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A Concept Analysis of *Trauma Coercive Bonding* in the Commercial Sexual Exploitation of Children

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ABSTRACT

Background: The sex trafficking of adolescents is known as commercial sexual exploitation of children (CSEC). CSEC is a complex phenomenon where identification requires understanding of developmental disruptions from toxic bonding experiences that increase in complexity over time. These toxic bonding experiences forced through coercive methods disrupt the holistic development of a self in the CSEC victim that interferes with daily functions, decision-making and social and emotional development. Lacking in the literature is a conceptual foundation for *trauma coerced bonding*.
Purpose: The purpose of the analysis is to define and clarify the future concept of *trauma coerced bonding* from trauma bonding as it relates to CSEC victimization.
Methods: The concept analysis used Rodgers' evolutionary method to search four databases (PubMed, CINHAL, Scopus, and Google Scholar [for grey literature]), using terms associated with various descriptions of trauma bonding (for instance, Stockholm syndrome), resulting in twenty papers for review.
Results: Attributes, antecedents, and consequences of trauma bonding were delineated and explained. It became apparent through this analysis that the concept of trauma bonding of adolescents exposed to CSEC is very different from other forms of trauma bonding, leading this author to a more precise term, *trauma-coercive bonding*. *Trauma coercive bonding* is a long process that is a developmentally disruptive form of bonding that has ramifications throughout the life span.
Discussion: Trauma coercive bonding is influenced by more than just an emotional bond. The proposed definition of *trauma coercive bonding* brings an in-depth description of vulnerabilities and disruptions to childhood when CSEC, which persists long into adulthood.
Conclusion: Future qualitative research should pursue a grounded theory of *trauma coercive bonding* to further explain and study this phenomenon.

Introduction

Sex trafficking is the fastest growing form of human trafficking worldwide (International Labour Organization and Walk Free Foundation (ILO), 2017). Also termed modern-day slavery, human trafficking affects 40.3 million persons engaged in forced labor, 3.8 million adults forced into commercial sexual exploitation of adults (CSEA), and 1 million children forced into commercial exploitation of children (CSEC) (International Labour Organization and Walk Free Foundation (ILO), 2017). The vast percentage (99%) of persons affected by CSEA and CSEC were women and girls (International Labour Organisation (ILO), 2015a; International Labour Organization and Walk Free Foundation (ILO), 2017). The risk of CSEC increases as youth enter adolescence, a developmental stage noted for independence (Erikson & Erikson, 1997). CSEC interrupts identity formation in the adolescent, resulting in role confusion, which in turn diminishes self-esteem and destroys healthy boundaries (Hopper, 2017b; Ueda, 2017). Adolescents reporting CSEC verbalize that they are subjected to continual abuse as a *sexual commodity*, and they experience being traded for money (cash, debit, or credit), where the traffickers profit when the child sells repeatedly; revenues from this crime estimated to be about $27.8 billion globally (ILO, 2015b). The CSEC experience ultimately leads to vulnerability, which results in risk behaviors and an emotional defenselessness to, or extreme fear of, traffickers (Dutton & Painter, 1993; Varma, Gillespie, McCracken, & Greenbaum, 2015).

An adolescent experiencing displacement, such as running away from home, homelessness, and/or truancy in school, doubles the odds

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of CSEC victimization (Greenbaum, 2014). Continuous exposure to trauma over time has profound health effects on adolescents (Anda et al., 2006; Anda et al., 2009). The health effects of trauma after CSEC in adolescent populations are both physical and mental, including include somatic pain, functional impairments, risk-taking behaviors, and heightened responses to their environment, leading to emotional, developmental, psychological, and behavioral dysregulation (Cole, Sprang, Lee, & Cohen, 2016). This dysregulation influences their impulse regulation, attention and consciousness, interpersonal relationships, and self-perception and meaning making. The CSEC experience for the adolescent results in boundary confusion about what constitutes kindness, intimacy, safety, and love; and the confusion results in the eventual creation of an emotional bond with their exploitative trafficker known as *trauma bonding* (Reid, Haskell, Dillahunt-Aspillaga, & Thor, 2013). Researchers are discovering that CSEC may be more complex than other forms of trauma bonding (Hopper, 2017a). Therefore, the purpose of the analysis is to further clarify the concept of *trauma coercive bonding*, and to identify attributes, antecedents and consequences noted in the literature using Rodgers' evolutionary Concept Analysis.

