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Affect Regulation as a factor in sex offenders.

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Abstract

Research and theory over the past 15 years indicate that affect regulation problems may play a role in the onset of sexual abuse. Affect regulation is often described as a developmental task that can be disturbed by attachment problems or traumatic experiences, potentially leading up to different psychological and behavioral problems. This review intends to integrate conceptual and empirical literature on affect regulation difficulties in adult male sex offenders. Specific attention is devoted to the role of affect regulation in the development of sexual offending and its link with other criminogenic factors, such as intimacy deficits and sex as coping. Furthermore, implications for psychotherapeutic practice are discussed. Most current treatment programs focus highly on cognitions and behavior and consider affect and emotion as being of secondary importance. Based on this review, recommendations for future research are made and important target areas for treatment are discussed.

Key words: affect regulation, emotion, attachment, sex offenders, sexual abuse

1. Introduction

Emotions are crucial for understanding the basic motivation behind human functioning. They drive our decisions and behavior, shape our interactions with others, and often influence our sense of self and general well-being. Current emotion theory emphasizes the adaptive value of emotions to enhance our effectiveness in pursuing our goals (Nyklíček, Vingerhoets & Zeelenberg, 2011).

“Adaptive emotions tell us what is important in a situation and act as a guide to what we need and want, but emotions can become problematic because of past traumas or because people are taught to ignore or dismiss them” (Elliot, Watson, Goldman & Greenberg, 2004, p. 3). Difficulties in regulation of affect and emotions are linked to different forms of psychopathology, such as depression and borderline personality disorder (McMain, Pos, Iwakabe, 2010) and many kinds of problematic behavior, such as alcohol abuse (Aldao, Nolen-Hoeksema & Schweizer, 2010), aggression and sexual violence (Day, 2009; Langton & Marshall, 2000).

Sexual offending is a widespread problem in human society, which causes many health problems and costs. Therefore, it is important to make treatment as effective as possible. Meta-analytic studies indicate that cognitive behavioural treatment of sex offenders significantly reduces general and sexual recidivism, although optimism is tempered by a lack of rigorous randomized control trials studies on treatment outcome in this population (Hanson, Bourgon, Helmus, & Hodgson, 2009; Lösel & Schmucker, 2005).

It has been noted that in general cognitive behavioral treatment models do not adequately address sexual offenders' difficulties at the level of affect regulation (Serran & Marshall, 2006; Howells et al., 2004; Serran & Marshall, 2006; Ward & Beech, 2006; Ward & Hudson, 2000). Recently, the role played by emotional states and maladaptive coping both at the level of the causes of sexual offending and during the psychotherapeutic process has become a topic of interest (Andrews & Bonta, 2010; Howells, Day, & Wright, 2004), but more investigation is required. Limited emotion regulation skills as well as problems dealing with difficult inner experiences has been discovered in offenders and are viewed as risk factors for sexual offending (Howells, Day & Wright, 2004; Serran &

Marshall, 2006; Ward & Beech, 2006; Ward & Hudson, 2000). Evidence suggests that sex offenders are likely to use ineffective coping styles when experiencing negative emotions, such as distracting themselves, worrying, impulsive emotional outbursts (Maniglio, 2011), and sexualized strategies (Whitaker, Le, Hanson, Baker, McMahon, Ryan, Klein & Rice, 2008). The self-regulation theory of Ward and Hudson (1998), which is widely known in sex offender treatment, describes how a life event and its subsequent appraisal (phase 1) can lead to a deviant sexual desire (phase 2). The authors acknowledge that the link between certain internal and external cues, and the desire to offend may reflect inappropriate learning, and a belief that abusive actions can fulfill their needs. Although indulging in sex and sexual fantasies is seen as a powerful but problematic mood regulation strategy, the focus of the model is on the regulation of behavior to accomplish one's goals (phase 3 to 9). Four different pathways are identified, depending on the wish of the offender to avoid offending behavior (avoidance goal) or not (approach goal) and the passive or active strategies used to achieve these goals. This current paper wants to expand the focus of clients' self-regulation difficulties by zooming in on phase 1 and 2 of Ward and Hudson's model, as well as the processes that might precede these phases.

To further our understanding of affect regulation difficulties in sex offenders and highlight the importance of looking at their emotional processing style, firstly the terms 'affect' and 'affect regulation' are clarified conceptually. Then, affect regulation is described as a developmental task that can be disturbed by attachment relationships or traumatic experiences leading to different psychological and behavioral problems. The main focus of the paper is to integrate the conceptual and empirical literature on affect regulation difficulties in sex offenders. To this end, we reviewed the literature investigating affect regulation as a dynamic risk factor in order to understand its link with other criminogenic factors. We searched in Web of Science database and Google Scholar for relevant articles published between 1996 and 2016, using the search terms 'affect (regulation)', 'emotion (regulation)' and sex offenders, sexual offending/abuse.

2. Affect and Affect Regulation: conceptual clarification

In this paper, the term affect is used to capture the holistic organismic experience. In general in the literature on emotion, affect is used broadly to include stress responses, emotions and moods (Gross, 2015). Whereas emotion involves more specific responses typically elicited from the appraisal of significant events, objects and/or persons, the term affect involves also undifferentiated feeling states (Kennedy-Moore & Watson, 1999) and implicit meanings that lie in bodily felt senses (Gendlin, 1979, 1996). Finding meaning in one's experience is related to healthy functioning. It makes it possible to understand oneself, to regulate one's behavior and to relate to others (Kennedy-Moore & Watson, 1999). Considering that affect encompass a greater range of organismic experience, the term affect and AR will be used to refer to and cover emotional functioning in the rest of the paper. In line with the conceptualization of affect, affect regulation is seen to be the process of regulating the whole range of affects, from sheer emotions to undifferentiated feeling states and organismic experience (Kennedy-Moore & Watson, 1999). Accordingly, emotion regulation is thought to refer to the regulation of specific emotions, with affect regulation embodying emotion regulation. Emotion Regulation (ER) models tend to focus on strategies individuals use in order to implement some kind of influence on the onset the emotion or the arousal of the emotion (Gross, 2015). Models of Affect Regulation (AR), on the other hand, ask for a broader perspective and the inclusion of different interrelated dimensions of regulation. Multidimensional models of AR try to capture the whole complexity of emotional functioning. In these models, AR is conceptualized as the typical or dispositional ways in which individuals react, understand, regard, and respond to their emotional experience. The *Process Model of Affect Regulation* of Watson and colleagues (Elliot et al., 2004; Kennedy-Moore & Watson, 1999; Watson & Prosser, 2004) is a good example of a framework that focuses on the person's AR capacities. According to this model, adaptive AR involves 1) awareness of emotional experience and accurate labeling of different emotional states, 2) the flexible use of ER strategies to modulate arousal, 3) the flexible use of strategies to modulate the expression of emotion, 4) acceptance of the emotional experience and 5) the capacity to reflect on emotions and

experience to solve problems in living (Kennedy-Moore & Watson, 1999; Watson & Prosser, 2004). Other examples of this approach are Gratz and Roemer's (2004) clinically informed model of ER or Berking and Whitley's (2014) Adaptive Coping with Emotions-Model. Both these models include dimensions that are similar to these described above.

