Cognitive distortions in child molesters: Theoretical and research developments over the past two decades

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Received 5 September 2006; accepted 6 September 2006
Available online 12 December 2006

Abstract

Cognitive distortions have become an important focus for professionals working with child molesters since the early 1980s. In this paper, we describe and discuss both the theoretical and methodological developments of child molester’s cognitive distortions that have evolved over the past two decades. We conclude that although theory and research development has been a little slow in this topic, several interesting theoretical and methodological developments have been made in recent years. We describe how we believe such developments will further increase the conceptual clarity of cognitive distortions and provide some suggestions for other future developments in this field.

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Keywords: Cognitive distortions; Child molesters; Theory; Methodology; Cognition

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doi:10.1016/j.avb.2006.09.005
1. Cognitive distortions in child molesters: theoretical and research developments over the past two decades

What sort of thinking occurs in men who sexually molest children? Do they think sexual relations with children are legitimate in some instances or do they know sexual offending against children is wrong but choose to offend nonetheless? Not surprisingly the role of the offenders’ cognition, or thinking, in child molestation is recognized as an important area for scientific inquiry. In fact, virtually all contemporary theories of child molestation etiology accord a key role to cognition (e.g., Finkelhor, 1984; Hall & Hirschman, 1991, 1992; Ward & Siegert, 2002). The basic assumption underlying these theories is that child molesters’ (CMs’) cognitions are distorted or different from non-molesters in important ways and that these differences help account for sexual offending. In this paper, we review the development of theory and research on cognitive distortions, the term that was first introduced to describe child molesters’ distorted thinking by Abel and colleagues in the early 1980s. We track the progress made in conceptualizing and studying cognitive distortions over the past two decades, and outline recent departures from traditional stances and methods that provide impetus for increasing research and clarity in this important area.

Our paper proceeds as follows. First, we describe the conceptual birth of cognitive distortions and outline some definitional problems stemming from the “early years.” Second, we describe theoretical developments concerning CMs’ cognitive distortions and identify important improvements that have evolved. Third, we examine the traditional approach to researching cognitive distortions over the past two decades and highlight common measurement problems. Fourth, we outline recent innovations in research approaches that challenge traditional notions and provide greater clarity to cognitive distortion theories. Finally, we summarize our main arguments and conclude with suggestions for future progress in the field. We do not aim to exhaustively review the cognitive distortion literature; instead, we confine ourselves to the illustration of cognitive distortion theory and research evolution generally, giving relevant examples where possible.

2. Anything goes: defining cognitive distortions

The term cognitive distortion was first used in the sexual offending literature in the early 1980s when Gene Abel and his colleagues applied the concept to CMs. When first introducing the term Abel, Becker, and Cunningham-Rathner (1984) simply referred to cognitive distortions as, “cognitions or belief systems” (p. 98), but in a later description Abel and his colleagues broadened the definition to include, “internal processes, including the justifications, perceptions, and judgments used by the sex offender to rationalize his child molestation behavior” (Abel et al., 1989, p. 134). Of what significance are these early definitions? In short, because Abel et al.’s definition of cognitive distortions were necessarily broad (since little work had been conducted to clarify their exact nature), the literature that followed was plagued with vague and inconsistent usage of the term (see Beech & Mann, 2002). For example, researchers used the label cognitive distortion to refer to “maladaptive beliefs” (Ward, Hudson, Johnston, & Marshall, 1997), “justifications” (Abel et al., 1989), “rationalizations” (Neidigh & Krop, 1992), “defensiveness” (Rogers & Dickey, 1991), and “minimizations” (Murphy, 1990). Even relatively recent attempts to provide rigorous definitions of the term cognitive distortion appear to have suffered from over-inclusiveness at the expense of specificity. For example, Bumby (1996) stated:

Cognitive distortions related to sexual offending are learned assumptions, sets of beliefs, and self-statements about deviant sexual behaviors such as child molestation...which serve to deny, justify, minimize, and rationalize an offender’s actions (Bumby, 1996, p. 38).

The problem with such an all encompassing definition is that the term cognitive distortion could be applied to a variety of different cognitive phenomena. For example, the term may reflect implicit schema, motivated self-deception, or post-offense impression management. Moreover, one might begin to ask how conscious each of these phenomenon are, and when (if at all) they played a part in sexual offending (Beech & Mann, 2002).

The cognitive distortion literature has been plagued with conceptual clarity problems over the past two decades (see Gannon & Polaschek, 2006, for a review). Nevertheless, a common hypothesis has prevailed throughout that CMs’ cognitive distortions represent, at least in part, some type of distorted belief structure (e.g., Bumby, 1996; Marshall, Anderson, & Fernandez, 1999; Saradjian & Nobus, 2003). Throughout this paper, we use the term distorted beliefs hypothesis to refer to the hypothesis that CMs’ offense supportive statements reflect the presence of distorted belief structures. We use the term cognitive distortion more globally to refer to offense-supportive statements, since we cannot be sure that all offense-supportive statements are driven by beliefs of an offense-supportive nature.
3. Theoretical developments

Despite the obvious appeal of understanding the role of cognition in sexual offending there is a relative dearth of specific explanatory theories. We recognize that the sociological and criminological literature have proffered broad theories for explaining the development and maintenance of cognitive distortions amongst offenders but these do not focus specifically upon child molesters (see Sykes & Matza, 1957; Yochelson & Samenow, 1976 for examples). In this paper, we choose to focus on three main psychological theories that have been offered to help explain child molesters’ cognitive distortions: Abel’s early theory (articulated across a number of sources, with various collaborators since 1984), Ward’s implicit theories (ITs; Ward, 2000; Ward & Keenan, 1999), and Ward, Gannon, and Keown’s (2006) judgment model of cognitive distortions, which updates the implicit theory model of cognitive distortions. A schema-based theory has also been presented by Mann and Beech (2003) but it has been argued elsewhere that this model has the potential of being a Level 1 theory and so we do not discuss it in detail here (see Ward, Polaschek, & Beech, 2005).

