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Posttraumatic Stress Disorder (PTSD) and Sexual Aggression: A Preliminary Study

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The present paper explored the relation between the posttraumatic stress disorder (PTSD) and sexual aggression. Many research on the characteristics of sexual offenders report that significant proportion of juvenile or adult sexual offenders were sexual abuse victims in childhood. Paradoxically, some of sexually abused children recapitulate the abuse experience by engaging in sexual offense as juveniles or adults. This paper proposes that PTSD symptoms could be important mediating variables for the association between childhood sexual victimization and subsequent sexual offending in adulthood. Trauma symptoms such as intrusive memory may lead to trauma-associated feelings such as fear and helplessness, which may in turn disrupt offenders' subsequent socio-cognitive-emotional functioning. Disruptive socio-cognitive-emotional functioning finally contributes to engaging in maladaptive behaviors such as sexual offense.

Key words : PTSD, sexual aggression

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It is very paradoxical that some of sexually abused children recapitulate the abuse experience by engaging in sexual offense as juveniles or adults. Being sexually victimized in childhood is obviously a devastating and painful trauma, and at first glance it is likely to have an inverse relationship with subsequent perpetration of sexual assaults. Sexual abuse victims are likely to avoid desperately the situations that may put them at a risk for engaging in sexual offense since they know how devastating such experience is. However, many research on the characteristics of sexual offenders report that significant proportion of juvenile or adult sexual offenders were sexual abuse victims in childhood. How could the paradoxical phenomenon be accounted for? How does the traumatic experience of childhood sexual victimization develop into subsequent sexual offending in juveniles or adulthood? Could there be important mediating variables for the association between childhood sexual victimization and subsequent sexual offending in adulthood?

Childhood sexual victimization is apparently a traumatic experience and if untreated, it is likely to develop to a psychological disorder such as Posttraumatic Stress Disorder (PTSD). PTSD is a psychiatric condition that occurs in individuals who experience a traumatic event. Initially identified in combat veterans, PTSD is characterized by specific symptoms that develop following exposure to a "threat to the life of oneself or others accompanied by intense fear, horror, or helplessness" (American Psychiatric Association, 2000). Symptoms of PTSD include intrusions (intrusive memories, flashbacks, feeling worse with reminders of the trauma, nightmares), avoidance (avoidance of thinking about the event, avoidance of the reminders, decreased concentration, amnesia, feeling cut off from others, sense of foreshortened future) and hyperarousal (increased startle, hyperarousal, hyper vigilance, decreased sleep) (see Bremner (2005) for review).

Research findings suggest that many sexual offenders have the high incidence of trauma exposure, which ranges from childhood sexual/physical abuse or experiencing serious life threats and/or injuries to witnessing severe injury and/or death of another and being involved in gang violence (see McMackin et al. (2002) for review). The typical sexual offenders have been reportedly exposed to numerous potentially traumatic events and are likely to have a correspondingly high risk of developing PTSD (McMackin et al., 2002). If that is the case, PTSD symptoms, that is, trauma-associated feelings or cognitive deficits, may contribute to hindering adaptive socio-cognitive and emotional functioning in various situations and thus triggering sexually offensive behaviors. This paper aims to address the nature of the relationship of trauma exposure to subsequent sexual offending behaviors, particularly with a focus on PTSD symptoms and memory functioning.

Prevalence of Sexual Abuse Victims and Offenders

Abused children are known to have increased rates of aggressive behavior and conduct problems compared with children who have not been abused. For example, Connor et al.(2003) reported that clinical children with a history of developmental traumatic stress, such as physical and sexual abuse, have greater likelihood of reactive aggression and verbal aggression than nonabused clinical children. They suggested that abused children, because of their traumatic histories, may have an increased likelihood of misperceiving neutral environmental stimuli as threatening and reacting aggressively to perceived threats, especially with hostile verbal responses.

Attempts to establish the rate of childhood sexual victimization among sexual offenders have produced surprising results. In England, Craissati and McClurg (1996) and Craissati, McClurg, and Falla (1999) found that approximately 50% of convicted child sexual abusers were themselves sexually victimized, and this finding was similar to that reported by other English studies (Elliott, Brone, & Kilcoyne, 1995; Fisher, Beech, & Browne, 1998). Hanson and Slater (1988), in their review of North American studies on the proportion of child sexual abusers who were themselves sexually victimized as children found that overall, 28% of the sex offenders were sexually victimized (with studies ranging between 0 and 67%).

