

The Relationship between Childhood Experiences and Adult Interpersonal Functioning and  
Wellbeing: Results from a Ghanaian Sample

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## Abstract

Childhood traumatic experiences have been shown to have long term consequences that extend into adulthood. The present study used a community sample of 250 adults (51.6% women, mean age = 32, age range: 21–64 years) in Ghana to explore the long term associations of childhood trauma with adult interpersonal functioning and psychological wellbeing. Participants retrospectively reported perceived childhood traumas and responded to questions assessing their self-esteem, object-relations, and current PTSD symptoms. In this sample, 23.3% of participants reported experiencing a single childhood trauma, while 36.7% of participants reported experiencing at least two childhood traumas. The three most common childhood traumas reported were the death of a close friend/family member, extreme illness/injury, and high conflict parental marriage. The majority (73%) of reported traumas were in the category of traumas that arose from chance events or nature (general trauma), as compared to traumas perpetuated by a person usually known by the victim with the specific intent to harm the victim (relational trauma). The results indicated that adults with any perceived trauma experiences in childhood had significantly more impairment in their current interpersonal relatedness capacity and more PTSD symptoms than their counterparts without traumas. Participants who experienced relational traumas, as well as those with multiple traumatic experiences had more object relations impairment and more PTSD symptoms compared to those with general traumas and a single trauma respectively. No evidence was found for associations between perceived childhood trauma and current self-esteem in the sample. There was also no evidence that social support moderated the relationship between childhood trauma and adult self-esteem, interpersonal relatedness, and PTSD symptoms among participants. Recommendations for future studies are to explore the unique interpersonal and PTSD impairments associated with each

individual type of childhood traumas investigated in the study, investigate associations of childhood trauma with physical outcomes in adulthood, and explore the possible moderating role of other elements of social support between childhood trauma and psychological and interpersonal outcomes in adulthood. Policy recommendations include the use of empirical studies from the country to advocate for better mental health resources, and social marketing campaigns to normalize mental health seeking behaviors.

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## Chapter I

### Introduction

#### Background of the Problem to be Investigated

Traumatic experiences in childhood, which range from violence against the self to witnessing violence against others, are a common phenomenon worldwide. Girls, for example, experience more incidents of sexual violence and neglect while boys experience more experiences of physical violence (see United Nations, 2006, which also recommends governments do research about traumatic experiences facing children). From an economic perspective, childhood traumatic experiences have implications on the productivity of a nation's workforce. Individuals with histories of childhood traumatic experiences, in addition to having more mental health problems, also tend to have more physical health problems such as migraines, chronic fatigue, obesity, hypertension or irritable bowel syndrome (Centers for Disease Control and Prevention [CDC], 2011; Sansone, Butler, Dakroub & Pole, 2006). These physical and mental health problems place the burden of care on society as a whole since the productivity of both caregivers of children with traumatic experiences, as well as adult children with childhood traumatic experiences is compromised. Wang and Holton (2007), for example, have conservatively estimated the annual cost of childhood abuse and neglect in the United States to be \$103.8 billion. An incidence-based approach used to estimate the total lifetime economic burden in 2008 estimated the burden to be as large as \$585 billion (Fang, Brown, Florence, & Mercy, 2012). Childhood traumatic experiences, especially when child maltreatment is involved places a substantial burden on society and indicates the importance of prevention efforts to address this widespread phenomenon.

Given the prevalence of childhood traumatic experiences and its associated negative consequences, some studies (Florian, Mikulincer, & Taubman, 1995; Kobasa, Maddi, & Kahn, 1982) have focused on what makes some individuals more resilient to the negative consequences of early traumatic experiences compared to others, since not all children (or adults) develop psychological symptomatology in response to traumatic experiences. These studies suggest that personal variables (hardiness, self-enhancement, use of repressive coping, intelligence) as well as the presence of social support mediate the after-effects of traumatic experiences. The National Child Traumatic Stress Network (NCTSN, 2007) reports that children's exposure to complex trauma, that is exposure to multiple traumatic events, increases the likelihood that an individual will experience lower psychological well-being and "often places them at risk for additional trauma exposure and other difficulties, including psychiatric and addictive disorders, chronic medical illness, and legal, vocational, and family problems. These difficulties may extend from childhood through adolescence and into adulthood" (p. 4).

CDC (2011), in investigating associations of early childhood maltreatment and adult mental and physical wellbeing similarly state that individuals who have experienced four or more categories of childhood trauma (psychological/ physical/ sexual abuse; violence against mother; living with household members who were substance abusers/ mentally ill /suicidal/ had ever been imprisoned) have greater risks of being diagnosed with physical and/or mental illnesses compared to individuals who had experienced none of these traumatic stressors.