In the section that follows, we briefly describe each of these theories and discuss their relative contributions to the field with reference to epistemological criteria. Epistemological criteria refer to a set of established principles, used by theorists, to make judgments about the adequacy of theories; including psychological theories (see Hooker, 1987; Newton-Smith, 2002; Ward et al., 2005; Wilson, 1998). In brief, these principles include: (a) empirical adequacy (i.e., is the theory supported empirically?); (b) internal coherence (i.e., does the theory integrate key constructs in a logical and consistent manner, or does it contain inconsistencies? If logically inconsistent this may result in a theory that is unfalsifiable); (c) explanatory depth (i.e., does the theory outline and explain deep underlying mechanisms?); (d) heuristic value (i.e., does the theory generate new predictions, research and knowledge? In the forensic setting this may also refer to the theory’s ability to generate new and empirically supported treatment interventions); and (e) unifying power (i.e., does the theory combine previously separated theories to create new insight into the field of inquiry in question?). It is important to note here that, although ultimately, we expect all good theories to show empirical adequacy, when such information is unavailable for a new theory, or all theories appear adequate on this dimension, it is necessary to look to the other key criteria when engaging in theory comparison.

3.1. Early theory

Abel and his colleagues provided the earliest theoretical account of cognitive distortions in a series of published papers (Abel et al., 1984; Abel, Becker, Cunningham-Rathner et al., 1984; Abel et al., 1989; see Ward et al., 2005, for a summary). Abel and colleagues used social learning theory to propose that in normal development boys learn to inhibit sexual arousal to inappropriate, socially disapproved of stimuli. For some reasons (not directly outlined), a small number of boys fail to learn these normal inhibitory mechanisms and as a consequence develop into men characterized by sexually inappropriate ideals and practices. Abel and colleagues proposed that in order for these men to deal with the mismatch between their own inappropriate sexual behavior and societal views about appropriate sexual behavior they begin to develop unusual pro-sexual offending beliefs that frame their actions and thoughts as being more acceptable.

Abel et al.’s account of both the development and structure of cognitive distortions left significant room for interpretation. For example, as one of us has argued elsewhere (Gannon & Polaschek, 2006), it is unclear whether Abel and his colleagues were arguing that offense-supportive beliefs arose from cognitive dissonance (Festinger, 1957) or from some other unspecified process that created more global and pervasive beliefs. Abel and colleagues also developed a transparent questionnaire to measure the strength of CMs’ “idiosyncratic belief system of cognitions” (p. 139) that contained general items such as “Having sex with a child is a good way for an adult to teach a child about sex” (Abel et al., 1989). However, it is hard to know exactly how Abel and his colleagues conceptualized CMs’ offense-supportive beliefs since they never gave any concrete account of their structure. Thus, Abel and his colleagues did not clearly specify the mechanisms responsible for developing cognitive distortions; a problem that appears to indicate a lack of explanatory depth.

In summary, then, Abel’s description of how offense-supportive beliefs developed implied a process of cognitive dissonance, yet was not specific enough to allow any real in-depth discussion of the mechanisms underlying cognitive distortion development.

A novelty of Abel’s overall cognitive distortion theory, however, was his unification of social learning theory with CM cognition; in other words, his theory has the epistemological strength of unifying power. Nevertheless, such
unification was not explained in enough detail for researchers to gain a clear and detailed conceptualization of cognitive distortions (i.e., once again, there is evidence of poor explanatory depth).

Abel and colleagues’ early cognitive distortion theory has played an extremely important role in generating interest in the study of cognitive distortions. For example, the questionnaire method first used by Abel et al. (1989) was adopted by various researchers interested in assessing CMs’ cognitive distortions (e.g., Bumby, 1996; Hanson, Gizzarelli, & Scott, 1994; Nichols & Molinder, 1984), and until recently was typically the only method used to assess CMs’ cognitive distortions. In addition, Abel’s early theory played an extremely influential role in directing attention towards attempting to modify cognitive distortions during CM treatment. Nevertheless, although Abel’s works appears to have held heuristic value since it has facilitated inquiry into previously untouched arenas of research and treatment, the ensuing research did not necessarily further clarify Abel’s original stance. For example, poor conceptual clarity (i.e., a lack of explanatory depth) left it almost impossible for early researchers to define and measure cognitive distortions clearly and consistency (i.e., weak empirical adequacy) and this is a problem which is only just being addressed by researchers.

3.2. Implicit theories

Abel’s theory was the only theoretical and psychological proposal available to explain child molesters’ cognitive distortions until Tony Ward’s theoretical offerings proposed relatively recently. Ward (Ward, 2000; Ward & Keenan, 1999) provides a somewhat different conceptualization of cognitive distortions that differs from Abel’s in four main ways. First, he views cognitive distortions from a social cognition perspective, which emphasizes the unconscious and implicit nature of humans’ beliefs. Second, he hypothesizes that CMs’ beliefs are developed during childhood (i.e., a long time before offending). Third, he details hypotheses about both the content and structure of CMs’ beliefs. Finally, he hypothesizes that CMs’ beliefs distort social information in an offense-supportive manner to produce sexual offending behavior.

In brief, Ward argues that CMs’ offense-supportive beliefs are the product of implicit schemas or theories (ITs) that CMs use to make sense of their social world. Unfortunately, for CMs the content of their guiding theories is hypothesized to be offense-supportive, which means CMs’ attention is drawn to offense-supportive social information and ambiguous social information is interpreted in offense-supportive ways. Ward proposes that CMs develop theories of the world containing anti social content largely as a result of childhood adversity. For example, Ward argues that being physically beaten as a child can lead to the development of beliefs and rules that are adaptive and useful during childhood (e.g., “all adults are hostile, stay away from them”). However, once the child reaches adulthood these very same beliefs can be maladaptive, since they may result in an adult who is fearful of other adults and feels only capable of socializing with children. Drawing upon evidence from a variety of cognitive distortion self-report studies and questionnaire measures (which we later critique and discuss in more detail), Ward hypothesizes that five implicit theories are revealed in CMs’ cognition: children as sexual beings, nature of harm, dangerous world, entitlement, and uncontrollability.