Background

The current definition of trauma bonding is the invisible strong emotional tie that develops between two individuals, where one person frequently harasses, beats, threatens, abuses or intimidates the other person (Hopper, 2017a). The study of the cycle of incest in families informs the concept of trauma bonding, where the dynamics of incest include the child's unfailing emotional bond to an abusive parent (deYoung & Lowry, 1992). The pressure of secrecy in an incestuous family, the emotional grooming of the child, and the child's resulting attachment behavior, nurtured under extreme conditions of stress, create a bond that prevents the child from disclosing the incest. Parallel research about abuse defines other strong emotional bonds, including domestic violence (DV), and hostage situations (deYoung & Lowry, 1992).

Stockholm syndrome is a hostage situation where there is a *bidirectional bonding* between the hostage and hostage takers to encourage unspoken survival of the hostage (Jülich, 2005), regardless of the hostage's age and life experience. When compared, neither Stockholm syndrome hostages nor child sexual abuse (CSA) victims were able to escape or stop the abuse (Jülich, 2005). In addition, Stockholm hostages and CSA victims assumed responsibility for the abuse by self-blaming and a protecting of the abuser (Jülich, 2005). The victim experiences remorse and abandonment when the abuse stops, which seems counterintuitive. The phenomenon of continual protection of the abuser by the victim carries over into the CSEC toxic trauma literature.

Research contributes to understanding trauma bonding experiences by exposing the aftermath of DV, which includes heightened levels of fear, dissociative disorders, memory impairment, diminished sense of self, difficulty interpreting emotions, and an inability to set boundaries that create a safe environment for self (Reid et al., 2013). Building on the evidence, research about persons experiencing CSEC, in comparison to CSA or DV, described higher exposure to toxic trauma in the CSEC group and produced more serious trauma symptoms, such as depression, anxiety, substance abuse, self-destructive behavior, and revictimization (Cole et al., 2016). Toxic trauma is defined as the extreme, frequent, or extended activation of stressful events that lead to negative psychological and physical health outcomes. Toxic trauma in CSEC occurs repeatedly and is cumulative over time within a specific captive relationship where the child's growth and development become impaired, leading to dissociative symptoms associated with coping and/or self-preservation (Cole et al., 2016). The extreme stress levels of CSEC or CSA or DV adds to the dysregulation and leads subsequently to the formation of poor self-concept (Greenbaum, 2014; Hopper, 2017a). The trauma of performing sexual acts by necessity in CSEC, with the dynamics of trauma bonding loyalty due to poor self-concept confuses and affects perceptions about safe and unsafe psychosocial connections/relationships (Varma et al., 2015) and results in fear and anxiety (Reid, 2013). The long-term outcomes for those adolescents who are sex trafficked include emotional responses that are due to long exposures to physical and sexual violence within the context of the role of sex and trafficking.

CSEC emotionally entangles adolescents in a trauma bond that is not well understood and not consistently defined (Reid, 2016). The lack of consistent definitions frustrates providers trying to understand the dynamic relationship between the CSEC hostage and trafficker. As a result, "service providers and law enforcement are unable to identify, rescue, or help" the CSEC reenter society (p. 493).

In order to understand the commonalities between trauma bonding and the terms Stockholm, DV, and CSA, researchers identified two present but different conditions: (1) a severe power imbalance that results in isolation, vulnerability, and helplessness; and (2) intermittent and unpredictable abuses alternate between positive and violent interactions that undermine trust (Reid, 2016). The trafficker and the conditions under which trafficking occurs are different from Stockholm, DV, and CSA in that they are more toxic. Imparting a primal fear, the trafficker perpetrates terror, a continuous unpredictable physical and psychological assault, taunting with threats of death (implying permission for victims to live), and expressing occasional false romance or false kindness (Reid, 2016). Isolation and threats to survival heighten the CSEC reaction of trauma bonding, leading the CSEC to depend on the trafficker for sustenance and full-time protection, all while believing the traffickers' threats, emotional belittling, and demeaning language. Isolation over time becomes normal and the trafficker becomes safe and trustworthy; however, law enforcement, health care providers, and families are no longer viewed as safe or trustworthy (Reid, 2016). Furthermore, surrender to the inevitable isolated situation fraught with terror meant the trafficker no longer needs to use physical force or restraints, because the CSEC would not seek freedom and/or elopement, even if it is an obvious option (Baldwin, Fehrenbacher, & Eisenman, 2015).