Studies on the association between trauma exposure and delinquency among juvenile offenders (Cauffman, Feldman, Waterman, & Steiner, 1998; Smith & Thornberry, 1996) have documented the high incidence of trauma exposure among juvenile offenders including childhood physical and/or sexual abuse. The severity and number of trauma exposure, combined with other psychological and developmental vulnerabilities and lack of protective factors, serve as risk factors for developing PTSD. Prevalence rates for a diagnose of PTSD in male juvenile offenders have been found to range from 17% to 32% (Burton, Foy, Bwanausi, Johnson, & Moore, 1994) and to be high as 49% among female juvenile offenders (Cauffman et al., 1988). Although PTSD rates are not available for juvenile or adult sexual offenders, it can be reasonably expected that it would be at least similar to or even higher than PTSD rates for nonsexual offenders, in terms of the fact that many sexual offenders have traumatic life histories. In one study conducted by McMackin et al. (2002), the rate of PTSD among juvenile sex offenders based on endorsement of symptoms by their treating clinicians was 65%. This study concluded that the multiple trauma exposures, early onset of trauma exposure, and lack of familial support as a protective factor can account for the high PTSD rate. In this regard, it is conceivable that significant proportion of sexual offenders develop PTSD symptoms after trauma exposure including

sexual abuse, and PTSD symptoms may contribute to disrupting their adaptive cognitive and emotional functioning in various situations. In the subsequent sections, it will be discussed on how the PTSD symptoms, especially in relation to memory, can elicit disruption of adaptive emotional and cognitive functioning with a focus on neurobiological processes of memory.

PTSD Symptoms and Neuropathology: Memory

The neuropathology in PTSD involves significant alterations in neural circuits and structures in the stress response. The critical underlying psychobiological processes have been defined as stress sensitization, fear conditioning, and failure of extinction (Charney et al., 1993). Specific brain areas that play an important role in mediating the biological stress response include hippocampus, amygdala, hypothalamus, locus coeruleus (LC), medial prefrontal, and cingulate (Bremner et al. 1999a; McEwen, 2000a). LTP (long term potentiation) has long been considered to a cellular mechanism that subserves the storage and retention of long term memory. In relation to PTSD, the intrusive memories, one of the major PTSD symptoms, may be related to the consequential phenomena of LTP after the traumatic experience. Specifically, when traumatic events occur, neurotransmitters such as norepinephrine and glutamate contribute to potentiating the relevant memory. In certain cases, traumatic events can be stored as a permanent memory in the form of LTP, and in other cases, as trauma-related amnesia displays, they can be lost temporarily or permanently. Involuntary intrusion of trauma-related memory seems to be a consequential phenomenon of LTP due to its strong excitability in neuronal synapses. Implicit trauma-related cues may elicit this memory intrusion from patients with PTSD in even unwanted situations.

Neuroimaging studies have found that stress was associated with damage to the CA3 region of the hippocampus (Bremner et al., 1995). Findings of smaller hippocampal volume have been reported several times in the published literature, with findings of a 26% reduction in bilateral hippocampal volume in combat-related PTSD (Gurvits et al., 1996), a 12% reduction in left hippocampal volume in abuse-related PTSD (Bremner, Randall et al., 1997), and a 5% reduction in left hippocampal volume in women sexually abused as children, most of whom had PTSD (Stein, Koverola, Hanna, Torchia, & McClarty, 1997). The hippocampus and adjacent cortex mediate declarative memory functions (e.g., recall of facts and lists) and play an important role in integration of memory elements at the time of retrieval and in assigning significance for events (Squire and Zola-Morgan, 1991). The hippocampus also regulates the neuroendocrine response to the

stress by its role in gluccocorticoid negative feedback. Furthermore, many lines of evidence indicate that memory processing in the hippocampus is modulated by the amygdala. The function of amygdala in the processing of fear involves conditioning and addition of an emotional valence to the situation. Afferent inputs from sensory processing areas of the thalamus and cortex mediate emotional learning in situations involving specific sensory cues, whereas learning about the emotional significance of more general, contextual cues involves projections to the amygdala from the hippocampal formation (LeDoux, 1993). Trauma-associated feelings such as fearfulness or horror are likely to be associated with amygdalar response. The failure of extinction to fear responding to trauma-related cues is characteristic of PTSD. Recent evidence suggests that extinction of fearfulness is mediated by cortical inhibition of amygdala responsiveness.

Neurological evidence suggests that amygdala and hippocampus presumably contributes to developing the neuropathology of PTSD. It can be reasonably conceived that the abnormalities in amygdalar-hippocampal circuits may be associated with increased trauma-related memory intrusion (it is unknown whether or not there is implicit trauma-related cues prior to memory intrusion, which I suspect), and increased emotional activation in the presence of trauma-related cues. Furthermore, it can be also conceived that people with PTSD may have difficulty in reconstructing trauma-related memory if they are afflicted with severe and persistent memory intrusion. Emotional dysregulation such as horror, helplessness, or fear may also interfere with such reconstruction process that needs the inhibition of trauma-associated feelings. If that model is applied to sexual abuse victims with PTSD symptoms, PTSD symptoms such as memory intrusion may interfere with reconstructing the trauma-related memory and elicit trauma-associated feelings such as horror and helplessness. These trauma-related feelings may in turn hinder adaptive socio-cognitive and emotional coping in various situations and exacerbate negative emotional states (e.g. anger) and thus contributes to triggering sexual offense. A more through exploration of potential mediating variables that trigger offense in sexual offenders with PTSD is needed in the following section.