Children as sexual beings. CMs who hold this IT are hypothesized to hold core beliefs that children are inherently sexual and enjoy having sexual relations; even with adults. Seeing children through this sexualized lens is thought to bias processing of innocent childhood behaviors. For example, a child climbing onto an adult’s lap or showing affectionate behaviors such as kissing would be interpreted as “sexually knowing”. Because children are naturally sexual, little harm is believed to occur from child–adult sexual contact (see below; nature of harm).

Nature of harm. There are two main variants of this IT. CMs who hold the first variant are hypothesized to conceptualize harm along a continuum in which only physically aggressive acts are viewed as really harmful. For example, a CM may believe that, because he did not have to hold his victim down, his offense was relatively harmless compared to a CM who tied up his victim. CMs who hold the second variant of this IT are hypothesized to see sex as being a natural inoffensive act (i.e., they will also hold the children as sexual beings IT), thus sex is unlikely to harm even very young children. A CM holding this latter IT is likely to downplay or ridicule wider society’s concern over the harmful effects of child molestation.

Dangerous world. CMs that hold this IT are hypothesized to view their social world as being excessively hostile, filled with individuals who are likely to exploit and reject them at any opportunity. There are two slightly different variants of this IT. CMs holding the first are hypothesized to also view children as being hostile and rejecting. Thus a way of dealing with such threatening children may be to “put them in their place” through sexually abusing and
controlling them. CMs that hold the second variant are hypothesized to view children as being the only safe haven in a world full of hostile rejecting adults. Put another way, these CMs see children as the only safe and loving individuals with whom they can have a sexual relationship.

**Entitlement.** CMs hypothesized to hold core beliefs of entitlement are likely to see themselves and their needs as paramount in comparison to other less worthy groups of people such as children. As a consequence, CMs holding the entitlement IT are likely to see themselves as being entitled to fulfill their sexual needs whenever they chose and with whoever they choose; even if the recipient is a child.

**Uncontrollability.** This IT is hypothesized to rest upon core beliefs that humans are out of control and unable to exert their own influence in the face of more powerful urges and emotions. A CM holding this IT is hypothesized to explain his sexual offending as having been triggered by some uncontrollable factor such as sex drive, drugs, alcohol, or an extremely stressful or euphoric experience.

The strength of Ward’s IT theory, in comparison to Abel’s earlier offerings, falls mainly in the areas of explanatory depth. For example, Ward more fully explains the origins of maladaptive belief development in a convincing and coherent manner (good explanatory depth). As a whole, Ward’s theory also appears to be more focused than Abel’s, since he limits his predictions to the maladaptive belief mechanism associated with cognitive distortions. This could be too simplistic, however, since there are likely to be a number of difference etiological pathways explaining the development of cognitive distortions. There are some inconsistencies present also (i.e., a lack of internal coherence).

For example, how do ITs with a non-sexual focus get translated into sexual offending actions?

Ward has adapted some of the key components of social cognition to explain CMs’ cognition (i.e., there appears to be a strong unifying framework or power). For example, he argues that a CM’s offending history is strongly connected to the development and extensiveness of offense-supportive ITs. Put simply, those CMs with an extensive offending history (i.e., extrafamilial CMs) are hypothesized to hold more pervasive ITs than CMs with less extensive sexual offending histories (i.e., intrafamilial CMs). This hypothesis uses basic social cognitive assumptions (i.e., that schema are self-fulfilling and strengthening) to make predictions as to why some CMs’ ITs may be more prevalent than others.

It should be noted, however, that all of the strengths noted above do not always necessarily translate into empirical adequacy. For example, as adults Ward et al. (2006) hypothesize that these individuals may develop enduring and pervasive beliefs that portray most adults in their social world as hostile. As we have already noted, however, it is
possible for an individual to hold enduring appropriate beliefs, but make errors in the evaluation of social information that result in temporary offense-supportive beliefs. For example, a man may reach the temporary false belief that a child is interested in sex with him because she asks questions about sexual relationships – in other words – he may not reason effectively in this particular situation and fail to consider the wider available evidence (i.e., that the child is asking because she is innocent, and genuinely interested in knowledge attainment).

Values. In the JMCD, values represent experiences or attributes held to be of particular worth to an individual that motivate a person’s actions. Individuals’ value judgments are linked directly to their day-to-day goals. For example, an individual may decide to take a course in business management to start a successful business and achieve a valued sense of mastery. In short, values are what we have referred to elsewhere as primary human goods (see Ward & Stewart, 2003 or Kekes, 1989): that is, intrinsic human needs required for ultimate psychological well-being and happiness. CMs, like all humans, instinctively seek a range of primary human goods. The universal range of primary human goods needed for psychological wellbeing include physical wellbeing, the experiences of relationships, mastery, competency, spirituality, rewarding work, and leisure (Diener & Myers, 1995; Emmons, 1999; Nussbaum, 2000). Frequently, CMs lack the capabilities or social supports needed to obtain their desired values or primary human goods in a socially acceptable manner. This can lead CMs to make maladaptive judgments in which they pursue their values, or primary human goods, in maladaptive and socially destructive ways (i.e., through sexual offending).

Ward et al. (2006) argue that maladaptive values are likely to accompany ITs, providing the ultimate driving force for sexual offending actions. For example, a CM holding the children as sexual beings IT may also highly value sex in comparison to other values or primary human goods. As a result of this combination he is likely to seek attainment of inappropriate sexual goals. In other words he will become more likely to seek out sex with children; an inappropriate action.

Actions. Actions represent an important strand of the JMCD used by Ward et al. (2006) to explain why some CMs appear to report offense-supportive statements in the absence of ITs. In brief, Ward et al. argue that some CMs’ offense-supportive statements are used by the offender to attempt to change how his actions and their motivating rationale are viewed by others (and perhaps even himself). For example, a CM may argue that he did not sexually abuse his daughter, but was merely checking for diaper rash. Interestingly, Ward et al. argue that these self-protecting mechanisms, if repeated often enough, may feed into and help form offense-supportive beliefs. In other words, a CM could begin to believe his previously unbelieved self-protective statements.