Therefore, trauma bonding lacks a formative foundation of inquiry needed for knowledge development (Raghavan & Doychak, 2015), vital for planning, implementing, evaluating prevention interventions and understanding the relationship between CSEC and trafficker. Trauma bonding and toxic trauma experiences are inadequate terms to comprehensively explain the phenomena of CSEC. Factors facilitating elopement or rescue may be uncovered by a thorough analysis of all types of trauma bonding experiences, and the similarities and differences between Stockholm syndrome, DV, CSA, and forms of trauma bonding in CSEC.

Methods

Rodgers' evolutionary method of Concept Analysis describes an inductive approach to building knowledge about trauma bonding. It allows for the identification the concept of interest and associated expressions, choosing the setting and sample, collecting and managing the data, examining data for characteristics of the concept, recognizing an exemplar, interpreting the results of the analysis, and proposing implications for practice (Rodgers & Knafl, 2000).

A literature search included PubMED, Scopus, Google Scholar, and CINAHL databases, using articles published between 1990 and 2017 in English. Search terms included "trauma bonding," "sex trafficking," "toxic trauma," and the Boolean phrases of "trauma bonding AND sex trafficking," "trauma bonding AND interpersonal violence," "trauma bonding AND violence," and "trauma bonding AND sex trafficking." An attempt was made to limit the search to papers less than 10 years old, full-text, and adolescents. Therefore, the search was expanded to papers less than 30 years. The literature search yielded 33 articles. After reviewing all articles and discarding duplicates, 21 articles had attributes pertaining to trauma bonding, and toxic trauma, in experiences described as Stockholm Syndrome, DV, CSA, and CSEC during

adolescence. The articles were peer-reviewed and there was one book chapter. Although trauma bonding had descriptions, definitions were scarce (See Appendix – Literature Search). It should be noted that a librarian was not included for this literature search.

Results

Attributes

Attributes are clusters of characteristics that make it possible to identify situations that can be categorized under the concept and provide the description of trauma bonding. Three novel attributes emerged defining trauma bonding in CSEC: (1) severe power imbalance; (2) increasing intermittent brutal and seductive behavior; and (3) social isolation. One additional attribute will be explored because of its significance in the wavering coercive attitude of the CSEC victim and its importance in exploring the 'perceived inability to escape/elope' (See Fig. 1).

Severe power imbalance

The severe power imbalance within the relationship dynamics of the trafficker and CSEC victim causes CSEC victim to feel increasingly helpless and vulnerable because they endure relentless beatings, rapes, torture, and psychological abuse (Jordan, Patel, & Rapp, 2013; Newby & McGuinness, 2012), which results in immense terror in CSEC. Terror and abusive torture threatens the adolescent's physical and psychological survival when experiencing CSEC (Wallace, 2007). Lack of psychological maturity magnifies the power imbalance and dependence in the negative relationship over time (Reid et al., 2013; Reid & Jones, 2011). Additionally, traffickers exploiting minors often exhibit psychopathic traits, tactically planning to react with increasingly intermittent brutal interactions (Reid, 2016), specifically to obtain complete control by forcing the witnessing violence toward others, and threatening the survival of the CSEC (Hopper, 2017a). Over time, the captured victim becomes hopeless and powerless, surrendering to the trafficker's demands and becoming committed to and identifying with the trafficker and his views (Hopper, 2017a). Eventually an intense, almost reverential dependence on the trafficker as the authority creates subtleties in the notion of entrapment and development of trauma bonding (Hopper, 2017a; Reid, 2013; Reid & Jones, 2011). The stigma and shame of the forced sexual acts adds to the trauma bonding that increases the complexity of the trauma as seen in victims of CSA to the experience in CSEC (deYoung & Lowry, 1992; Hopper, 2017a).