Although different views and definitions of emotion and affect regulation still exist, there is a growing agreement on some key aspects of AR. Affect regulation is seen as key to healthy functioning with people capable of engaging optimally on each dimension to process and regulate their affective experience (Berking & Whitley, 2014; Elliot, ea. 2004; Gratz & Roemer, 2004; Gross, 1998; Kennedy-Moore & Watson, 1999).

It has been noted that models of AR no longer primarily emphasize the elimination, control, or reduction of negative emotion (Tull & Aldao, 2015) as a result of numerous studies that show that efforts to repress or avoid emotions may have paradoxical effects on subjective well-being and even physical health (John & Gross, 2004). Both upward and downward regulation capacities of both positive and negative emotion are considered to be essential for adaptive AR (Kennedy-Moore & Watson, 1999; Gross, 2014). We will now turn attention to the role of early attachment experiences with primary caregivers on individuals AR capacity.

3. Affect regulation as a developmental task

AR is one of the earliest developmental tasks. AR (dis)abilities grow from an interaction between constitution and environment (Siegel, 2012; Tull & Aldao, 2015). Research in the field of developmental psychology highlights the importance of early relationships in the development of AR capacities (Fonagy, Gergely, Jurist & Target, 2002; Kiel & Kalomiris, 2015; Schore, 2003). Therefore, attachment theory provides a framework for understanding the development of AR capacities (Cassidy, 1994; Mikulincer, Shaver & Pereg, 2003; Wallin, 2007). According to attachment theory, caregivers foster affect and self-regulation.

3.1. Awareness and labeling

To explain the development of the capacity to label and be aware of experience, Fonagy et al. (2002) suggest that the attachment context provides the setting in which the infant can develop a sensitivity to self-states. When a child's constitutional or physical self is in a state of arousal, there are associated non-verbal and vocal expressions. Ideally the caregiver resonates with these, reflects on her internal experience and generates an appropriate responsive reaction. The internalization of the caregiver's mirroring response of the infant's distress allows the child to create a psychological self by developing a second-order symbolic representational system for intentional mind states. Fonagy describes the development of the capacity to label experiences that come into awareness in the child as a result of intense physiological sensations. The predictable contingent responding of the caregiver enables the child to understand his own inner state, which is an important aspect of AR. In contrast, childhood emotional invalidation may lead to chronic emotional inhibition (Krause, Mendelson & Lynch, 2003). This growing self-awareness is an intermediate step to developing self-reflection and the understanding of self and others as independent psychological entities. This reflective functioning or mentalizing capacity is defined as the ability to understand the behavior of self and others in terms of their mental states (Fonagy & Target, 1997; Fonagy et al., 2002, p 126-127).

3.2. Modulation of arousal and Expression

To internalize an ability to contain their experiences and to modulate their intensity, children need to be convinced of the protective presence of the primary care givers who provide attuned responses to the child's experience. Children normally seek proximity for protection from physical and psychological threats as well as to alleviate distress (Bowlby, 1998; Farnfield & Holmes, 2014; Mickulincer, Shaver & Pereg, 2003). In contrast, when attuned responses from attachment figures are lacking, children will develop secondary attachment strategies, other than proximity seeking, to ensure their needs for protection, comfort, safety, closeness, predictability are met (Crittenden, 2008, Baim & Morrison, 2011). In these circumstances children may learn either to suppress and

ignore emotions and inner experiences (also known as deactivating strategies), or to exaggerate their own emotions of fear, anger, sadness or hopelessness (called hyperactivating strategies) (Cassidy, 1994; Crittenden, 2008).

This process is further illuminated in Crittenden's (2006, Crittenden & Landini, 2011) Dynamic-Maturation Model (DMM). She argues that mental strategies to predict and cope with dangerous circumstances are reflected in patterns of attachment. There are three main categories, Type A, B and C, of strategies to cope with potential danger. These 'self-protective strategies' vary dimensionally (rather than categorically) in terms of the relative use of cognitive-contingent information or affect-arousing information to organize behavior. Type A strategies are based on minimizing demands on their caregivers because they have learned that their distress is likely to be consistently ignored or rejected. These children learn that their displays of negative affect alienate their caregiver. They are preoccupied with the perspectives, desires and feelings of others in order to prevent conflict. Thus, these infants will learn to ignore their internal feeling states, and will consistently inhibit the expression of negative affect and dismiss their own needs and inner experiences. These infants use a cognitive strategy. In contrast Type B strategies are characterized by receptive openness to cognitive as well as affective information. In Type B, there is an ongoing internal dialogue regarding the competing needs of the self and the other. These strategies are developed in safe circumstances in contact with well-enough attuned caregivers. On the other hand, Type C-strategies are affectively-organised, especially around anger, fear and the desire for comfort. These infants develop these strategies based on the unpredictability of the attuned response of the caregiver. They become preoccupied with their own perspectives, hyperactivate their emotional states and are focused on justifying the self to the exclusion of the other. Thus they dismiss the other. Crittenden (2006) further states that the more insecure and dangerous the context, the more extreme and variable the strategies will be (Baim & Morrison, 2011; Farnfield & Holmes, 2014). If milder strategies fail to gain comfort or safety, the child will develop more extreme strategies. By adolescence there is a further expansion on the A-side with a focus on meeting comfort needs from

relative strangers or withdrawing from the possibility of intimacy and attempting emotional self-sufficiency (promiscuity/self-reliance). On the C-side, there is a further developmental expansion during puberty to obsessive preoccupation with revenge or a display of extreme vulnerability (punitive/seductive).