Ward et al. view CMs’ offense-supportive statements as being a direct consequence of different belief, value, and action judgment combinations. Thus, cognitive distortions may represent core misleading beliefs (i.e., ITs), temporary beliefs, problematic motivating values, or self-protecting mechanisms such as impression management.

It may take some time before the full epistemological criteria of the JMCD can be adequately assessed, given the recency of its formulation and complex nature. For example, we know little about the model’s empirical adequacy. Nevertheless, at present it appears to hold some heuristic value since it opens novel research avenues (e.g., analyzing CMs’ offense-supportive statements to examine the content of IT-related values). Treatment related heuristic value is dependent upon findings from future research, although we predict that there could be some interesting implications. For example, future therapy could begin to target not only ITs (see Mann & Shingler, 2006) but also their motivating associated values.

The JMCD is creative, since it unifies the philosophical rationality literature with cognitive distortion literature (unifying power). However, such creativity appears to have resulted in some explanatory gaps. More detail, for example, is needed on the action part of the model. Why do some men feel they must rationalize and justify their actions? Under what circumstances is this most likely to happen? It could also be argued that the JMCD is unable to explain which types of offenders are associated with the different types of distortion mechanisms outlined (i.e., poor explanatory depth). This is a substantial problem in the cognitive distortion literature broadly and is likely to be addressed in future theoretical work. Finally, within the JMCD, the term “action” is used in two different ways. On the one hand, it is used to refer to the sexual offending outcome of maladaptive beliefs and values. However, it is also used to describe the mechanism driving self-protective statements. On the surface, this dual focus appears to reflect some weakness of internal coherence in the JMCD. We believe, however, that it may simply be necessary to use other descriptors to label sexual offending actions (e.g., offense relevant behavior). This will eradicate any surface confusion and make the working components of the JMCD a little clearer.

Our examination of cognitive distortion theory development over the past two decades shows that, although there is still work to be done, some important progress has been made. Abel’s early theory provided a rather vague conceptualization of CMs’ cognitive distortions that lacked specific reference to the mechanisms producing cognitive
distortions. Yet this theory was the only guiding theory available to researchers and clinicians interested in CMs’ cognitive distortions for some 15 years. Ward’s IT theory developed just over six years ago provides a much more integrated and consistent account but a rather narrow one which focuses exclusively on maladaptive belief mechanisms. Ward’s use of social cognitive theory to explain both the structure and function of ITs is certainly a novel feature that appears to have promoted some interesting research methodologies. Finally, the very recent JMCD model has built on the strengths of the previous IT theory and focuses on explaining how maladaptive beliefs or ITs translate into sexual offending via values. As yet, we know of no research explicitly testing this theory, although we predict this will begin to filter through following formal dissemination.

4. Traditional methods of investigating cognitive distortions

Over the past two decades, cognitive distortion research has tended to follow the same track facilitated by Abel’s early works. That is, (a) analysis of CMs’ offense-supportive statements, in which CMs are typically asked to self-report their offense-supportive beliefs, and (b) questionnaire designs, in which CMs are asked to rate their acceptance of offense-supportive beliefs and these answers are compared to non-CMs. In the section that follows, we provide a brief overview of this research and evaluate the knowledge gained from these designs.

4.1. CMs’ offense-supportive statements

One technique commonly used to support the distorted beliefs hypothesis is analysis of CMs’ post offense statements. Abel et al. (1984) first set the ball rolling by providing seven basic cognitive distortion categories that they thought typified the thinking of CMs: (1) a lack of refusal indicates that children are willing sexual partners (2) adult–child sex is educational, (3) children keep sexual abuse secret because they enjoy it, (4) future society will learn to accept adult–child sexual relations, (5) fondling, without penetration does no harm to children, (6) children ask sexual questions because they want to experience sex, and (7) having sex with a child strengthens existing emotional bonds. The techniques used to elucidate these themes appear to have been largely anecdotal and obtained through clinical experience.

More formal techniques were later employed by Neidigh and Krop (1992). Using an open-ended questionnaire, they asked 101 CMs to provide “thoughts, ideas or beliefs” (p. 210) that acted as offense contributors. Three judges sorted the 357 statements provided into 38 categories ($\alpha=0.94$). Unsurprisingly, a number of categories seemed to fit loosely with Abel et al.’s (1984) previous observations (e.g., “there is no force involved, so this must be mutual”, “she didn’t say no or tell, so it must be ok with her”). However, a number of new categories also emerged (e.g., “lots of people do this so it can’t be all that bad”, “I can’t control myself so I’m not responsible”), further broadening the content database of cognitive distortions.

Hartley (1998) summarized the main justificatory themes that emerged from incestuous CMs’ offense descriptions using grounded theory, a technique that involves scrutinizing qualitative data for emerging themes in the absence of a priori hypotheses. Amongst other things, Hartley found that CMs were likely to try and reduce their responsibility for their crime through claiming, for example, that the child could control the sexual interaction (“...I only did what she would let me do”, p. 34), that the abuse started out as an innocent game (“But I assured her, or showed her that I wouldn’t hurt her in any way. It started out as a game”, p. 34), or that the abuse had not harmed the child (“If it was really that much bothering her, why would she lay down without being asked?” p. 34). Permission seeking cognitions were also identified, in which CMs typically used the child’s lack of resistance to justify their actions. From these accounts, Hartley concluded that CMs used these cognitions to overcome “...their internal inhibitions against offending throughout the history of the sexual contact with their daughters” (1998, p. 36 — italics in original).