The importance of identifying at risk individuals thus has benefits beyond the suffering individual from an economic as well as an intergenerational perspective. Studies pointing to the intergenerational transmission of interpersonal trauma (de Graaf, 1998; Fraiberg, Adelson, & Shapiro, 1975; Lev-Wiesel, 2007) have demonstrated that parents with trauma histories may pass

on their experiences to their children through “acting out” (i.e., abusive) behaviors, inability to provide emotional or physical caring for their children, and through transfers of their traumatic symptoms to their children via unconscious communications. Since traumatized parents may transmit their trauma experiences unto the next generation, early intervention for at risk populations may reduce the long lasting consequences of such traumatic experiences.

Perry, Pollard, Blakley, Baker, and Vigilante (1995) have described traumatic experiences as both pervasive and chronic (e.g., incest or war), or time limited (e.g., natural disasters or drive-by shootings). Both types of trauma have been associated with negative outcomes on psychological wellbeing, interpersonal functioning (Briere & Runtz, 1990; Kaplow, Saxe, Putnam, Pynoos, & Lieberman, 2006; Schore, 2001) and the development of physical and/or mental health problems. Haine, Ayers, Sandler, and Wolchik (2008) in reviewing the literature on parental death, for example, conclude that parental death is among the most traumatic experiences in childhood. Negative outcomes associated with parental death include mental health problems, traumatic grief, lower self-esteem, and greater external locus of control. Divorce, which also results in parental loss, has been associated with negative consequences in adult children including higher depression and anxiety levels. Amato and Keith (1991) report however that the relationship between parental divorce and psychological wellbeing of adult children is weak in community samples in comparison to clinical samples. When the degree of marital conflict prior to the divorce is included in the analyses of the aftereffects of parental divorce, the results suggest that low marital conflict prior to divorce is related to negative consequences in offspring following parental divorce (Amato, Loomis, & Booth, 1995). This suggests that parental conflict prior to divorce appears to mediate the aftereffects of parental divorce. In another study exploring whether culture influences the aftereffects of parental divorce

in a sample of young adults, Gohm, Oishi, Darlington, and Diener (1998) report that in comparison to individuals from individualistic cultures such as Argentina, Denmark, Greece, and the United States, young adults in collectivistic cultures such as Brazil, Ghana, India, and Taiwan showed significant differences in subjective wellbeing between adults whose parents had high conflict but never divorced, and adults from divorced one-parent homes. These findings provide support for the social support hypothesis in collectivistic cultures which posits that other family or community members provide more social support for children from divorced homes.

In addition to the research which indicates that traumatic childhood experiences are related to long term detrimental psychological and mental health outcomes, other studies (Hadley, Holloway, & Mallinckrodt, 1993; Waldinger, Schulz, Barsky, & Ahern, 2006) have suggested that traumatic childhood experiences result in problems in interpersonal functioning in adulthood. Hadley et al. (1993) found that growing up in dysfunctional families in which one's parents had psychiatric or physical illnesses resulted in significant associations with internalized shame, mistrust, addictions, and emotional problems in adult children.

### **Relevance of the Study**

While there exists in the literature a number of important studies examining the long term correlates of childhood traumatic experiences in adulthood, there is, to the researcher's best knowledge, no study that has examined this question in a Ghanaian sample. Due to the grave physical and psychological health consequences of childhood traumatic experiences (e.g. Solomon & Davidson, 1997) which may continue into adulthood, the contribution of this study to the field of professional psychology is two-fold:

Firstly, the fledging field of psychology in Ghana is still in the process of building up itself as a science to guide professional practice. There is subsequently a small number of empirical studies exploring psychological phenomena in the Ghanaian context, which results in clinical interventions based on empirical data obtained from Western samples. As has been noted by S. Sue and L. Sue (2003) for example however, insufficient research with ethnic minority populations in the United States results in an inadequate body of knowledge and theory for treating ethnic minorities, the consequences of which may be detrimental, since culture plays a large role in individuals' worldviews and beliefs. Likewise, with Western cultures typically classified as individualistic and African cultures, such as Ghana, classified predominantly as collectivist (Hofstede, 2001), cross-cultural importation of Western studies and interventions may not be effective without adaptation to the specific culture in which they will be implemented. As an example Ghanaian culture is highly religious, and trauma interventions may need to integrate individuals' religious belief systems into treatments that will enable them develop healing narratives for traumatic experiences.