Increasing intermittent brutal and seductive abusive behavior

The emotional ties present in antecedent behavior become a lure, which is broken when the violence and rapes begin, supporting the notion that an emotional dependency, which may be reciprocal typically, precedes trauma bonding. As the bond strengthens, the efforts for reciprocal affection diminish, and the trafficked victim is trapped by the trauma bond. Using intermittent exploitative abuse alternating with positive or neutral interactions help the trafficker obtain complete control of the CSEC victim. In this case, traffickers exploit seductive and/or grooming processes conceptualized in CSA (Reid, 2013; Reid et al., 2013) and DV (Wallace, 2007). The process results in a powerful loyalty to the trafficker where the use of reward and punishment, acceptance and degradation, potentiates a psychological confusion and fear among victims where the CSEC victims question what constitutes kindness, intimacy, and safety (Cole et al., 2016). Trauma bonding promotes vulnerability and resistance to rescue. Additionally, the phenomenon of trauma bonding occurs when violent and kind acts are intermittently administered. The friendly and loving actions of the traffickers create inner confusion, often misinterpreted for acts of love (Hopper & Hidalgo, 2006), and potentiating victimization (Dutton & Painter, 1993) through establishing a sense of obligation and gratitude from the victims (Reid et al., 2013). The adolescent CSEC victim does not have the autonomy or maturity to analyze the complexities of their feelings while under the constant threat to their survival.

Social isolation

Social isolation is a method used by traffickers to stop the formation of friendly relationships among CSEC victims in the trafficking community, known for its own rules and demands (Cecchet & Thobum, 2014; Salisbury, Dabney, & Russell, 2015). Favoritism and creating conflict among CSEC victims ensure a lack of cohesion among CSEC, even when CSEC resists the traffickers efforts (Hopper & Hidalgo, 2006). In social isolation, the victim becomes more vulnerable and dependent on the trafficker for all physical and emotional needs, resulting in a progressive and worsening trauma bonding to trauma coercive bonding.

Perceived inability to escape/elope

Often CSEC have significant physical and emotional consequences that are directly linked to the CSEC coercive bonding experiences. The mental and emotional inner turmoil that emanates with the decision to escape, quit, leave, and inevitably change is part of a long journey of unsettling psychological and physical conditions and awareness. Leaving is a physical and emotional process with obstacles to success (American Public Health Association, 2015). In one case, the CSEC returns physically and periodically or has obligatory feelings toward the trafficker (Cecchet & Thobum, 2014). In leaving, an inability to perceive a non-threatening healthy environment is a direct result of an unaware coercive bonding experience. Even if physically removed, CSEC may agree to sell or exchange sex as a favor to another, usually an older male (Anderson, Coyle, Johnson, & Denner, 2014; Cole et al., 2016; Newby & McGuinness, 2012). In safe communities outside the trafficker's reach, the CSEC feels unsafe, even if their needs are met, and people and/or services are in place to promote restoration and recovery after elopement (Anthony et al., 2017). The exploited youth often express a lack of understanding about their insensible efforts to reach out or return to the trafficking environment where escape is inconceivable.

Antecedents

Rodgers explains that antecedents are factors that precede the concept of interest. The antecedents of trauma bonding relate to the trafficker's gradual entrapment, using seduction and grooming environment which promotes the cultivation of a pseudo-familial bond (Cecchet & Thobum, 2014) and a physical and emotional dependency on the trafficker (Wallace, 2007). The potential captive becomes

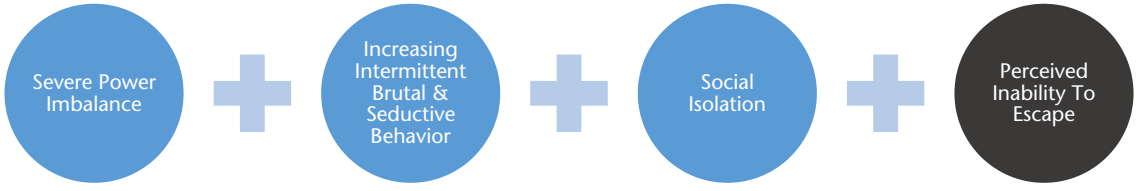

Fig. 1. Attributes of trauma bonding and coercive bond.