3.3. Acceptance and Reflection

According to attachment theory described above, both children who developed A or C strategies have learned to view emotions in terms of their dysfunctional and interfering aspects (Mikulincer & Shaver, 2007). They respectively learned that the expression of emotions are subject to rejection and punishment, and thus should be hidden or suppressed (A) or viewed the experience of emotions, in particular negative emotions, as overwhelming, unbearable and unmanageable (C) (Cassidy, 1994; Crittenden, 2008; Mikulincer & Shaver, 2007). Attachment avoidance and anxiety are related to non-acceptance of emotions, whereas attachment security is related to positive attitudes toward emotions. Children who grow up in safe circumstances with attuned caregivers learn at an early age that it is good to fully experience and flexibly express both negative and positive affect. They learn to tolerate and not to be afraid of intense or distressing emotions, but rather to view them in functional and adaptive terms (Cassidy, 1994; Mikulincer & Shaver, 2007).

These multiple influences of attachment on AR are demonstrated in a study of Waters, Virmani, Thompson, Meyer, Raikes and Jochem (2010). The findings show that children with secure attachments to caregivers who validate the child's perspective are less likely to avoid talking about negative feelings and develop greater understanding of negative emotions. However, when the attunement of the caregiver fails or the experience is too traumatizing, the emotional experience cannot be processed and integrated in the self. People tend to split off these unbearable experiences, which leads to problems on the dimension of acceptance. The more a child is exposed to danger, neglect or other unsafe situations, the less the child will be able to integrate and process new information (Crittenden, 2008; Mikulincer & Shaver, 2007; Watson & Greenberg, 2017). In contrast, children, who grow up in secure attachment situations develop B-strategies that are

associated with cognitive exploration, flexibility, and accessibility of emotion-related information. In healthy development the outcome of information processing is a constantly changing set of representations or emotion schemes, which are attempts to integrate all aspects of a specific experience (Elliot et al., 2004). When some aspect of the experience needs to be cut off and cannot be integrated, then the experience and linked emotion schemes become structure bound. When this happens, the experiencing process that is necessary to be aware of and symbolize emotion gets stuck and cannot adequately integrate new information from new situations in the present (Gendlin, 1970; Watson & Greenberg, 2017). Because the experience is not accessible or too intense, the reflective functioning fails and people cannot find meaning in their experience. Integration of cognitive and affective information is not possible due to fixation or the inadequate symbolization of one or more sources. The avoidant type A-strategies lead to an extreme reliance on external cues and the perspective of the other to prevent the situation from getting worse, while their own experience is dismissed and inadequately symbolized. In contrast, when consequences are unpredictable children with hyperactivating type C-strategies rely too heavily on their own perspective. They cannot depend on the perspective of the other. Normally, the capacity to reflect develops during the school years due to maturation of the cortex. But when children are not provided with the necessary scaffolding to help them to reflect on their own experience and their own behavior by their attachment figures, they will find it extremely difficult to symbolize the behavior of others and regulate their own behavior (Crittenden, 2006; Watson & Greenberg, 2017).

The ability to reflect on emotional experiences is seen as the final step in the Process Model of Affect Regulation (Elliot et al., 2004; Kennedy-Moore & Watson, 1999; Watson & Prosser, 2004). Reflection follows the evocation of arousal, awareness of the experience, acceptance and symbolization.

Consciousness and acceptance of emotional experience precedes reflection. Only when people learn to accept their experience as meaningful, can they attend fully to their bodily experience to find and symbolize it accurately and understand their experience (Elliott et al., 2006; Greenberg, 2008; Kennedy-Moore & Watson, 1999). Finding words for emotional experience allows the previous non-

symbolized implicit experience to be assimilated into consciousness and facilitates reflection on what is felt (Greenberg, 2008). Reflection is essential in the effective modulation of affect because it helps individuals to clarify the meaning of their affective experiences, and ultimately, to gain further insight of their wants, needs, and goals, and how to meet them (Elliot et al., 2004; Greenberg, 2015; Greenberg & Watson, 2006; Watson & Greenberg, 1996). Furthermore, reflection has a recursive characteristic, in that it can influence the other dimensions, like modulation of arousal and acceptance (Kennedy-Moore & Watson, 1999).

3.4. Further development of Affect Regulation during life

The Dynamical Maturational Model described above assumes that attachment strategies develop further over childhood and, can evolve subsequently, in adult love relationships and psychotherapy. Besides being a maturational model, the DMM provides a dynamic model as well. Thus in the DMM, the distinction between security and insecurity is not as sharply delineated as in Main and Solomon's (1986) categorical attachment model, but rather varies more subtly, along a dimensional continuum (Shah, Fonagy & Strathearn, 2010). The DMM sees attachment strategies as dynamic and assumes they change dependent on the others we are with and how safe we feel (Farnfield & Holmes, 2014). Humans are seen to have an innate propensity to develop self-protective and sexual strategies (Crittenden, 1997, 2006). Events occurring after infancy can affect a person's strategies in a positive or negative way. For example, childhood maltreatment has been found to impede the development of emotional awareness and understanding, and increase the risk for emotional non-acceptance (Linehan, 1993). Conversely, positive corrective experiences of attuned and containing responses of others can increase AR. Receiving empathic responses is essential for the development of AR capacities (Watson, 2006; 2015). Therefore, offering a developmental framework is useful to explore and understand how past experiences shape current maladaptive strategies and behaviors (Farnfield & Stokowy, 2014). The DMM can be particularly relevant in professional work with forensic or other troubled clients (Farnfield & Holmes, 2014; Baim & Morrison, 2011). Specifically in the work with sex offenders, the DMM is interesting because it is unique in the literature of attachment theory in

linking attachment more explicitly to sexuality (Crittenden, 2006). Crittenden (2006) emphasizes the huge similarity between attachment and sexual behavior. She perceives the boundaries between affection, aggression, and fear, on the one hand, and sexual arousal on the other, as highly permeable. This suggests that high arousal in a state of anger or intense desire for comfort can be transformed to or experienced as sexual arousal. The onset of sexuality in puberty creates a challenge to integrate sexual desire with attachment needs and corresponding affects. A failure due to attachment difficulties can lead to isolation, promiscuity, or dangerous sexual incidents (Crittenden, 2006). Furthermore, the model using an attachment theory perspective provides a framework to understand why people under or over-regulate their emotions. Emotional self-regulation strategies that are endangering or damaging for self or others were once self-protective to meet basic attachment needs in childhood. While these strategies may be efficient or even essential to survive in times of distress and danger, they often lead to problematic bio-psycho-social functioning later in life when they are no longer necessary and become exaggerated or frozen (Baim & Morrison, 2011; Watson & Greenberg, 2017).