In light of cultural differences that influence treatment decisions, the developing field of professional psychology in Ghana needs to build a scientific knowledge base to establish new theories or confirm existing ones. Davies (1974) also argued that nationality in a culture is a *sine qua non* for insight into that society, making it necessary for indigenous researchers to contribute to the literature on cross-cultural studies.

Secondly, this study could provide useful empirical findings for advocacy activities directed at increasing governmental resources for mental health interventions in the sub-Saharan region. In 2009 for example, only 1.2% of the national health budget was allocated to mental health (Ollenu, 2010) in Ghana. The low priority given to mental health in the region suggests



that empirical data, (from local communities) could be utilized as tools for advocating for a greater share of the health budget. This data is especially needed for trauma interventions in light of the pervasiveness and direness of the consequences of unaddressed childhood traumatic experiences based on findings from Western countries. The results of the present study, if comparable to findings from Western cultures, will help authenticate the knowledge of the consequences of childhood traumatic experiences on adult psychological wellbeing and interpersonal functioning in this underserved region, and guide recommendations for action.

Thus, the present study seeks to explore the long term associations of the following childhood traumatic experiences: (i) death of a close friend or family member; (ii) high parental conflict; (iii) physical abuse; (iv) sexual abuse; (v) emotional abuse; (vi) neglect; and (vii) extreme personal illness or injury with adult interpersonal relatedness and psychological wellbeing in a community sample of Ghanaian adults using a cross-sectional survey method.

The next chapter reviews the available literature on the eight types of childhood trauma to be investigated in the study, and provides theoretical frameworks for understanding the long lasting associations of childhood traumatic experience on psychological wellbeing and interpersonal relatedness, as indicated by the quality of object relations and the absence of PTSD symptoms.

## Chapter II

### Review of the Literature

#### Introduction

*Trauma* comes from a Latin word meaning “to wound” (Walser & Hayes, 1988). Brewin, Dalgleish, and Joseph (1996) describe trauma as “any experience that by its occurrence has threatened the health or well-being of the individual. Just as physical trauma may extend from minor abrasions to severe tissue damage, there is no implication that psychological trauma must involve an event outside the ordinary range of human experience, although it may do so” (p. 675).

Brewin et al. include in the definition of trauma, events that violate the basic assumptions connected with one’s survival as a member of a social group, such as the unavailability and unreliability of attachment figures, the non-existence of an orderly relation between actions and outcomes, major illness or disability, physical or sexual assault, social humiliation, transgression of one's own moral code, loss of employment, divorce and separation, bereavement, involvement in actual or potential accidents, conflict, and natural disasters.

After a traumatic experience, some individuals may have *traumatic stress reactions*, which are “conscious and unconscious actions and emotions associated with dealing with the stressors of the catastrophe and the period immediately afterwards” (Figley, 1985, p. xix). Janet (1907), as cited in van der Kolk (2007), proposed that when a person experiences a traumatic experience, the mind is unable to match the experience with its existing cognitive structures. Once the memory of the experience cannot be integrated into personal awareness, a coping mechanism in which the memory is subsequently split off or dissociated from conscious

awareness is employed. Janet proposed that traumatized individuals react to reminders of the trauma with responses that, while relevant to the original trauma, currently have no adaptive value. Janet further hypothesized that a failure to integrate traumatic memories resulted in an “attachment” to the trauma and a subsequent inability to assimilate new experiences, almost as if such individuals had become “stuck” at the moment the traumatic experience occurred. This condition has since evolved into what is known today as posttraumatic stress disorder (PTSD) under the formal diagnostic system of the Diagnostic and Statistical Manual (DSM-5, American Psychiatric Association, 2013). PTSD exists when an individual meets criteria in the following areas: Exposure to actual or threatened death, serious injury, or sexual violence; the presence of one or more intrusion symptoms associated with the traumatic event; persistent avoidance of stimuli associated with the traumatic event; negative changes in cognition or mood associated with the traumatic event, marked changes in arousal and reactivity associated with the traumatic event; and a longer than one month duration of these disturbances after the traumatic experience.