defenseless to the invisible emotional tie growing from weak to intense emotional and/or fear of the trafficker. The emotional ties or emotional connections depend on the recruitment tactics of different traffickers (Baldwin et al., 2015). For example, the boyfriend recruiting tactics in boys as well as in girls, using an emotional connection *"love"* between the trafficker and child, are often used to lure CSEC victims, and fear develops when the emotional assaults, physical violence, and rapes begin. The continual assaults create intense fear, seeded in the earliest capture activities of the trafficker toward the CSEC, and continue, where intense fear changes bio-psycho-social-spiritual development to promote survival.

Consequences

Consequences of trauma bonding within the dynamics of growth and development affect their psychosocial and neurobiological environment. Trafficking victims' exposure to toxic trauma, one that occurs repeatedly and cumulative over time and within a specific relationships and context, leads to dissociative symptoms associated with coping and/or self-preservation; while managing stress levels adds to the dysregulation and leads subsequently to the formation of poor self-concept (Cole et al., 2016; Reid & Jones, 2011). Continuous exposure to toxic trauma, have a profound effect on the developing brain of an adolescent victim, allowing for the formation of trauma bonding (Reid & Jones, 2011).

Hence, trauma bonding increases victim's pathology due to internal responses to the continual environment of terror (Raghavan & Doychak, 2015). The hidden nature of the CSEC (Newby & McGuinness, 2012) amplifies providers' inability to identify and engage potential victims (Reid, 2013). Consequently, CSEC victims remain hidden, increasing vulnerability to immediate harm, long-term physical injury with a loss of function, as well as death (Anda et al., 2009). Literature about long-term sequelae of bio-psycho-social-spiritual injury is growing. The neurophysiological response to toxic environments, like CSEC, promote stress responses that cascade hormones, altering sensations (anxiety), emotions (fear), and cellular response (epigenetic change and end organ damage) (Anda et al., 2006; Anda et al., 2009).

Furthermore, the biological consequences are from the dysregulation of the neuroendocrine system, which creates brainstem irritation (fear) and hormonal sequelae (Malenka, Nestler, & Hyman, 2009). The resulting "fight-or-flight" response causes an elevation in stress hormones cascading and triggering other hormones, called general adaptation syndrome (GAS) (Selye, 1956). However chronic stress promotes hormonal exhaustion and fundamentally changes cellular activity, which promotes disease, e.g., digestion, immune system, mood, anxiety, energy storage (fat), and the changes results in hypertension, obesity, and autoimmune diseases (Child Welfare Information Gateway, 2016; Gross, Beeber, DeSocio, & Brennaman, 2016; Selye, 1956).

The psychological injury changes the adolescent's developing brain architecture, affecting interpretation and learning. When emotional and physical assaults occur, the internalization results in mental health consequences of anxiety, low self-esteem, self-doubt, and emotional dependence upon the trafficker, followed by adoption of behavioral aberrations and deleterious risk behaviors (with subsequent disease or injury) (Anda et al., 2006).

The social injury is from isolated interactions of the trafficking environment and results in the inability to trust others, often falling into re-trafficking environments. The forced activities promote a lack of boundaries in risk taking behaviors, as well as a tendency to minimize or deny violence and other harmful behaviors and re-enter as "bottoms" (traffickers) (Zimmerman, Hossain, & Watts, 2011).

The spiritual injury occurs when beliefs about life contradict the actuality of the lived experience. For CSEC moral conflict is characterized by feelings of hopelessness, where their isolated experience is inconsistent with beliefs about their lives (Wallace, 2007) where their immaturity is insufficient to create logic about the events, a reluctance to disclose their abuse, and a resistance to (and often decline) rescue services as unsafe.