Saradjian and Nobus (2003) examined the “pro-offending thinking” elements of clergy CMs’ therapy files in order to try and identify beliefs that may have helped support sexually abusive behavior; the analysis technique used was grounded theory (see above). Overall, Saradjian and Nobus identified a sequence of ten types of offense-supportive cognitions that occurred throughout the offense process. Prior to the offense, in addition to believing that they had special permission to offend sexually, CMs tended to believe that sexual offending would meet important needs, would be ethically acceptable, and would not be long-lived. Around the time of the offense itself, CMs tended to believe that their offending would cause no great harm and that the child played a role in the abusive relationship. Finally, post offense, CMs downplayed the seriousness of their actions, externalized offense responsibility, focused on positive
personal attributes so as to maintain self-esteem, and made reference to previous lack of offense detection to justify offense continuity. Saradjian and Nobus (2003) appear to have published one of the first content studies since Ward’s IT theory was introduced into the literature. Nevertheless, Saradjian and Nobus did not frame any of their identified distortions within an implicit theory (IT) framework, even though their identified belief categories appear to overlap with some IT categories (e.g., downplaying offense seriousness would fit under nature of harm).

Only recently have researchers explicitly used Ward’s IT framework to guide their interpretations of CMs’ post offense statements (Gannon, Keown, & Polaschek, in preparation; Marziano, Ward, Beech, & Pattison, 2005). For example, Marziano et al. (2005) set out to explore whether they could identify each of the five ITs proposed by Ward and Keenan (1999) in 22 CMs’ offense narratives. Overall, they identified a total of 2660 cognitive distortions, of which 28% fitted the IT children as sexual beings, 26% fitted uncontrollability, 22% dangerous world, 14% nature of harm, and 10% entitlement. Interestingly, over 80% of CMs (n = 18) appeared to articulate cognitive distortions fitting all five ITs and no alternative IT categories emerged from the analysis. This finding showed that Ward and Keenan’s (1999) proposed big five captured all identified cognitive distortions. Although these results are promising, however, it would be unwise to make too many generalizations from such preliminary data.

In summary, Abel appears to have introduced the assumption that CMs’ post offense statements provide some insight into their offense-supportive beliefs (see Abel et al., 1984; Gannon & Polaschek, 2006). In the two decades since Abel’s works, analysis of CMs’ post offense statements has become popular with researchers wishing to gain insight into offense-supportive beliefs (e.g., Hartley, 1998; Saradjian & Nobus, 2003). A core issue with such studies, however, is that we have no reliable way of knowing which statements truly reflect offense-supportive belief structures and which statements reflect normative post-hoc impression management strategies. Thus, we believe additional methods are needed to improve investigations of cognitive distortions.

4.2. Questionnaires

In a bid to quantify CMs’ beliefs and highlight the differences between CMs’ and non CMs’ beliefs, researchers have developed and tested cognitive distortion questionnaires. Typically, these questionnaires contain a number of offense-supportive statements, and respondents are asked to rate their agreement with each on a Likert scale; total scores across all items are then summed for analysis. The content of offense-supportive statements are typically derived from CMs’ self-reported cognitions.

The first CM cognitive distortion scale was developed by Abel et al. (1989), just a few years after they introduced the term “cognitive distortion” into the CM literature. The scale was named the Abel and Becker Cognitions Scale (ABCS), and contained 29 offense-supportive beliefs such as, “When a young child has sex with an adult, it helps the child learn how to relate to adults in the future.” Abel et al. (1989) found that their questionnaire was useful in the sense that it was able to statistically discriminate CMs from community controls overall. However, the scale did not statistically discriminate CMs from non-CM paraphilics, even though the measure had acceptable psychometric properties (e.g., overall test–retest reliability = 0.76). In a much later study, Tierney and McCabe (2001) also found the ABCS statistically differentiated CMs from community controls, but they too had problems differentiating CMs from other offender comparisons (i.e., sexual offenders against adults and non-sexual offenders). Other researchers, however, have reported more discriminatory power using the ABCS. For example, Stermac and Segal (1989) found that CMs had significantly higher cognitive distortion endorsements than both rapists and community comparisons. Similarly, Hayashino, Wurtle, and Klebe (1995) were able to statistically discriminate extrafamilial (but not intrafamilial) CMs from both non-CM offenders and community comparisons.

Concern has been voiced over the vulnerability of the ABCS to social desirability bias (Langevin, 1991; McGrath, Cann, & Konopasky, 1998; Murphy, 1990; Vanhouche & Vertommen, 1999). In other words, researchers believe that CMs may be consciously depressing their cognitive distortion endorsements because they know that their offense-supportive beliefs are socially unacceptable (Gannon & Polaschek, 2006). In apparent support of this, Langevin (1991) found that very few CMs were willing to respond affirmatively to ABCS items evidenced by the fact that, on average, over 75% tended to strongly disagree with the items. It is hard to know the real mechanism underlying such low endorsements, however, since no formal measure of social desirability was used.

Using some items derived from the ABCS, Bumby (1996) set about developing a questionnaire measurement of CMs’ cognitive distortions more robust to socially desirability bias. The resultant MOLEST scale contained 38 items rated using a 4-point Likert scale, had improved psychometric properties in comparison to the ABCS ($\alpha = 0.97$; test–
retest reliability over two weeks=0.84), and was not significantly correlated with socially desirable responding (measured using the Marlow–Crowne Social Desirability Scale; Crowne & Marlowe, 1960). Increased MOLEST scale endorsements were significantly correlated with number of victims in offenders’ offense histories. In terms of discriminative ability, Bumby reported that CMs made significantly higher endorsements of cognitive distortions on the MOLEST scale than both rapist and non-CM offender comparisons, who did not significantly differ from one another.

More recent uses of the MOLEST scale have also been positive. For example, Arkowitz and Vess (2003) found that civilly committed CMs made significantly higher MOLEST scale endorsements than rapists. Marshall, Marshall, Sachdav, and Kruger (2003) found that CMs made significantly higher endorsements than both non-CM offenders and community comparisons.

There is a range of less widely used scales developed to assess the cognitive distortions of CMs (see Vanhouche & Vertommen, 1999 for a comprehensive review). In the interest of brevity, we describe some exemplars here. Hanson et al. (1994) constructed the Hanson Sex Attitudes Questionnaire that contains six subscales rated using a 5-point Likert scale. Overall, only three of the scales were able to discriminate CMs from male batterers and community comparison groups (i.e., sexual entitlement, children are sexual, and sexual harm subscales); the batterers and community comparison group were not statistically distinguished from one another.