It should be noted that while traumatic experiences are very common in most societies (e.g., 150 million girls and 73 million boys under 18 experienced sexual violence worldwide, United Nations, 2006), many people who experience trauma do not develop PTSD. In general, the literature points to a number of risk factors such as the presence of mental health problems prior to the traumatic experience, peritrauma pain, dissociation during a traumatic experience, traumatic experiences of a long lasting nature, abuse by early caregivers, emotion-focused coping, low social support during traumatic experiences, and an absence of the individual characteristic of hardiness (Bonanno, 2004; Ford et al., 2013; L.King, D.King, Fairbank, Keane, & Adams, 1988; Norman, Stein, Dimsdale, & Hoyt, 2008; Shalev, Peri, Caneti, & Scriver, 1995; Trickey, Siddaway, Meiser-Stedman, Serpell, & Field, 2012; van der Kolk, 2003; van der

Velden & Wittmann, 2008), that predict the likelihood of developing PTSD symptoms following a traumatic experience.

## **Theoretical Frameworks**

**Attachment theory.** Bowlby (1969) pioneered work in human attachment theory which contributed to our understanding of how infants' attachments to caregivers prime their subsequent relatedness with other people. From an evolutionary perspective, the physical proximity of an infant to its caregiver is prudent, since separation from caregivers could result in mortal injury. In addition to providing physical security from the many predators in the natural environment, physical proximity to one's caregiver was also necessary to promote emotional security. The *attachment behavioral system*, as Bowlby termed it, predisposes and orients an infant to three behaviors in response to threat and insecurity: 1) seeking, monitoring, and attempting to maintain proximity to a protective attachment figure; 2) using the attachment figure as a secure base from which to explore unfamiliar settings and experiences; and 3) fleeing to an attachment figure as a safe haven in situations of danger and moments of alarm.

Bowlby (1969) worked with delinquent, homeless, and hospitalized children, and observed that environmental factors could disrupt the attachment behavioral system. Bowlby discovered that due to early separations from their parents, these children had difficulties coping with the painful reality of separation. The children's initial reaction to the traumatic separation was protest, followed by despair, and ended in detachment towards caregivers. Bowlby theorized that infants needed to have ongoing warm interactions with caregivers to form secure attachments. According to Bowlby, an infant, throughout the first year of life, builds up expectations out of the experiences that happen to him or her. From the sixth to the ninth month

of the developmental period (Ainsworth, 1967), the infant internalizes these experiences by organizing them into what Bowlby (1982) calls *internal working models* of physical environment, attachment figures, and self. The working model thus influences both expectations and resultant behavior, as it is shaped by one's interactions with others. As an example, an infant with a physically present and yet emotionally absent caregiver, may have expectations of the caregiver as unavailable, based on his/her experience of that caregiver's availability in the past (Wallin, 2007). Subsequently, this child's internal working model will likely be one of an interpersonal world where one cannot rely on another for safety and security.

Bowlby originally focused on the attachment behavior of infants and young children; however he came to believe that the need to attach was significant across the lifespan. This hypothesis has been supported by subsequent research (e.g., Johnson, 2003; Mikulincer & Shaver, 2007) and actuarial data which shows that people with partners and/or close friends live longer than people who are isolated (Wallin, 2007). Bowlby theorized that internal working models could be altered in light of new and altered relationships, or through heightened awareness. This hypothesis has been investigated by studies which suggest that psychotherapy can create long lasting change in clients through the modification of neural systems, the integration of neural functioning, and the enhancement of emotion regulation between the therapeutic dyad (Cappas, Andres-Hyman, & Davidson, 2005; Cozolino, 2002; Siegel, 1999).

Ainsworth (1967) demonstrated that while the attachment system is biologically driven, differences in individuals' attachment styles are dependent on differing behaviors of caregivers. Using an Ugandan sample of 26 families with unweaned children, Ainsworth observed these families individually for two weeks every two weeks for a nine-month period to find out what promoted or impeded the attachment bond. Ainsworth, in addition to finding evidence for the

attachment behavioral system described by Bowlby in this cross-cultural population, found differences in the attachment styles of the infants studied. Based on her naturalistic observations of these children with their mothers, she concluded that the quality, rather than the quantity of care, determined whether infants were attached or not.

Ainsworth, Blehar, Waters, and Wall (1978) used an experimental paradigm in the United States to test the findings from the observational study conducted in Uganda in the famous “Strange Situation” experiment to elicit an infant’s biological attachment behavioral system in the double exposure of separation from a caregiver in an unfamiliar setting, and the appearance of a stranger in the absence of the caregiver in this unfamiliar setting. Findings from the study provided validity for the belief that attachment is a universal instinctive need. The study found that securely attached children had the ability to both freely explore the new setting and be consoled by connection. Insecurely attached children however engaged in a number of different behaviors: Children with *avoidant attachment* styles appeared unconcerned after separation from their mothers, which was evidenced by their continued exploring of the strange environment. The heart rates of avoidantly attached infants however have been found to be as elevated as securely attached infants in the absence of their mothers (Spangler & Grossman, 1993; Sroufe & Waters, 1977), indicating that while avoidantly-attached infants appeared outwardly nonchalant about their mothers’ absence, inwardly they are highly aroused and distressed by separation. The rise of cortisol levels pre-to-post procedure of infants with avoidant attachment styles was also significantly greater than that of securely attached infants, and provides support for the anxiety of avoidantly- attached infants when separated from their mothers. Ainsworth et al. (1978) concluded that the behaviors of insecurely attached infants was similar to the detachment behavior Bowlby(1969) had observed in two- and three- year old