In addition, trauma bonding integrates the gradual development of cognitive distortions and behavioral patterns between the adolescent victim of CSEC and the trafficker. The adolescent age and immaturity are a function of their growth and development, highlighting their normal psychological and emotional dependency on those in charge (adults, parents, and teachers). However, once captured and removed from safety, the repeated and prolonged toxic traumatic experiences during captivity create a dysfunctional attachment related to protection and dependency on a trafficker (Hardy, Compton, & McPhatter, 2013).

Exemplar

The exemplar provides clear descriptions and characteristics of the concept by illustrating the concept in a "real life" experience. *Crimesider* staff (2014) reported the story of a 15-year-old California adolescent kidnapped and held for 10-years by her mother's ex-boyfriend. Over the captivity, she endured mental and physical abuse, often drugged and isolated to prevent escape. She entered a forced marriage, conceived a child, was severely beaten and locked in a small room after an escape attempt. To feign affection, the captor rewarded her with occasional trips outside her small room. When seen by neighbors, they described the couple as "a happy couple." Occasionally, they attended church and block parties together, a small reward for good behavior, juxtaposed with physical punishment for "bad behavior." She internalized a dysfunctional attachment of dependency, losing identity, with feelings of hopelessness, and accepted her captor's world as her own. The exemplar case demonstrates attributes of trauma bonding and coercive bonding concepts, which include severe power imbalance, intermittent brutal and selective abusive behavior, social isolation, and perceived inability to escape.

Surrogate and related terms

Various terms were interchangeable in published literature about trafficking, expressing commonality with the outcome of *trauma bonding* (deYoung & Lowry, 1992; Hopper, 2017a; Reid, 2013, 2016) and include *Stockholm syndrome* (Cantor & Price, 2007; Wallace, 2007) and *trauma coerced bonding* (Raghavan & Doychak, 2015). Surrogate terms associated with the interchangeable terms above in the trafficking literature were *anxious attachment* (Hopper & Hidalgo, 2006); *brainwashing* (Cantor & Price, 2007; Jordan et al., 2013; Reid, 2013); *child sexual abuse* (Jülich, 2005); *coercive control* (Jordan et al., 2013; Raghavan & Doychak, 2015); *domestic violence* (Reid, 2013; Wallace, 2007); *dysfunctional attachment* (Raghavan & Doychak, 2015); *elastic bond* (Dutton & Painter, 1993); *invisible chain* (Hopper & Hidalgo, 2006); *toxic trauma* (Hopper, 2017a), and *traumatic entrapment* (Cantor & Price, 2007). While, these terms express some element of the violent and abusive relationship and environment between the victim and offender, they fail to demonstrate the complexity of progressive *trauma coercive bonding* experiences in CSEC.

Additional descriptive terms associated with trauma bonding

The closest relational concepts to trauma bonding outcomes recognized in the literature is Stockholm Syndrome. Cantor and Price (2007), Jülich (2005), and Wallace (2007) recognized Stockholm Syndrome is a psychological phenomenon where hostages become devoted to their captors. The attachment association with other victims, such as DV and CSA illustrates the power imbalance in combination with intermittent kindness, which creates an emotional bond to the abuser (Adorjan, Christensen, Kelly, & Pawluch, 2012; Wallace, 2007). Although, one finds similarities between trauma bonding and Stockholm syndrome outcomes, there are a few key differences. In Stockholm Syndrome, a bi-directional reward and fear relationship created a bond

between the victim and the abuser (Cantor & Price, 2007). Thus, the emotional bond has interchangeable characteristics and outcomes seen in victims of incest and DV (Adorjan et al., 2012; deYoung & Lowry, 1992; Wallace, 2007). Adorjan et al. (2012) explains that one demonstrated characteristic is reciprocal sentiment, where abusers seem to develop positive feelings for the victims they abuse, even making excuses for "teaching" or "demonstrating" love.

In trauma "coerced" bonding, a hybrid exists in trauma bonding where the bond is a direct outcome of the abuses and terror (Raghavan & Doychak, 2015).