A more recent development is the Child Molester Scale (CMS; McGrath et al., 1998). The CMS is made up of 22 justificatory items regarding child molestation (e.g., “Children usually outgrow any problems resulting from a sexual experience they had as a child”) that respondents are asked to rate using a 5-point Likert scale. In a novel study which manipulated questionnaire context, McGrath et al. split CM respondents to compare those promised anonymity with CMs assured confidentiality, but who knew their answers were likely to be scrutinized for parole. Non-CM comparison groups were non-sexual offenders and male students. Overall, results showed that all CM groups endorsed significantly more cognitive distortions than the students. Interestingly, CMs promised anonymity were significantly more distorted than CMs assured confidentiality, who had similar scores to the non-sexual offender comparison group. In turn, both the CMs assured confidentiality and the non-sexual offender comparisons were significantly more distorted than the students. Unsurprisingly, during later use of the CMS, Tierney and McCabe (2001) were unable to demonstrate discriminant validity. In fact, they found that sexual offenders against adults endorsed more distortions than CMs!

All in all, we think it is fair to conclude that the questionnaire literature presents a mixed bag of findings when examined as a whole. However, even in instances where researchers found their questionnaire discriminated CMs from non-CMs, an important question arises about the clinical significance of the results. Upon close examination, it appears that many statistically significant differences between CMs and non-CM comparison groups appear to represent a difference of degree and not direction (see Gannon & Polaschek, 2006). To explain, CMs do not appear to be answering in a wholly different way to others; instead, they seem to be slightly less vehement in their disagreement. For example, Marshall et al. (2003) reported a mean total MOLEST score of 66 for their CMs and scores of approximately 52 for the comparison groups. Because total scores on the MOLEST range from 38 (all strongly disagrees) to 152 (all strongly agree; B. Marshall, personal communication, 11 November, 2004), this means both CMs and the comparison groups were tending, on average, to disagree with the cognitive distortion items.

We do not wish to downplay usefulness of the questionnaire method since it has obvious advantages for both assessment and treatment purposes. But we are intrigued by the mixture of findings reported from questionnaire research. In addition to differing scale properties and recruitment samples, we believe that there are two main areas in need of remedy. First, a significant problem with questionnaires (and analysis of CMs’ statements) is the reliance on self-report honesty; how prevalent is faking and how does faking affect cognitive distortion assessment? Second, the questionnaire approach assumes that CM respondents are fully able to accurately access and retrieve implicit belief structures. This assumption may be problematic since offense-supportive beliefs are implicit and may not be fully accessed consciously. The astute reader may ask why, if implicit beliefs are not consciously accessible on questionnaires, CMs are able to self-report them easily when asked open ended questions about their offending. There are many possibilities for this discrepancy. First, CMs may not be providing insight into their beliefs when talking of their offenses; instead, they could be impression managing. Second, CMs may be unknowingly providing information about their beliefs when they recount their offense, but may be unable to consciously access the same information for questionnaire self-report. Third, recounting one’s own offense may act as a type of prime, so that beliefs are revealed in their fuller form; by contrast, the artificial questionnaire context provides no priming (see Gannon & Polaschek, 2006, for a full discussion).
5. New methods of investigating cognitive distortions

So how are researchers beginning to address the problems inherent with traditional methods of investigating cognitive distortions? Recently, Gannon and her colleagues (Gannon, 2006; Gannon, Keown, & Polaschek, 2005) have begun to use a fake lie detector procedure (commonly termed a *bogus pipeline*) to investigate the prevalence of CM faking on cognitive distortion questionnaires. In other words, do the low endorsements so often reported in the literature reflect a deliberate tendency to cover up offense-supportive beliefs? A particularly novel feature of the studies we are about to describe is the presentation of overall cognitive distortion endorsements. In the questionnaire studies described previously total scores are *summed* making it difficult to conceptualize where on the Likert scale CMs are placing their responses (for example, what does a total score of 80 mean when scores may range from 38 to 152?). In Gannon’s studies, however, participants’ overall mean Likert response is calculated across items, making it easier to conceptualize where CMs are tending to place Likert responses as a rule. In other words, this method shows whether CMs are agreeing or disagreeing, on average, with the items.

In the first study, Gannon (2006) constructed a 14-item cognitive distortion scale designed to tap the children as sexual beings IT. She asked a small group of CMs to complete the scale under standard pen and paper conditions (i.e., CMs were free to impression manage). As hypothesized from the existing questionnaire research, CMs tended to disagree, on average, with the cognitive distortion items. A week later the same CMs were given a disguised version of the questionnaire to complete again. This time, however, half of the CMs were asked to complete the scale while they were attached to a fake lie detector that they were led to believe could detect dishonesty. Post manipulation credibility checks showed that CMs tended to believe the machine’s lie detecting capabilities (with 67% scoring >5 on a 7-point Likert scale). Surprisingly, however, upon re-administration of the questionnaire, lie detector CMs revealed no more cognitive distortions than their own previously low endorsements or controls CMs’ endorsements. These data suggest that CMs were *not* deliberately lowering their cognitive distortion endorsements when they first completed the questionnaire; and so did not support Ward’s (2000) theoretical predictions regarding ITs. However, because Gannon’s (2006) sample were mostly treated extrafamilial CMs or intrafamilial CMs (those hypothesized by Ward (2000) to have less opportunity to strengthen offense-supportive beliefs), Gannon et al. (in preparation) set out to explicitly test Ward’s study with untreated extrafamilial CMs. Using a similar methodology, she asked CMs to complete Bumby’s MOLEST scale under conditions in which they were free to impression manage. CMs’ mean endorsements under these conditions fell between disagree and unsure on the 5-point Likert scale. A few weeks later, upon re-administration of the questionnaire, CMs attached to the fake lie detector significantly *increased* their cognitive distortion endorsements compared to their own previous endorsements and that of the control group. In summary, unlike the CMs from the first study, these data suggest that untreated extrafamilial CMs were deliberately depressing their initial cognitive distortion scores; perhaps to create a more favorable impression. Interestingly, however, although cognitive distortions significantly *increased* when untreated extrafamilial CMs were attached to the lie detector, CMs didn’t, on average, begin to *agree* with the items. It is possible that CMs’ beliefs are so implicit, they cannot be fully accessed consciously but further research is needed to fully test this issue.