PTSD Symptoms as Triggers to Offending Behaviors

One of the most common types that were used for adult and juvenile sex offender treatment is a Relapse Prevention (RP) model (Laws, 1989, 1995, 1999; Laws, Hudson, & Ward, 2000). In RP clients learn about their offense cycles with an emphasis on recognizing high-risk situations and negative emotional states that can be precursors or triggers to offending behavior (McMackin et al., 2002). In Pithers and his colleagues' study (1989) on early and

immediate offense precursors, common early precursors seen at over a 40% rate for both rapists and child molesters included family chaos, parental marital discord, and parental absence/neglect, and common risk factors that the offenders experienced just prior to the offense at over a 40% rate were cognitive distortions, disordered sexual pattern, low victim empathy and so on. In line with this, trauma-associated feelings such as fear, horror, and helplessness are likely to play an important role as risk factors. Trauma symptoms such as intrusive memory may lead to trauma-associated feeling such as fear and helplessness, which may in turn hamper offenders' subsequent socio-cognitive-emotional functioning and finally contribute to engaging in maladaptive behaviors such as sexual offense. In short, trauma exposure may generate the cycle of trauma.

Trauma cycles can be discovered in another PTSD-related clinical group, for instance, Vietnam veterans. It has been widely known that combat veterans with PTSD reported more problems in areas of intimacy and sociability, and have less expressiveness ,less disclosure, and higher levels of general hostility and physical aggression toward their female partners when compared with combat veterans without PTSD(Robertsetal.,1982; Caroll ,Rueger, Foy,& Donahoe,1985). Thus, research has suggested that male Vietnam veterans suffering from PTSD are at in increased risk for engaging in physical aggression against their partners. Byrne and Riggs(1996) attempted to identify the underlying mechanism of the association between PTSD symptomology and physical aggression and found that relationship conflict mediates the association between PTSD symptoms and their use of relationship aggression. That is, veterans with higher levels of PTSD symptoms tend to experience more frequent and severe relationship problems, which in turn contributes to increased rates of relationship aggression. This trauma cycle can be accounted for by using different processes such as memory and emotional dysregulation. Trauma exposure such as sexual abuse/ combat exposure leads to PTSD, and memory-related symptoms such as in trusive memory, combined with motional hyper responsiveness such as fear, horror, and helplessness, interferes with adaptive functioning invarious domains of sociallife, which in turn contributes to problems such as relation aggression or sexual aggression. In summary, sexual victimization in childhood does not elicits sexual aggression in juvenile or adulthood itself, but its trauma-related symptoms such as in trusive memory, hyperarousal, combined with trauma- associated feelings such as helplessness or horror, put some sexual victims at greater risk of engaging in sexual offense.

PTSD and Future Research in Sexual Offenders

Although it is conceivable that sexual

victimization in childhood makes a cascade effect to the subsequent functioning in various domains and contributes to increasing sexual offense, the model needs to be investigated in empirical research. For instance, sexual offenders with PTSD can be compared with sexual offenders without PTSD to investigate the specific role of PTSD symptomology that contributes to triggering sexual offense. Studies on neurobiological underlying mechanism for the association between PTSD symptoms and sexual offense should be paralleled with psychological studies. In those studies, hippocampal-amygdalar circuits may be highlighted in their potential role in mediating the association between PTSD symptoms and offending behaviors. Findings of such study also can be utilized for making more specific intervention programs for sexual offenders with PTSD.

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외상후 스트레스 장애(PTSD)와 성적 공격성: 예비 연구

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본 논문은 외상후 스트레스 장애(PTSD)와 성적 공격성의 관계를 고찰하였다. 성범죄자들의 특성에 관한 많은 연구들이 청소년이나 성인 성범죄자 중 상당수가 어린 시절에 성적 학대를 받은 피해자였다는 사실을 보고하고 있다. 그러나 역설적이게도, 성적 학대를 받은 아동들이 청소년이나 성인이 되어 다시 성범죄를 저지름으로써 학대 경험을 되풀이하기도 한다. 본 논문은 PTSD 증상이 아동기의 성적 피해 경험과 이후 성인기의 성적 가해 사이의 관계에서 매개적인 변수가 될 수 있음을 제안한다. 간섭 기억과 같은 트라마 증상이 두려움이나 자포자기 같은 트라마 관련 감정을 일으키고, 후에 가해자들의 사회 인지적/감정적 기능에 장애가 된다. 정상적인 사회 인지적/감정적 기능이 발달하지 못할 경우, 성범죄와 같은 비정상적인 행동에 가담할 가능성을 증가시키게 된다. 관련된 이론과 경험적 연구들이 고찰되었다.

주요어 : 외상후 스트레스 장애, 성적 공격성, 성범죄