Discussion

Unlike Stockholm and trauma bonding, the uni-directional trauma "coercive" bonding, characterized by brutal terror inflicted on the victim and controlled by the trafficker, is planned specifically for the purposes of obtaining profit without emotional affection for the victim. In CSEC, captivity is followed by a process previously unrecognized, which we will label *trauma coercive bonding* that has characteristics of capture, fear, and terror in a progressively isolated and dependent dysfunctional attachment to the trafficker, where recognition and identification of this phenomenon in CSEC may interrupt the trauma coercive bonding process in order to mitigate dependency on the trafficker and facilitate elopement/rescue of victims. This newly identified process is a form of trauma bonding but differs in the effects of its coercive nature on the psychological and neurophysiological development of adolescents.

Therefore, the concept *trauma coercive bonding* offers promising direction in the development of understanding processes in abusive experiences involving captivity in CSEC. There are similarities in the trauma bonding literature that support further research on the process of *trauma coercive bonding*. Only then will we have a foundation for developing interventions for identification, rescue, and support for societal reintegration of CSEC victims to end the cycle of abuse.

The concept of *trauma coercive bonding* clarifies the pathways and complex processes experienced by adolescents who are sex trafficked. The process milestones are characterized by antecedents (gradual entrapment), attributes (severe power imbalance, intermittent brutal and seductive abusive behavior, social isolation, and perceived inability to escape), and consequences (neurophysiological change that promotes interruption of development, characterized by emotional and physical maladaptation that includes hypervigilance and hypersensitivity to the traffickers' mood, language, movements, and actions, all leading to adoption of the trafficker's world and loss of identity).

Knowledgeable providers consider the gradual entrapment of the adolescent by a trafficker where there is a **severe power imbalance**. The ploy results in the adolescent's dependency beyond the victim's control, trading money for necessities of survival, such as shelter, food, and the possibility of protection and companionship (Raghavan & Doychak, 2015). The degree of **increasing intermittent brutal and seductive behavior** that includes cognitive and emotional manipulation through rapes, beatings, forced crimes, and other atrocities promotes confusion about safety where fear and terror are unpredictable. Occasional rewards of kindness alter the victim's before ability to identify themselves as victims of crime. **Isolation** diminishes outside contact where CSEC lose ability to individualize, further reinforcing unidirectional bonds, promoting fear of law enforcement, declarations of love for trafficker, denial of trafficker activities as crimes, and denying acts of abuse or terror as retaliation by the trafficker. Acts of abuse and emotional coercion accelerate until resistance to the reality diminishes, where inconsistent punishment to existence is often unpredictable. Exposure to substance abuse, worsening mental health, physical health deterioration, and long-term isolation diminishes knowledge, desire, and capacity to seek help. The **perceived inability to escape** is a direct result of emotional symptoms of fear and shame, when combined with an internalized stigma about forced criminal acts performed during captivity, there is diminishes trust in systems. The lack of trust prevents disclosure when asked and elopement when opportunity arises and a perceived entrapment.

CSEC experience psychological coercion over time, degrading conditions, terror, and unsafe environments, enhanced by isolation. The experience influences the adolescent's development through biological neurotoxicity, alterations in brain structures and function, psychological and behavioral dysregulation, and emotional stagnation. Importantly, impact of CSEC on the bio-psycho-social-spiritual development of the adolescent limits their organization of memories (HPA axis), ability to self-soothe (chronic vagal nerve irritation), negative attachment (fear) and understanding of appropriate interpersonal boundaries associated with Erikson's development of trust, autonomy, initiative, industry, and identity.

Conclusion

Rodgers' evolutionary method of Concept Analysis is effective in exploring the scope, complexity, and evolutionary processes of *trauma coercive bonding* as a process within the relational dynamics of CSEC with many points for intervention. CSEC ***is*** child abuse and as such reporting by health care providers is mandatory. The current analysis should inform both practitioners and researchers about an inherent bias toward the misunderstood choices made by the vulnerable CSEC victims. These victims do not have a choice to escape – they are psychologically bonded to their perpetrators. The concept of *trauma coercive bonding* provides a realistic and compelling explanation about the CSEC experience, the physical and mental health consequences, and the perplexing choices made by the adolescents experiencing CSEC. The negative impact of CSEC spreads beyond the individuals, and changes epigenetic environments, affecting the future health and longevity of the adolescent CSEC, their future offspring, and society's future healthcare expenditures. Therefore, the conceptualization of *trauma coercive bonding* as a process provides a novel framework for further research and eventual interventions.