4. Affect Regulation and general psychopathology

AR is transdiagnostic and underlies multiple forms of psychopathology and maladaptive behaviors.

Werner and Gross (2010) stress that more than three quarters of the diagnostic categories of psychopathology are characterized by problems with emotions or emotion regulation.

Investigating the link between AR difficulties and psychopathology, researchers have focused mainly on the dimension of modulation of arousal and expression including both under and over modulation. On the one hand, experiencing overwhelming emotions shows a strong relationship with mental disorders, including mood disorders (such as depression and bipolar disorder), anxiety disorders (such as panic disorders, PTSD, GAD), dissociative disorders and certain personality disorders (such as borderline personality disorder) (Elliott et al., 2004; Greenberg & Watson, 2006;

Gross, 2014; McMMain, Pos, Iwakabe, 2010; Siegel, 2012; Watson & Greenberg, 2017). On the other hand, there is growing empirical support for the theory that attempts to avoid internal experience underlies many psychological disorders (Hayes, Wilson, Gifford, Follette & Strosahl, 1996; Krause et al., 2003), including psychosomatic illness, dissociative disorders or personality disorders eg. narcissistic personality disorder (Nicolo et al., 2011; Stewart, Zvolensky & Eifert, 2002); eating-disorders and substance abuse disorders (Aldao, Nolen-Hoeksema & Schweizer, 2010). A study by Krause et al. (2003) found that emotional inhibition was mediating factor between childhood emotional invalidation and psychological distress.

Gross and Jazaieri (2014) made an effort to move beyond the broad link between emotional problems and different forms of psychopathology. They differentiated the difficulties with emotion in terms of intensity, duration, frequency or type. Specific statements related to different disorders, were based as much as possible on empirical research. To illustrate the problem of emotional intensity, emotional hyperactivity is found in samples with social anxiety disorder while hypo-reactivity is a common feature in antisocial personality disorder. Another way of differentiating among disorders is in terms of a person's awareness of emotion, knowledge of their short- and long-term goals and availability of flexible strategies to meet their goals. Gross and Jazaieri (2014) argue that deeper understanding is needed of the mechanisms responsible for the onset and maintenance of many clinical and nonclinical conditions that limit personal and interpersonal well-being in order to improve assessment and treatment strategies.

Besides the strong correlations between ER difficulties and psychopathology and/or behavioral problems, there are also interesting findings from neuroscience research regarding the impact of dysregulation of arousal on the dimension of reflection and vice versa. Neuroscience stresses the crucial role emotions play in decision-making, adaptive functioning and in the self-organization of the mind (Damasio, 1994, 1999; Le Doux, 1998). The prefrontally mediated capacity to respond flexibly is crucial for reflection and integration. The mind has to monitor and modify the flow of energy and information internally and interpersonally in order to achieve regulation (Siegel, 2012). Siegel

describes affect “dysregulation” as impairments in this capacity, which moves the system to chaos or rigidity, or both. Regulation of affect has a strong influence on how people experience the world, relate to others and find meaning in life. Poor integration of information or dealing with erroneous information decreases the probability of people being able to regulate their behavior appropriately, including their sexual behavior (Crittenden, 1997).

Siegel (2012) warns that emotional resilience and behavioral flexibility is difficult to achieve, for people with impairments in AR due to constitutional features, traumatic experiences and/or severely suboptimal attachment experiences. Traumas have a huge impact on brain development, such as limbic irritability, which generate hypervigilance for threat cues and thus leads to overreactions. Brain circuits in the lower brain regions that are activated regularly by abuse or other trauma are programmed more firmly and activated more easily. These overreactions from the amygdala create an emotional bias to cognitive functions (Creeden, 2009) as attention is primarily given to higher-intensity environmental stimuli that elicit feelings of anxiety or increase sexual arousal (Crittenden, 1997; Le Doux, 1998). Although negative early childhood experiences lead also to deficient left hemisphere development, as well as lack of hemispheric integration, neuroscientists, remain hopeful that the neocortex can learn to override lower brain responses and bring the deeper structures of the brain to more tolerable levels of arousal. Moreover, findings in neuroscience provide positive evidence that psychotherapy can facilitate improved integration and self-regulation (Fuchs, 2004).

5. Affect regulation as a factor in sex offending

5.1. Affect regulation's possible role as an etiological factor

Recent trends in the etiological literature of sexual offending include an emphasis on the role of self-regulation in the development and maintenance of deviant behavior. Self-regulation includes the individual's ability to regulate and modulate emotions, thoughts, interpersonal interactions and behavior (Kochanska, Coy & Murray, 2001; Littlefield-Cook & Cook, 2009). In this paper, AR difficulties are highlighted as a subcomponent of a variety of self-regulatory processes. The role of

affective states as causes and consequences of sexual offending is emerging as an important area for theoretical analysis and for empirical research (Declercq, Willemsen, Audenaert & Verhaeghe, 2012; Hanson & Harris, 2000; Howells et al., 2004; Maniglio, 2011; Whitaker et al., 2008).

Marshall (1989) initiated theorizing around the possible link between insecure attachment and sexual offending. He proposed that insecure attachment leads to deficits in the skills necessary for achieving intimacy in adult relationships, resulting in emotional loneliness and social isolation.

Marshall and Barbaree's (1990) integrated theory proposes that sexual abuse of children occurs as a consequence of a number of interacting distal and proximal factors. Specifically, this theory suggests that individuals experiencing developmentally adverse events (e.g., poor parenting, inconsistent and harsh discipline, physical and sexual abuse) are likely to exhibit distorted internal working models of relationships, particularly with respect to sex and aggression, resulting in poor social and self-regulation skills from an early age. Childhood attachment relationships provide a template for future interactions and relationships with others, and lead to the forming of a self-image as worthy or worthless (Bartoholomew & Horowitz, 1991; Wallin, 2007). Marshall & Marshall (2000) proposed that child molesters lack the self-confidence to initiate relationships with appropriate others. A continued failure to achieve intimacy (Marshall, 1989) or to deal with negative emotions can engender an expansion of the range of sexual activity. High levels of masturbation during adolescence may lead these individuals to engage in sexual fantasies that incorporate elements of power and control (Marshall, Hudson & Hodkinson, 1993). And seeking emotional intimacy through sex can ultimately result in sexual offending.