children who had endured prolonged separation from their caregivers during the second World War, in that both had given up on having their need for comfort and connection met. Children who were *ambivalently-attached* were too preoccupied with their mother's whereabouts to the extent that free exploration in her presence was inhibited, and overwhelming distress was caused by her departures, so that the separation episodes in the experiment had to be interrupted frequently. Ambivalent infants were further categorized into two groups based on their response to their mothers' return: *Angry* infants oscillated between accepting and rejecting their mothers' overtures either by leaning away from their mother's embrace, or engaging in full-blown tantrums. *Passive* infants appeared to be capable of only faint bids for comfort, as though overwhelmed by their helplessness or misery to approach their mothers directly. Ambivalent infants were neither consoled nor less preoccupied by their mothers' return, and acted as if they were looking for a mother who was not there. Ainsworth discovered that whereas avoidant infants had mothers who actively rebuffed their children's bids for connection, were emotionally inhibited, and were averse to physical contact, ambivalent infants had mothers "who were at best, unpredictably and occasionally available" (Wallin, 2007, p. 20). These mothers, subtly or unsubtly communicated to their children that autonomy was not allowed, which may be what interferes with ambivalent infants' ability to safely explore in their mothers' presence.

Main and Solomon (1990), nearly two decades after the Ainsworth study discovered an overlooked attachment style while reviewing the tapes of the Strange Situation experiment. This fourth attachment style, which they termed *disorganized attachment*, occurred when the attachment figure/ caregiver was simultaneously seen as both the source of safety and of danger. Disorganized infants, upon reunion with their mothers engaged in a number of inexplicable behaviors such as freezing in place, collapsing to the floor, or falling into a dazed, trance-like

state. Main and Solomon (1990) proposed that disorganized attachment not only arose when infants experienced parents' anger or abuse as frightening, but also arose from interactions with parents in which the child experienced the parent as frightened.

In conclusion, attachment begins as a biological instinct which is registered psychologically as an internal working model based on an infant's experiences with caregivers. Attachment continues lifelong to shape behavior and subjective experience, whether the original caregivers are present or not. When attachment goes awry from traumatic experiences with caregivers, the foundation for developing the capacity and trust for interpersonal relatedness may be damaged. Across the four attachment styles, secure infants appear to be the most resilient and can develop trusting relations with other individuals throughout the lifespan, while insecure attachment on the other hand poses a significant risk factor for the development of personality disorders and a lower capacity for trust in the interpersonal domain (Wallin, 2007). In the personality disorder domain, anxiously attached infants for example appear to have more obsessional, narcissistic and schizoid problems, whereas avoidantly attached infants have been found to have more hysteric or histrionic difficulties, and infants classified as having disorganized attachment styles are more vulnerable to developing more severe psychopathology such as borderline personality disorder (Fonagy, Gergely, Jurist, & Target, 2002; Schore, 2002; Slade, 1999).

**Object relations theory.** While Bowlby formulated attachment as an evolutionary necessity, other theorists (e.g., Kernberg, 1976; Kohut, 1971, 1977; Winnicott, 1957) conceptualized the need for interpersonal relatedness as a need in itself that did not arise from evolutionary or instinctive drives. Greenberg and Mitchell (1983) define object-relations as “an



individual's interactions with external and internal (real and imagined) other people, and to the relationship between their internal and external object worlds” (pp. 13- 14).

Fairburn (1949, 1952) developed a theory of internal object relations which explained the effect of trauma on the developing personality. According to Fairburn, the human libido is object seeking in that humans are wired from birth to seek connections with others (i.e. “objects”).

