals with a history of child molestation may score lower on the PICTS than those with exclusively rape charges (Knight & Thornton, 2007).

Future research may conceptualize this through the lens that sexual violence exists on a continuum and that both reactive and proactive thinking styles may fluctuate for one individual dependent on the intended victim. As the results of the current study are contextualized against the backdrop of previous studies it appears as though criminal thinking is relevant to both sexual and violent offending because of the antisocial component and the PICTS Proactive and Reactive scores can be referred to as psychologically meaningful risk factors wherein these consistencies may be relevant to future studies on risk management (Knight & Thornton, 2007; Mann et al., 2010; Walters et al., 2009).

The second hypothesis predicted that there would no significant differences in rape supportive cognitions between the two offender types, which was supported by observed effect size. These findings suggest violent sexual offenders and non-sexual violent offenders may share overlapping cognitive distortions that support the rape or molestation of women/children. The results also indicate that cognitive distortions supportive of sexual offending may be reflective of sexual violence as a continuum of behaviors and can be conceptualized through implicit theories (ITs). Therefore, perpetrators of both violent and non-sexually violent crime may endorse

rape/molestation cognitive distortions in efforts to explain or understand behaviors of others and interpret evidence, regardless of convicted offense. However, these ITs may not be accessible for introspection and those accessing them are unlikely to be aware of biases in information processing (O'Ciardha & Ward, 2013; Ward et al., 2006). However, when exploring the results of the current study it should be noted that there have been several critiques of the RAPE or MOLEST scale face validity. It has been suggested that these scales may be susceptible to a socially desirable response set as there may be motivation for participants to present themselves in a positive manner. It is possible that suppression of scores and lack of significant differences may have arisen due to this motivation as well as the transparent nature of this self-report instrument (Arkowitz & Vess, 2003).

It is of note that, while not significant, the violent offenders in this sample endorsed slightly higher means on the RAPE or MOLEST scales. This may suggest a further need to explore content differences in underlying offense-related schemas of rapists, child molesters and violent offenders. It may be that certain cognitive distortions associated with the MOLEST scale may be those that contributed to offending behaviors whereas for the sex offender group, even if the cognitive distortions were present, other schemas may be more relevant (Milner et al., 2005).

There are several limitations to be considered when interpreting the results and implications of this study. First, participants were high-risk male inmates, and the results may not generalize to low or medium risk offenders. The applicability of these findings to other participants and diverse settings is important for further research. Secondly, as the measures were based upon self-report, we cannot verify their responses and, in some instances, not all items were completed. Further, as a measure of social desirability was not administered it is unclear whether the desire to present oneself in a better or worse light impacted responses.

An additional consideration includes the discrepancies between the number of rapists, child molesters and non-sexual violent offenders. While violent offenders indicated more molestation-supportive cognitive distortions than individuals convicted for a sexual offense it is notable that data was collected after these offenders had completed treatment that individuals convicted of violent non-sexual crime had not. There were a larger number of individuals who had sexually offended against a child which may suggest differences in treatment effectiveness by sexual offense. The effectiveness of treatment for sexual offenses against children has been well documented through various therapeutic modalities such as Cognitive-Behavioral, Relapse Prevention, Self-Regulation, and group therapy (Bauman & Kopp, 2006; Ward & Hudson, 2000; Yates & Kingston, 2006). However, little research has been done on comparing treatment efficacy for reducing cognitive distortions supportive of rape or molestation with violent offenders.

In the most recent National Criminal Victimization Survey, on average less than 1% of sexual assaults ever lead to conviction, providing support that some of the non-sexual violent offenders may have been involved in a sex crime but not apprehended or convicted. It should be noted that up to 97% of federal criminal convictions are acquired by plea bargains, therefore it is possible that a portion of the violent offenders in this sample may have been apprehended for crimes of sexual violence but may have plead down (U.S. Sentencing Commission, 2018). A future direction for research should focus on exploring cross-over offenders to further specify how offenders convicted of a non-sexual crime may endorse cognitions associated with sexual offending.

Many sex offender treatment programs focus on the concept of cognitive distortions and dismantling excuses, justifications, denial, attitudes, and information processing errors while

most violent offender programs address aggression and offense supportive cognitions. As observed in other studies, individuals convicted of sex crimes have been found to commit nonsexual crimes as well as sexual offenses (Walters et al., 2014). The current study provides rationale for further reflection for treatment planning in terms of intervention protocols as well as risk assessment. The results suggest that both measures can be useful in assessing general antisocial component of both sexual and non-sexual offending. Therefore, in treatment planning there is utility in incorporating intervention protocols for proactive and reactive thinking for both offender types.

The results of this study indicate a need to incorporate the cognitive distortions well established in sexual offending literature into existing treatment modalities for non-sexually violent offenders. Violent offenders may benefit from therapeutic interventions directed at addressing cognitive distortions such as need for control, minimization, justification, grievance, or entitlement (Mann & Hollin, 2001; Ward, 2000). Future research on risk assessment should also be directed towards how cognitive distortions and criminal thinking styles may be predictive of future specific or crossover offenses. This will allow clinicians and researchers alike to conceptualize a framework of offenders by offense type while acknowledging the possibility of fluidity within criminal cognition as opposed to a heterogenic viewpoint.

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**Table 1***Criminal Thinking Styles Included in the Psychological Inventory of Criminal Thinking Styles*

	Description	Sample Item
Entitlement	To believe one is special or has individualized privilege	The way I see it, life owes me what I want.
Mollification	To excuse, rationalize, justify, or externalize blame for criminal behaviors	I never would have had to engage in crime if I had been raised wealthy.
Cutoff	To eliminate common cognitive restraints (disgust, moral distress, or fear of repercussions) to crime	When I am angry, I say, “who cares” and then engage in an irresponsible act.
Power orientation	The desire to exert power or control over one’s social environment	When I am not in control of the situation I feel anxious and need to gain control over those around me.
Sentimentality	To compensate for negative consequences of crime by performing “positive” acts	Even though I was involved in crime I was a pretty good person.
Superoptimism	The belief that the negative consequences of a criminal lifestyle can be avoided	The more I did not get caught, the less I believed the police would ever catch me.

Cognitive Indolence	The tendency to give uncritical thinking priority over decisive solutions	I tend to put off until tomorrow what I needed to do today.
Discontinuity	Easily sidetracked, incongruence and inconsistency of thought	Reviewing my life, I see that I did not possess the direction or clarity to find my purpose.

*Note.* Adapted/Retrieved from “Lifestyle Criminality and the Psychology of Disresponsibility,” by T. White, G. Walters, 1989, *International Journal of Offender Therapy and Comparative Criminology*, 33 (3), p. 257