Marshall's theory can be further grounded and understood in terms of attachment theory. Fonagy (1999) argues that the activation of conflicting internal models and intense emotions, such as fear or anger, may result in contradictory attachment behavior, including both attacking and seeking closeness or attempting to achieve physical closeness without intimacy. A lack of reflective functioning may create a predisposition to act on bodies and not on minds. Building further on that hypothesis, in the Dynamic Maturational Model, Crittenden (2006) argues that an extensive overlap

exists between attachment seeking behavior and sexual behavior, and that a failure in the functioning of one system can be compensated by the other. Yet, when the onset of sexuality fails to be integrated with attachment, then isolation, promiscuity, or dangerous sexual entanglements might occur. Baim et al. (2011) explain that maladaptive emotional self-regulation strategies used by sex offenders often echo strategies that were needed in childhood to protect the self and meet basic attachment needs. Furthermore, poor attachment and the related distorted development of the brain impede the development of reflective, integrative processes to guide behavior (Crittenden, 2006).

In the Self Regulation Model, outlined by Ward and Hudson (1998), the first two steps explain how aversive childhood experiences can affect the appraisal of current life events and how maladaptive regulation of emotion may result in the emergence of a desire for offensive sex.

Beech and Ward (2004) reviewed the research on attachment difficulties and abuse and neglect as developmental precursors of sexual abuse. They concluded in their etiological model of risk that developmental adversity can result in vulnerability to sexually abuse a child. Craissati and Beech (2006) described three key developmental variables relevant to pathways of offending. The first is described as developmental trauma, including physical or sexual abuse or emotional abuse/neglect. The second, childhood difficulties, includes problems such as aggression, peer difficulties and being bullied. The third comprises insecure attachment. Considering the fact that a lot of people with the same kind of difficulties do not become sexual offenders, these developmental variables are not sufficient to explain the onset of sexual abuse. However, under certain circumstances a combination of these vulnerabilities may result in deviant sexual behaviors. In their Integrated Theory of Sexual Offending, Ward and Beech (2006) spelled out how the interaction of biological, ecological (social, cultural, and personal circumstances), and psychological vulnerabilities can generate clinical phenomena associated with offending behavior. These clinical variables can be understood as the manifestation of underlying vulnerabilities that have been activated by situational events. There are four empirically supported clusters of problems or symptoms typically found among adults who

sexually abuse children and rape adults: 1) emotional regulation problems/impulsivity; 2) cognitive distortions or dysfunctional schemas; 3) attachment problems/social difficulties; and 4) deviant sexual arousal (e.g., Hanson & Harris, 2000; Thornton, 2002; Ward & Beech, 2004). Although vulnerability factors have their origins in a person's developmental history, Ward and Beech (2006) argue that they are involved in the onset of sexually abusive behavior. For example, deficits in emotion regulation may be a consequence of poor or traumatic childhood experiences and may actively contribute to the onset of sexual offending several years later. The onset can be enabled because individuals may try to suppress their own negative attachment experiences through substance misuse or dissociation, which have been seen as precursors to offence related activities (Craissati et al., 2002). Consistent with these ideas, Burk and Burkhart (2003) hypothesize that individuals with poor or disorganized attachment may be more likely to rely on externally based means of self-regulation. Specific sexual experiences, such as previous sexual victimization, witnessing sexual violence, viewing pornography combined with severely disrupted attachment and biological facts such as sex drive and the reinforcing power of orgasm, allow for the use of sexual offense behavior as a self-regulatory mechanism.

The link between maladaptive self-regulatory strategies and harmful sexual behavior is further explored and described by Stinson, Sales and Becker (2008) in their Multi-Modal Self-Regulation Theory. This relation is described as a complex process involving specific biological and developmental antecedents, cognitive processes, perceived opportunity, and reinforcement contingencies. This model assumes, based on empirical support, self-regulation deficits in sexual offenders. Sex offenders tend to have significant symptoms of mood or anxiety disorders or personality disorders characterized by emotional lability (Ahlmeyer, Kleinsasser, Stoner, & Retzlaff, 2003; Dunsieith, Nelson, Brusman-Lovins, Holcomb, Beckman, Welge, ... & McElroy, 2004; Kafka & Hennen, 2002; Leue, Borchard, & Hoyer, 2004; Raymond, Coleman, Ohlerking, Christenson & Miner, 1999) and are prone to experience anger, fear, and feelings of loneliness, worthlessness, inadequacy and low self-esteem (Marshall, 1989; Robertiello & Terry, 2007; Smallbone & Milne, 2000; Seidman,

Marshall, Hudson, & Robertson, 1994).

Having a further look at research findings, there is evidence to suggest that the developmental precursors for deficits in AR exist in the sex-offending population. Many offenders report negative parent–child experiences (such as neglect, trauma and loss), negative social interactions and poor peer relationships (Craissati, McClurg & Browne, 2002; Seto & Lalumiere, 2010; Starzyk & Marshall, 2003; Stinson & Becker, 2012). As described above, experiences of poor attachment, sexual trauma and physical abuse, impede the development of different AR capacities in childhood. These in turn are precursors of self-regulation problems and interpersonal functioning problems later in life.

Current theory about the nature of the link between attachment style and sexual offending is limited and empirical research is scant as well. Although studies indicate that the majority of sex offenders are insecurely attached, no clear link is found between attachment style and type of offending. To our knowledge only a few studies (Craissati et al., 2002; Marshall & Marshall, 2002; Smallbone & Dadds, 1998, 2000; Ward, Hudson & Marshall, 1996) have been conducted to link different attachment styles to offending. These studies have produced conflicting results. Ward et al, (1996) found that a preoccupied attachment style was dominant in a group of child molesters and that rapists had a more dismissing style of attachment. Smallbone et al. (1998) did not replicate these findings. The use of categorical rather than dimensional approaches to measurement of attachment style in these studies has limited the reliability of the findings (Baker, Beech & Tyson, 2006).

Besides poor attachment, childhood maltreatment has been explored in terms of disruption of the development of AR in offenders. Gratz, Paulson, Jakupcak and Tull (2009) reviewed several studies that demonstrate a relationship between childhood trauma and AR deficits. In their own study, Gratz et al. (2009) found that the relationship between childhood maltreatment and intimate partner abuse was fully mediated by affect dysregulation. However, the role of limited AR abilities in the etiology of sexual offending is not completely understood and the research is rather sparse. It seems that most theory and research is built on the link between poor attachment or traumatic experiences and ER difficulties, or between poor attachment and sexual offending.