Fairburn, like Bowlby, believed that one’s experiences with early caregivers became the pattern or mode of reference for subsequent interpersonal relationships in later life. Healthy parenting typically resulted in “a child with an outward orientation directed toward real people, who would provide real contact and exchange” (Mitchell & Black, 1995, p.117). Given that the human libido is object seeking, a child, in the absence of healthy parenting, adopts the defense of repression in order to maintain an internal image (i.e. the internal object) of the caregiver as ideal, since a bad object is better than no object. The repression defense prevents the anxiety that will arise when a child is faced with the realization that his/her caregiver failed in the parenting/caretaking role.

Repression begins firstly by the child’s introjection of the caretaker’s badness and accepting that badness as originating from the self (Stark, 1999). Introjection is then followed by a splitting of the ego and object, resulting in the formation of a six-part structure of the personality, made up of sub-units of self and the corresponding parts of the object which have been split off from consciousness (Fairburn, 1952). This six-part structure of personality is made up of the central ego and its corresponding good enough object; the libidinal ego and its corresponding exciting object; and the antilibidinal ego and its corresponding rejecting object. The central ego and good enough object system remain largely in consciousness, as do the affects associated with this system. The better the relationship with the caregiver, the more ideal is the object and the less of it is repressed. The libidinal ego on the other hand has as its object the exciting object, the parts

of the caregiver that create longed-for experiences of unbearable intensity to the extent that the child splits off these longings and all its associated affects into unconsciousness. Due to this repression, even longings of tolerable intensity become subsequently lost from the central ego which becomes inhibited, unrestricted, and unable to generate enjoyment. The antilibidinal ego has as its object the rejecting object, corresponding to a child's experience of caregivers who frustrated his needs. Too much frustration of the child's needs leaves the child having aggressive feelings towards the caregivers which is repressed to maintain an ideal image of the object in the external world. Under normal circumstances, all children experience their caregivers as occasionally ignoring or frustrating their needs, and hence as bad objects. In instances of trauma however, when a caregiver is actually abusive, Fairburn (1952) theorized that the persecutory and rejecting part of object relations dominates the child's personality. Since the child's identification with external objects is the libido's number one goal, the child by identification with his/her caregiver will begin to perceive the self as bad (Scharff & Scharff, 1992), which increases his/her likelihood of having low self-esteem.

In summary, the natural instinct for connectedness begins in infancy. Infants seek to have connections with caregivers even if they have been the perpetrators of interpersonal trauma since connections with a caregiver, no matter how bad is better than having no interpersonal connectedness with an object. From object relations theory, children who have positive experiences of being supported and cared for by caregivers can be expected to have confidence in the value of support from interpersonal relationships, and will have positive self-concepts about themselves. Conversely, children who suffer adverse experiences from caregivers and other adults will grow up having difficulties trusting other people and holding negative self-concepts about themselves. The intrapsychic and interpersonal perspective provided by

psychoanalytic theory explains why early traumatic experiences of an interpersonal nature may have long lasting consequences into adulthood.

**Self –psychology theory.** While object relations focuses more on the internal and external relations of others in relation to the self, self-psychology (Kohut, 1977) focuses on the representation of the self that develops in response to others' actions, and hence has particular significance for understanding self-esteem issues. A central concept in self-psychology is that of *selfobjects*, that is objects experienced as part of the self. Selfobjects are differentiated into two kinds: *Mirroring selfobjects* are people who respond to and confirm a child's innate sense of vigor, greatness and perfection. *Idealized parent imagoes* are people whom a child looks up to and with whom s/he can merge as an image of calmness, infallibility and omnipotence (Kohut & Wolf, 1978). Thus, the quality of the interactions between the self and its selfobjects in childhood determines whether the self emerges as a firm and healthy structure, or as a more or less seriously damaged one.

The selfobject construct has two core functions of teaching interdependence between self and others in a system, and affect regulation (Schorer, 2002). Kohut (1977) explicated in his theory two levels of disturbances to the self that occur in the absence of selfobjects (for example as a result of traumatic childhood experiences): Primary disturbances of the self and secondary disturbances of the self.

*Secondary disturbances of the self* are less severe and arise from the reactions of a structurally undamaged sense of self to the precariousness of life, that is the "hills and valleys" or the successes, failures, disappointments and triumphs of life. These changes are accompanied by varying emotions, happiness, sorrow, despair, shame, anger, or excitement in the sense of

self. A strong self is able to tolerate these variations in self-esteem that accompany successes and failures without succumbing either to the inflatedness of success, or sinking into despair in the wake of failure. Individuals with less fairly established sense of selves are unable to tolerate these fluctuations since their self-esteems are more vulnerable to external changes in the environment.