Several cognitive distortion studies are beginning to emerge that use more sophisticated methodologies to circumvent participant introspection. Mihailides, Devilly, and Ward (2004) set out to explicitly test Ward’s IT theory using an *implicit association test* (Greenwald, McGhee, & Schwartz, 1998) with CMs (offense characteristics unspecified). In brief, the implicit association task is an extremely robust method used to measure the strength of association between concepts stored in long-term memory (see Greenwald et al., 1998; Swanson, Rudman, & Greenwald, 2001). Mihailides et al. hypothesized that if CMs hold children as sexual beings, entitlement, and uncontrollability ITs, then they will strongly associate *children* and *sex* words, *entitlement* and *sex* words, and *loss of control* and *sex* words respectively. More specifically, CMs were expected to respond quickly to IT congruent pairings (e.g., children and sex words) and slower to IT incongruent pairings (e.g., children and non-sexual words) relative to comparison groups (non-sexual offenders and non-offenders). Overall, the results were promising; CMs held relatively stronger associations for both the children as sexual beings IT and the uncontrollability IT. For the entitlement IT, however, CMs’ strength of association was only stronger in comparison to the non offenders and not the offenders. This is the first controlled empirical research demonstrating that CMs hold strong associations between offense-supportive content.

More support for this conclusion has recently been provided by a further implicit association test conducted by Gray, Brown, MacCulloch, Smith, and Snowden (2005). In their study, however, they concentrated solely on the children as sexual beings IT (although they made no specific reference to Ward’s ITs). In short, Gray et al. measured the strength of...
association between children and sex concepts relative to adult and sex concepts in CMs \( n=18 \); who had committed “pedophilic offenses”) and a non-CM offender comparison group \( n=60 \). Gray et al. found that CMs were faster at categorizing children and sex words (e.g., school and climax) than adult and sex words (e.g., mature and climax), while non-CM offenders showed the opposite pattern of results. Using receiver operator characteristics (ROC) to quantify the implicit association task’s predictive power (i.e., how well do implicit association task scores classify CM group membership where 0.5 = zero prediction and 1 = perfect prediction), Gray et al. found that the implicit association task predicted CM classification at an impressive rate of 0.73.

In summary, we believe that the two implicit association task studies described above represent a significant achievement, since they provide information about CMs’ beliefs which is relatively untainted by CMs’ attempts to impression manage. However, whether implicit association tasks are supporting an implicit memory explanation of cognitive distortions or an explicit memory explanation remains to be empirically tested. Although encouraging, however, we believe that the results of implicit association task studies should not be over-interpreted. A strong association between, for example, children and sex words, does not necessarily indicate that CMs use this information to process and misinterpret children’s innocent behavior in a sexual way. There could be many other reasons that CMs hold strong associations between children and sex; for example, it may be that CMs are exposed to these associations more frequently from interacting with prison psychologists or talking about treatment programs. In order to fully support the concept of implicit offense-supportive beliefs, then, researchers need to be able to show that CMs’ beliefs lead to the misinterpretation of social information.

Researchers have been fairly slow to investigate the misinterpretation of social information. The first apparent analysis of CMs’ offense-related interpretations was presented by Stermac and Segal (1989). They asked CMs, offenders against adults, and three non-offending comparison groups to read through a series of vignettes describing adult–child sexual contact. Sexual contact was varied along four levels ranging from touching to full genital contact. In addition, the child’s described response differed along three levels (they either smiled, were not responsive, or cried and resisted). After reading through each of the vignettes, participants were asked to respond to a series of Likert-style questions designed to tap important abuse-supportive perceptions regarding child molestation.

Overall, findings showed that CMs believed there were more child benefits, more child responsibility, and less adult responsibility than the comparison groups. Interestingly, however, when the behavior of the child was unambiguously negative, (i.e., crying and resisting), the CMs’ responses appeared similar to the comparison groups. If these results were actually driven by IT-like structures, it could be the case that crying opposes the schema content so vehemently that it becomes impossible to reinterpret the information in an offense-supportive manner.

The design of this study is novel in comparison to previous traditional methods of assessing cognitive distortions, since it attempts to assess online errors of social perception. Stermac and Segal (1989) report that CMs’ responses to the vignettes were largely unrelated to socially desirable response bias. Nevertheless, we believe that this method still leaves plenty of room for CMs to consciously manipulate their responses. It is important to note here, however, that if beliefs were actually being tapped by this task, they could either be implicit or explicit belief structures.

A more recent study has attempted to further circumvent social desirability through assessing more automatic, unconscious, offense interpretations. Gannon, Wright, Beech, and Williams (2006) developed a short vignette describing an interaction between a child and an adult male (who ends up sexually abusing the child). Within the vignette, ten themes were planted that we hypothesized could be interpreted using an IT. For example, the child is described as whimpering during the abuse, which could be interpreted as sexual enjoyment (IT congruent), or as a sign of distress (IT incongruent). Twenty-eight CMs and twenty non-sexual offenders were asked to read through the vignette and were given innocuous questions to answer so as to disguise task aims. After a short time interval, CMs were unexpectedly asked to free recall the vignette and their responses were scrutinized for any IT consistent interpretations. The results were quite surprising: although CMs showed distorted recall for each of the themes, CMs hardly ever made IT congruent mistakes, performing at a similar level to the non-sexual offenders. Gannon et al. thought it possible that CMs may have seen through task aims and deliberately held back offensive IT congruent information in their recall. However, post-test follow up questions showed that CMs were often unaware of the full study aims (only 21% identified the full task aims).

There may be several reasons why Gannon et al. (2006) did not detect offense-supportive interpretations indicative of ITs in their study. First and foremost, their sample consisted of intrafamilial CMs, who, as we have mentioned previously, may not be the CMs most likely to hold ITs or offense-supportive beliefs. Alternatively, it could be that the method used did not provide the necessary conditions needed to fully detect offense-supportive beliefs. For example,
other areas of forensic research frequently use priming to ensure that belief structures are activated and highly detectable during artificial testing situations (e.g., Tiedens, 2001). Priming is one method yet to be used in the CM literature, which is surprising given that this method would fit perfectly with Ward’s social cognitive conceptualization of offense-supportive beliefs.