Empirical studies examining the relationship between self-regulation deficits and sexual offending are limited. In one study, Stinson, Becker and Sales (2008) examined a sample of 95 civilly committed male sexually violent persons. The majority (89,5%) reported adverse childhood experiences. Many of them had substantial difficulty in regulating negative affect and obtaining self-control over behavioral impulses. Evidence was found for the link between emotion-based indicators of self-regulatory functioning (affective instability and mood dysregulation) and primarily sexual behaviors (Stinson et al., 2008). A second study examined 256 psychiatric patients with a history of sexual offending. Fifty nine percent of them suffered from mood disorders, 14% met criteria for an anxiety disorder and 12 % had a diagnosis of border-line personality disorder. Emotional dysregulation (extreme mood states or affective difficulties) was seen as a common factor in this population. The study illustrated that emotional dysregulation was significantly predictive of criminal and suicidal behavior but not of sexual behavior (Stinson, Robbins & Crow, 2011). It is important to mention that the use of psychiatric diagnoses and self-reported data must be interpreted and generalized with caution. Further research is needed to clarify and explore the relationship.

To summarize, an interaction between biological vulnerabilities and environmental stressors can disturb the development of reflective functioning and AR abilities, which are needed for good self-regulation. Severe attachment problems or trauma are proposed as a diathesis, but not as direct cause, for committing sexual offending behavior. Research is scant, but that which is available confirms the high likelihood of attachment problems and trauma histories in sex offenders, as well as emotional and cognitive regulation problems. It is proposed that sex offending behavior for some people may be a maladaptive strategy to manage their experiences of distress or affect dysregulation.

(Stinson et al., 2011).

5.2. AR's relationship with known criminogenic factors

Building further on the argument above, AR will be explored as a dynamic risk factor for sexual offending. Poor ER strategies are often considered as an important risk factor (Hanson & Harris, 1998), but the research is scant.

Empirical support for the relationship between affect and offending has been found in studies on anger and sexual arousal, offense pathways studies, and sexual fantasy studies. It should be noted, however, that it is not easy to investigate AR difficulties, especially in non-laboratory situations where people are emotionally aroused. Limited AR abilities (awareness, modulation of arousal and expression, symbolization, acceptance and reflection) should also be taken into account in relation to other problems that are considered as risk factors. Ward Keenan & Hudson (2000) argue that intimacy deficits, offence supportive beliefs or impulsivity that are found to be psychologically meaningful risk factors (Mann, Hanson & Thornthorn, 2010) may be induced by an inadequate theory of mind. This failure is related to poor attachment histories as described above, and AR difficulties. The underdevelopment of these mentalizing and AR abilities may also generate poor ER strategies, such as sexualized coping, externalizing and substance abuse, which are all considered to be dynamic risk factors for sex offenders (Mann et al., 2010; Hanson & Harris, 1998).

The most convincing evidence for the role of affect as a causal factor in sex offending comes from the offense process or offense chain studies. Positive and negative affect routes to sexual offending have been described in earlier work by Hudson, Ward, and McCormack (1999) based on their Self Regulation Model (Ward & Hudson, 1998). This model describes 9 phases to sexual offending behavior. The first phase is some kind of life event and it's subsequent appraisal based on past experiences and related to an individual's salient goals and needs. The activated thoughts, emotions and intensions lead to the emergence of a (deviant) sexual desire in phase 2. In phase 3, the offender takes the acceptability of his maladaptive desire into consideration and based on that, tries to avoid sexually reoffending (avoidance goal) or determines to sexually offend (approach goal). Phases 4 to 9 of the self regulation model describe four different pathways based on the selected strategy (avoidant-passive, avoidant-active, approach-automatic, approach-explicit). The authors suggest that

the avoidance category is more likely to be associated with a negative affective state, while the approach category might be related to positive or negative affective states depending on the actual aim of the offender. If sexual gratification is intended, then it is likely to be positive. If the basic drive is aggression, then strong negative emotions may be involved. Ward and Hudson (1998) formulate positive and negative affect routes to sexual offending from phase 3 in their model. They acknowledge, however, that the indulgence in sex or sexual fantasies (found in phase 2) might function as a powerful mood regulator for negative affective states that might be activated in phase 1, due to a particular life event and often linked to aversive past experiences.

This paper wants to highlight the significance of AR problems in these first two phases. Recognizing the problem of the activation of maladaptive emotion schemes (in phase 1) and the use of maladaptive AR strategies (in phase 2) gives reason to put more emphasis in treatment on AR difficulties as dynamic risk factor.

While it is relatively easy to explain why some emotions such as anger may result in sexual aggression (Howells et al., 2004), it is less clear why emotions, such as anxiety, sadness or loneliness, should elicit deviant sexual behavior. One explanation comes from studies examining affective states and coping behavior (Cortoni & Marshall, 2001; Marshall & Marshall, 2000; Marshall, Serran & Cortoni, 2000; Serran & Marshall, 2006). These authors proposed that when in a state of negative affect, sex offenders are more likely than non-sexual offenders and non-offenders to use sexual behaviors and daydreaming or fantasizing as a means of coping and comfort seeking. Based on several studies, Wagner and Heathorton (2014) conclude that negative affect may sensitize people to rewards and increases the strength of temptations. These authors state further that people stuck in negative affect will shrink their long-term goals in order to address the more immediate need to feel better.

Howells et al. (2004) have suggested that using sex as a way of resolving non-sexual problems is learned precisely because it is effective in reducing a state of negative affect. In Cortoni and Marshall's (2001) study, sexual offenders consistently reported using sexual activities, both

consenting and non-consenting, as a coping strategy to deal with stressful and problematic situations. They also found that intimacy deficits and loneliness were related to greater use of sexual activity as a coping mechanism. The engagement in deviant sexual fantasy, Maniglio (2011) suggests, is a strategy to avoid, reduce or interrupt unpleasant internal states associated with an abuse history. In fact, sexual offenders are more likely to have experienced sexual abuse during their childhood, which is a risk factor for subsequent sexual offending (Hanson & Slater, 1988, Seto & Lalumière, 2010, Whitaker et al., 2008). As with sexualized coping, aggressive behavior has an ER function (Jakupcak, Lisak & Roemer, 2002; Jakupcak, 2003, Pascual-Leone, Bierman, Arnold & Stasiak, 2011) in that it allows the person to avoid and/or escape emotions (Gratz et al., 2009).