Kohut and Wolf (1978) classified *primary disturbances of the self* into three categories depending on the extent, severity, nature and distribution of the primary disturbance. Individuals in the *Psychoses* category have disturbances of the self that involve serious damage of a protracted or prolonged nature. Individuals in the *Borderline states* category can be classified as having personality disorders. Such individuals experienced in childhood the intrusions of a parental selfobject who due to his/her own “incompleteness and fragmentation fears” (Kohut & Wolf, 1978, p.414), thwarted the child’s efforts to establish an autonomous self. The literature (e.g., Gunderson, Zanarini, & Kisiel, 1995; Lieb, Zanarini, Schmahl, Linehan, & Bohus, 2004; Ogata et al., 1990) has additionally shown that this condition can arise in response to prolonged and ongoing trauma to the developing psyche. Individuals in the *Narcissistic* category, according to Kohut and Wolf (1978) are more resilient and can with increasing insight into the developmental roots and dynamic functions of the symptoms of these narcissistic behaviors (i.e. the experienced developmental failures), relinquish their narcissistic behaviors for more mature and realistic supports for their self-esteem.

In conclusion, self-psychology provides a theoretical framework for understanding how the representation of the self and self-esteem are influenced by the quality of the interactions between the self and the selfobjects. The availability of selfobjects who respond to, and confirm a child’s uniqueness, and whom the child can look up to and internalize their strengths, helps the

growing psyche develop a strong sense of self which is less vulnerable to changes in the external environment. Thus, from self-psychology theory, individuals who lacked such self-objects or were subjected to traumatic experiences of a relational nature are more likely to have lower self-esteem arising from a less developed sense of self, and will be more vulnerable to negative external changes in their environments.

Kohut(1977) shied away from developing his theory to include the psychobiology of the self, in his efforts to keep his theory a purely psychological one which looked at the unconscious systems underlying human behavior (Schor, 2002). The field of neuroscience and developmental neurobiology in particular, has contributed to our understanding of normal brain development and the consequences of disruptions on brain functioning that arise from traumatic experiences.

**Developmental neurobiology theory.** The human brain is responsible for processing and internalizing our experiences, as well as mediating all emotional, cognitive, behavioral, social, and physiological functioning. The brain matures in a sequential and hierarchical fashion, growing from the less complex brainstem to the most complex limbic and cortical areas at different times during childhood. This implies that different areas of the central nervous system are developing at different rates, making the brain differentially sensitive to organizing experiences during development(Cragg, 1975; Wainwright et al., 1995). Since a child's brain is more malleable to experience than an adult's, trauma in infancy and childhood has a higher likelihood of adversely influencing the permanent organization and future functional capabilities of an individual (Perry et al., 1995).

Pechtel and Pizzagalli (2011) suggested, based on their review of the literature, that the associations exist between childhood trauma and cognitive deficits in performance, memory, and executive functioning, as well as affective deficits in emotion regulation, processing social and affective stimuli, and reward processing. The review also concluded that the amygdala is the most sensitive to childhood trauma, with deficits in the affective domain being more likely to have long lasting consequences and increase the risk for later psychopathology.

Grant, Cannistraci, Hollon, Gore, and Shelton (2011) used functional magnetic resonance imaging (fMRI) to explore whether a heightened amygdala response is a core feature of depression, or is a general risk factor for psychopathology which occurs secondary to early life stressors or childhood traumas in a cross-sectional study of participants. The authors reported that a heightened amygdala response to sad stimuli mediates the relationship between the risk for depression and the childhood traumas of sexual abuse, emotional abuse, and multiple forms of neglect irrespective of gender, severity of the illness, or comorbid anxiety symptoms. Dannlowski et al. (2012) also report that limbic hyperresponsiveness and reduced hippocampal volumes may mediate the relationship between childhood traumatic experiences and the development of depression and PTSD later in adulthood.

According to Cicchetti, Graniban and Barnett (1991), early relational trauma produces a severe pruning of the right hemispheric orbitofrontal callosal axons growing towards their left hemisphere counterparts, and results in “an interhemispheric organization in which facial expressions, bodily states, and affective information implicitly processed in the right brain would be inefficiently transmitted to the left hemisphere for semantic processing” p.242. This explains why maltreated toddlers have great difficulties talking about their emotions and internal states. Alexithymia for example (the inability to put words to feelings), as well as somatization disorder

have been posited to reflect the lack of coordination between the left and right hemispheres (Hoppe & Bogen, 1977). Alexithymia has also been found in individuals with posttraumatic stress disorder, borderline personality disorders, substance abuse disorders, and somatoform disorders (Taylor, Parker, & Bagby, 1997).