In an attempt to address this caveat we (Keown, Gannon, Polaschek, & Ward, in preparation) are currently testing a sexual priming technique for assessing both intrfamilial and extrafamilial CMs’ offense-related interpretations. In brief, we present CMs and various comparison groups with semi-naked pictures of young children to activate any offense-supportive beliefs. Then, during the encoding phase, we present participants with a series of ambiguous sentences (e.g., Katie showed her knickers while playing the card game). We test whether CMs interpret the ambiguous sentences in an offense-supportive manner by giving them a recognition test. During this test, CMs are given either an offense-supportive interpretation of the ambiguous sentence (e.g., Katie deliberately showed her knickers during the card game) or a benign interpretation (e.g., Katie accidentally showed her knickers during the card game) and are asked to make a time pressured recognition decision. Presumably, primed CMs who hold offense-supportive beliefs are more likely to recognize the offense-supportive interpretations of the ambiguous sentences. Since the study compares intrafamilial and extrafamilial CMs, this will also be an excellent opportunity to further test Ward’s theoretical predictions regarding IT pervasiveness across different CMs.

6. Treatment implications

Before drawing conclusions about our theoretical and research knowledge concerning cognitive distortions, it is worth presenting a brief overview of treatment progression in this important area. In brief, the overarching aim of treatment should be to provide practice that is grounded by current empirical evidence (McGuire, 2001). As we have already seen, Abel’s early theory, and the traditional research that followed performed a significant function in the CM literature since it identified offense-supportive cognition as a significant treatment need in CMs. Put simply, the distorted statements uttered by CMs, and the ability to discriminate CMs from others on questionnaire measures of distortion were enough to place offense-supportive cognition high on the priority of treatment providers in the Western world. Yet although cognition was pinpointed in treatment, we believe theoretical conceptualizations were poor, limiting treatment providers’ ability to adequately conceptualize and treat the underlying drivers of offense-supportive statements. For example, prior to Ward’s IT theory, treatment providers had only Abel’s theoretical framework to guide rehabilitative efforts with CMs. As we have already seen, this theory is open to much interpretation and was very likely prone to differing interpretations across treatment programs. Additionally, prior to Ward’s IT theory, treatment efforts centered upon restructuring CMs’ victim-specific beliefs, with little reference to the underlying structures producing such beliefs (Thornton & Shingler, 2001).

With the dawn of Ward’s ITs, CM treatment appears to have found a firmer foothold with which to conceptualize cognitive distortions. Therapists are moving towards targeting the core theories or schemas hypothesized to underlie offense-supportive statements (see Beech & Mann, 2002; Drake, Ward, Nathan, & Lee, 2001; Mann & Beech, 2003; Mann & Shingler, 2006). For example, using this method, therapists may aim to (a) educate CMs about the ways in which ITs or schemas function to skew their offense-related interpretations, (b) provide CMs with alternative interpretations of information they see as being offense-supportive, and (c) challenge the underlying IT or schema with highly IT-incongruent information (i.e., victim harm; Drake et al., 2001). While early self-report evaluations of this approach are promising (e.g., Thornton & Shingler, 2001), we believe constructive research programs using the new approaches we have described will further improve current treatment techniques. For example, it is possible that future treatment programs will move towards computerized techniques of pre and post assessment of cognitive distortions that incorporate a prime, a test of association, and a test of social information processing. Such a battery of tests would ensure that social desirability was curtailed, and that treatment providers gained the fullest possible picture of CMs’ offense-supportive beliefs. At present we need to know who is most likely to hold ITs, as well as the other mechanisms that may promote IT-like utterances. We believe future research on ITs (described above), and exploration of the JMCD will be beneficial for improving treatment.

7. Conclusions and future directions

In this paper, we have presented an overview of cognitive distortion theory and research over the past two decades. Overall, it appears that both theory and research have suffered a rather slow start in the literature. For well over a
decade, Abel’s early theory was the only guiding framework available to researchers interested in CMs’ cognitive distortions. This led to a preponderance of what we have termed “traditional methods” for understanding CMs’ cognitive distortions. These methods, of course, provide a valid starting point for understanding CMs’ cognitive distortions, but in isolation, and with no other theoretical framework, they leave many questions unanswered.

Just over six years ago, encouraging progress was made theoretically when Ward introduced the concept of ITs into the CM literature. This created a much more coherent framework for guiding traditional methods, and also for constructing more sophisticated research programs to try and provide a clearer picture of CMs’ cognitive distortions. As we have outlined already, methodological departures from traditional methods are relatively new. However, we strongly believe researchers should pursue such methodologies since they provide the most promising avenue for a fuller understanding of CMs’ offense-supportive cognition. This is not to say, however, that researchers should ditch traditional methods altogether. We believe that studies of this type are useful, but that there is room for researchers to design and interpret such studies using more recent theory. The most recent theoretical offering, the JMCD, is yet to be tested and so we see Ward’s ITs providing the strongest framework at present. For example, current questionnaires contain a mixture of offense-supportive statements that do not necessarily reflect latest theoretical developments (i.e., Ward’s ITs). Thus, it is perfectly possible that CMs hold only one or two ITs that, when averaged out over a large number of questionnaire items, do not become fully apparent during total score analyses. In an attempt to address this caveat we are currently developing a cognitive distortion questionnaire containing five subscales that tap each of the five ITs proposed by Ward and Keenan (1999). Such a questionnaire could then be paired with other less transparent techniques (e.g., a lexical decision task, or Stroop task) to try and unravel the mechanisms driving cognitive distortions. However researchers choose to proceed with cognitive distortion research, we believe the field is now gathering some momentum for making exciting discoveries that will change the way we view CMs’ cognition.

Acknowledgments

The authors would like to thank three anonymous reviewers for their insight and helpful comments on this paper.

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