What matters when predicting sexual recidivism is not the overall level of distress, but rather the mechanism used by offenders to regulate these feelings (Hanson and Bussière, 1998) as well as acute negative affect (Hanson & Harris, 2000). In a small study, Ross and Fontao (2006) found lower scores on mood management and self-soothing for sex offenders (n=10) compared to non-sex offenders (n=60) and they were more emotionally vulnerable to threatening and/or stressful situations. These findings suggest that sex offenders tend to have more difficulty managing their mood and engaging in optimal self-soothing strategies in stressful situations.

In risk assessment, developmental variables are considered to be technically fixed or historical variables (Craissati & Beech, 2006). The literature on static risk prediction however has not examined these developmental factors in depth, instead, it focuses more on offense-specific variables. This highlights the failure of risk prediction models to consider a range of psychological factors implicated in sexual offending. Therefore, Craissati and Beech (2003) postulate in their risk prediction model that a combination of two or three of the key developmental variables: 1- childhood experiences of abuse and neglect (sexual, physical and emotional); 2- childhood emotional/behavioral difficulties; and 3- insecure attachments to primary caregivers — need to be considered in conjunction with a static risk prediction model. They argue that this is key to determining risk of community failure. As mentioned above, besides negative affect routes, more positive affect routes were revealed in

some sex offenders in a study by Hudson et al. (1999). However, it should be mentioned that in general negative affect appear to be a much more potent force than positive affect in self-regulation failure (Wagner et al., 2014). The positive affect routes to sexual offending were discovered based on a description of the most recent or typical offence of participants who were not yet in treatment. Some examples of these positive routes including offending while in a state of elation, while experiencing a sense of entitlement, or while casting away inhibitions. Here the sexual gratification goal involves the enhancement of positive mood. Under these specific circumstances positive affect may lead to greater excess (Wagner et al., 2014). This pathway predominantly reflects the offender's distortions about sexual contact with children. These offenders ignore the central issue of lack of consent. In other words they neglect the fact that a child is not able to understand the impact of sexual contact with an adult. This positive affect route is typically seen among offenders who are explicitly attracted to children. The presence of positive emotions is due to the anticipation of engaging in the deviant sexual activities.

These offenders are not motivated to avoid offending and do not experience any negative moods in the process. In contrast, approach behaviors motivated by sexual desire that result in sexual arousal and orgasm are intrinsically rewarding (LoPiccolo, 1994). Nevertheless, it is possible that also for these offenders sexual fantasies or sexual behavior is not only a means to sexual arousal, but also functions as a way to avoid consciously experiencing negative feelings or difficulties (Quayle, Vaughan & Taylor, 2006). For example, as proposed above, attachment problems or experiences of trauma and related intrapersonal and interpersonal difficulties may be underlying the fact that the offenders seek intimacy and sex with children.

There is a third potential affect route that is not enabled by positive or negative emotions, but, instead by a complete lack of emotion (Howells et al., 2004). That some sex offenders suppress, avoid or 'cut off' their negative emotions appears to have been overlooked in current research, theorizing and treatment. Only one study was found to investigate the prevalence of alexithymia, as a deficit in attending to and labeling emotional states, in those who sexually offend (Byrne, Bogue,

Egan & Loneragan, 2014). The findings of this study suggest that alexithymia and emotional awareness difficulties are prevalent within this population. For example, 62 of the 99 sex offenders met criteria for at least moderate alexithymic characteristics. Another study found empirical evidence that some offenders struggle to experience and accurately label their emotional states as a repercussion to (historical and intergenerational) trauma (Day, Davey, Wanganeen, Casey, Howells & Nakata, 2008). While others truly do experience emotional lability in a more pathological sense, some clients are simply unaware of their emotions until they become very strong, or do not recognize what prompts their emotions to change. As described above, a child can learn to inhibit or disconnect a specific emotion or their inner experience as such in response to unattuned or repressive attitudes from caregivers to some emotional reactions (the A-strategy in the Dynamic Maturational Model). The suppression of emotion commonly leads to a continuation or exaggeration of problems and can cause a rebound effect, namely a sudden collapse of the unprocessed feelings (Fonagy & Target, 1996).

Related studies on empathy can be reviewed in light of a restricted ability to experience emotion besides other possible problems as coping with personal distress. Neurobiological research shows that the same neurocircuitry is involved in promoting emotional contagion empathy (affective empathy) as in experiencing and recognizing stress in oneself. (Shirtcliff, Vitacco, Graf, Gostisha, Merz & Zahn-Waxler, 2009; Watson & Greenberg, 2009). These authors argue that the capacity to process one's own experiences provides the neurological basis for processing the experiences of others, which is central in empathy. Individuals classified as callous or unemotional have deficits in detecting or experiencing stress in themselves and have problems with recognizing emotions in others (Shirtcliff et al., 2009). The same holds true for psychopaths who are characterized by a lack of empathy. Empathy deficits for this group are generally viewed as a component of a general deficit in affective reactions, likely with a biological basis (Kiehl, Smith, Hare, Mendrek, Forster, Brink and Liddle, 2001). A meta-analysis (Miller & Eisenberg, 1988) showed a significant relationship between affective empathy and antisocial behavior. The notion that the absence of emotions may be causally

related to sexual abuse is in line with the over-representation of psychopathy in the sex offender population (Porter, Fairweather, Drugge, Herve, Birt & Boer, 2000). However, empathy deficits are not always implicated in sexual offending (Barnett & Mann, 2013) and there is no unequivocal evidence that sex offenders have empathy deficits at the trait level (Marshall, Anderson & Fernandez, 1999; Smallbone, Wheaton & Hourigan, 2003). Such deficits may play a role in the sexual offenses of those who are more generally criminal or psychopathic (Barnett & Mann, 2013). In a different manner, offenders with low self-esteem may defensively externalize or minimize the harm they are inflicting on victims in order to ameliorate the experience of shame or personal distress which would be evoked if the harm was acknowledged (Marshall, Marshall, Serran & O'Brien, 2009).

The research suggests that empathy needs to be considered in situational terms and may be situation specific and appear specifically in the offence situation rather than generally (Barnett & Mann, 2013). One of the problems in empathy research is the difficulty to measure affective empathy, specifically in situations when people are emotionally aroused.