Coercive trauma bonding provides the explanation necessary to comprehend the psychosocial dynamics between victims of CSEC and their traffickers. Defining and understanding the conceptual analysis of the *trauma coercive bonding* processes in the adolescent aids in the development of innovative and comprehensive primary, secondary and tertiary prevention interventions. The opportunities include prevention strategies to the antecedents of gradual entrapment and severe power imbalance, and include interventions at the individual, family, community, and systems levels. Correct recognition and identification before disclosure opens the opportunity for education about positive safe relationships, activities building self-worth, potential to discover or reclaim self-identity, and improve skills to overcome traumas. For those victimized for significant periods of time, successful models will build on trauma informed care principles and provide an individualized patient-centered care experience. Interventions after CSEC that meet the adolescent's self-identified immediate needs with the community of service providers promises to improve the adolescent's potential for higher levels of wellness, a longer productive life, and successful reintegration into society.

Conflict of interest statement

No conflict of interest has been declared by authors.

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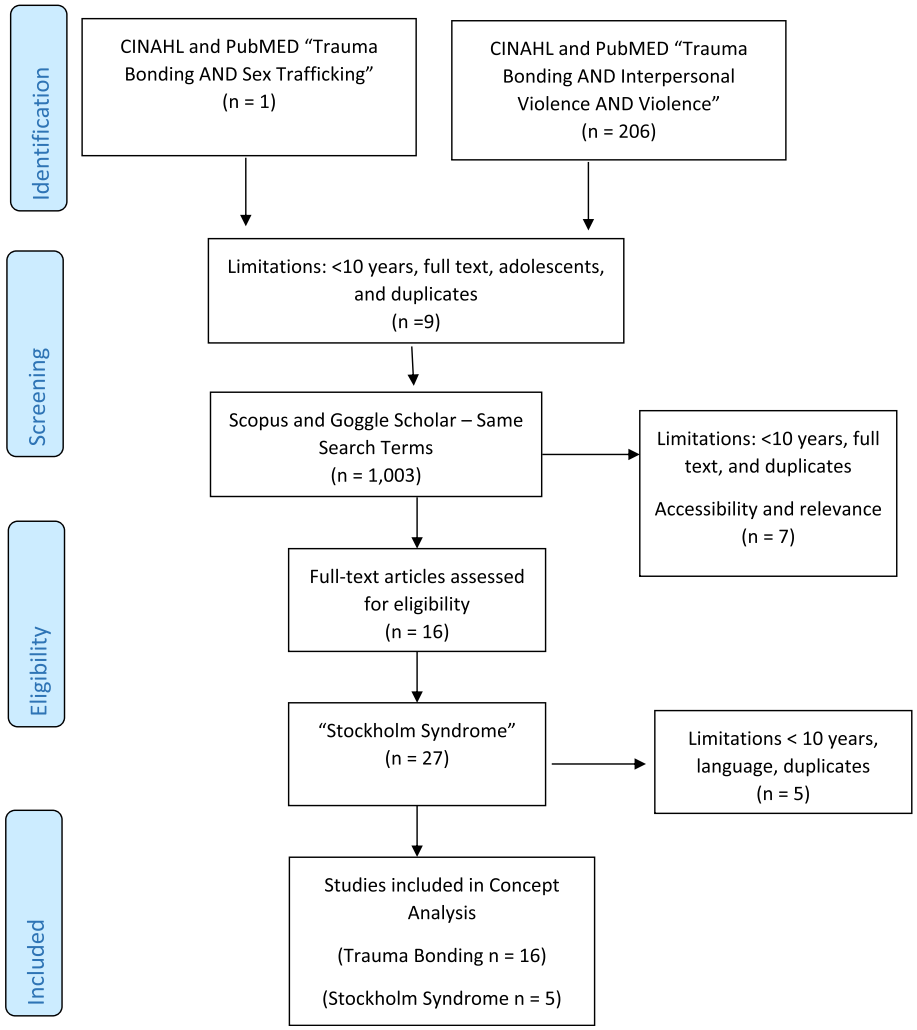
Appendix A. Literature search



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