To conclude, all identified affect routes to offending illustrate difficulties with AR. Some offenders seem to overregulate their emotional experience, which is related to a lack of awareness and labeling, while others fail to regulate distress or use maladaptive strategies such as substance abuse or engagement in deviant sexual fantasies. They both appear to have problems to deal constructively with negative emotions like accepting their affective experience and listening to their underlying needs. A lack of reflection on their experience impedes the functional use of emotions as information in order to guide their actions to promote well-being, while respecting others. Sexual and violent behavior can be considered not only as a strategy to regulate negative affect, but also as a depletion in behavioral self-regulation due to a chronic attempt to down regulate negative affect (Wagner et al., 2014). In a review study, Howells et al. (2004) found some support for the fact that affective states as well as their pathological absence are precursors for sexual offending. These authors warn that if both presence and absence of affect may be criminogenic, average scores can mask what might be important variations within the group.

6. Conclusion and recommendations for future research

AR is of major importance for well-being and healthy psychological functioning. Different interrelated dimensions of affect regulation (awareness, labeling, modulation of arousal and expression, acceptance and reflection) all develop by means of attuned responses from caregivers in relation to constitutional factors. Attachment difficulties or traumatic experiences evoke strategies that help children to survive unsafe or dangerous circumstances. These surviving strategies in turn cause psychological and behavioral problems later in life. Given the close link between attachment behavior and sexuality, puberty creates a huge challenge for insecurely attached people to integrate sexual desire and attachment needs (Crittenden, 2006).

This theoretical framework and the high prevalence of attachment problems and history of trauma in the population of sex offenders give reasons to focus on AR problems and their link with deviant sexual behavior. Attachment insecurity and traumatic experiences are indeed described as precursors for AR deficits. While childhood adversity is frequently observed in sex offenders, the relationship between the type of attachment style or AR strategies used and the type of offending remains unclear and warrants further research. It seems that most theory and research is built on the link between poor attachment or traumatic experiences and ER difficulties, or between poor attachment and sexual offending. The role of limited AR abilities in the etiology of sexual offending is not completely understood and the research is rather sparse. Research on self-regulation, with AR as a subcomponent, is mostly focused on psychopathology in general, but not on criminal violence in particular (Ross, 2007). AR problems are found to underlie many different forms of psychopathology and maladaptive behavior, which may interfere in the onset to sexual offending behavior.

Another problem in this field of research is that most of the studies have used quantitative self-report measures to investigate attachment, AR deficits and other clinical symptoms. However, self-report symptom measures have limited validity, since they are subject to a variety of biases (Schwarz, 1999). Moreover, attachment strategies and AR vary depending on the situation. For example, in

situation of conflict or threat it is more difficult to regulate arousal and the self-reflective and mentalizing capacity declines. Thus, research is influenced and restricted when the examination takes place in experimental settings when people are not emotionally aroused. Future research should incorporate multiple methods of measurement including, interviews, observer measures, physiological and neurological indices in different settings. The addition of observation instruments like the Observer Measure for Affect Regulation (Watson & Prosser, 2004) and the Adult Attachment Interview (George, Kaplan & Main, 1985) would likely improve the quality of research. However, these instruments are often precluded by the need to have large groups of participants to test hypotheses. On this point, it is important to mention, that inter-individual variability found in average tendencies in large groups cannot fully account for the variation in the psychological phenomena in which researchers and practitioners are interested (Cornelis et al., 2015). Population studies that average scores may mask important variations within the group. Howells et al. (2004) warned about this possibility especially in studies examining emotional problems in sex offenders, and agglomerate groups of sex offenders in which both the presence of intense affect and the absence of affect may be criminogenic. It is important to look more closely at the differences in these two groups and their impact on the therapy process.

Notwithstanding these limitations in current research, AR is described as a major factor in etiological models of sexual offending. Although the onset of sexual abuse can be facilitated by maladaptive coping with intense negative emotions or due to complete inhibition of emotion, most literature and research is found on the negative affect route to sexual offending behavior. Negative affect is described as a potent threat to self-regulation. Negative affect impedes the capacity for control, but it may in addition increase the strength of experienced desires and temptations making it more difficult to resist (Wagner & Heatherton, 2014). Engagement in sexual fantasy or activity is found to be a preferred strategy for sex offenders to avoid, reduce or interrupt unpleasant internal states, specifically when they are associated with a history of sexual abuse (Cortoni & Marshall, 2001; Howells et al., 2004; Maniglio, 2010). Both sexualized coping as well as aggressive behavior can serve

an ER function (Gratz et al., 2009; Jakupcak et al., 2002; Jakupcak, 2003, Pascual-Leone et al., 2011).

Findings suggest that risk prediction should not only focus on fixed historical variables, but also on developmental factors as well as current mechanisms used by the offender to cope with traumatic experiences and to regulate negative affect (Hanson and Bussière, 1998; Hanson & Harris, 2000; Craissati & Beech, 2006). Besides negative affect, positive affect is described as a possible route to offending behavior. This route may however be considered as a focus on the gratification of the sexual desire, and may be a way of avoiding underlying difficulties in establishing intimate relationships with adults or escaping or dismissing underlying negative affect. This hypothesis is in line with the third route, which describes a complete lack of emotions. This dynamic also suggest a lack of the capacity to accept negative affect. Suppression of emotion may have been a necessary strategy to survive unattuned and punitive responses in childhood.

Besides a biological or neurological predisposition assumed in some specific pathology like autism or psychopathy, emotional invalidation in childhood is found to be related to chronic emotional inhibition in adulthood which in turn predict psychological distress (Krause et al., 2003). The problem of overregulation of affect appears to have been ignored in current sex offender research, theory and treatment. The emphasis is on ER difficulties, often understood as problems with intense emotions. Future research should further differentiate problems with over as well as under regulation of affect. The focus in research should be to broaden from a focus on modulation of arousal to other dimensions of AR like awareness, acceptation, and reflection.

To conclude, there is enough evidence for the utility and perhaps even the necessity to teach sex offenders more adaptive ways of responding to their emotions. Conscious awareness of the process involved in the onset of negative affect, improved capacity to tolerate and listen to the meaning of their emotional experience can guide them to more optimal states of well-being and pro-social behavior. Therefore, it is important to examine AR capacities of offenders in treatment and improve these capacities based on the characteristics of good parenting. Based on the review of literature and

research it seems important to focus on attachment related difficulties and processing traumatic experiences in order to improve AR capacities. This still seems a gap in current treatment programs.

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