Schore (2001) looked at the impact of relational trauma in particular on right brain development. The right hemisphere, which is more dominant in the first two years of life, is deeply connected into the limbic system and the sympathetic and parasympathetic components of the autonomous nervous system. It is therefore predominant in the physiological and cognitive components of emotional processing (Chaplin, John, & Goldberg, 1988; Gross, 1998; Spence, Shapiro, & Zaidel, 1996). Emotion regulation in particular, which is defined by Gross (1998, p. 276) as “the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions”, is one component of affect regulation. The inability to regulate one’s emotions (i.e. emotion dysregulation) has been implicated in over half of the *DSM* disorders and in all of the personality disorders (APA, 1994; Gross & Levenson, 1997; Thoits, 1985), making emotion regulation a major goal in clinical interventions.

Schore (2001) conceptualized development as the transformation of external into internal regulation that occurs with the support of an attuned caregiver who creates a secure attachment for the dyadic regulation of emotions. According to Schore, the caregiver “allows for the interactive generation of high levels of positive affect in coshared play states, and low levels of negative affect in the interactive repair of social stress, i.e., attachment ruptures”( p.205). A caregiver who does not fulfill the function of affective regulation puts a child in the position of leaving childhood unprepared to deal with a wide range of both positive and negative affect.

Schore helped provide a neurobiological understanding of attachment theories (Ainsworth, 1967; Bowlby, 1969), which had stated that early attachments influenced an individual's style of seeking interconnectedness with others in adulthood. Thus, a primary caregiver who is abusive, and fails to provide emotional regulation for her child may also fail to protect the child from potentially abusive others, and will induce in the child a state of enduring negative affect. O'Hagan (1995) stated that repetitive, sustained emotional abuse is at the core of childhood trauma while Trickett and McBride-Chang (1995), have stated that parental maltreatment or neglect compromises cognitive development.

According to Cozolino (2002), "the growth and organization of the brain is a function of the interaction of genetic and environmental influences" (p.21). This interaction mediates human experience through the organization and functioning of the nervous system, and is programmed by evolution to mature developmentally under the right conditions and within the context of significant interpersonal relationships. The human brain senses, processes, stores, perceives, and acts on information from the external and internal environments using neurons, the basic building blocks of brain activity. Neurons are interconnected into networks which are also interconnected networks into systems. Different systems in the brain work together to mediate different sets of specific functions. Systems in the frontal cortex for example are involved with abstract thought, cognition and complex language. Systems in the brainstem are responsible for regulating heart rate, blood pressure, and arousal states, and systems in the limbic areas are responsible for attachment, affect regulation, and aspects of emotion (Perry et al., 1995). Memory systems play an integral role in our responses to new situations or experiences based on our past learnt experiences. Moderate stress triggers the release of neurohormones that enhance cortical reorganization and prepares the brain to pay attention and learn (Cowan & Kandel, 2001;



Gould, McEwen, Tanapat, Galea, & Fuchs, 1997). Extreme stress, such as a traumatic experience in contrast, inhibits new learning and brain growth as it triggers the body's stress response and interferes with learning (Carrion & Wong, 2012; Rothbaum & Davis, 2003).

Childhood trauma may also cause disruptions to the brain's two memory systems, which have traditionally been dichotomized into declarative (explicit) memory and procedural (implicit) memory, and are posited to develop simultaneously in early life (Roove-Collier, 1997). The declarative or explicit memory system is built to remember things, details of events, and the contextual facts of experience. Declarative memory, which is highly linked to language systems, is largely mediated by the hippocampus and higher brain systems (LeDoux, 1998). The procedural or implicit memory system is organized to give the emotional valence of events without the details of context. Largely mediated by the amygdala, procedural memory is tightly connected to body response systems that help individuals survive in the face of threat. Usually the two memory systems are highly integrated and coordinated. When an individual undergoes extreme stress or trauma however, the two systems become uncoupled, resulting in sensory and affective elements becoming separated from any coherent semantic memory system (Van der Kolk & Fessler, 1995). Brewin et al. (1996) further distinguish between *verbally accessible memories*, representations of an individual's conscious experience of a trauma which can be retrieved from autobiographical memory (a type of declarative memory), and *situationally accessible memories* which cannot be accessed deliberately but resurface automatically when an individual is confronted with a situation that has physical features or meaning similar to those of the trauma. Perry et al (1995) have described the maladaptive response individuals with traumatic experiences employ in response to stressful experiences (Table 1).

Table 1

<i>Adaptive Response</i>	<b>REST (Adult Male)</b>	<b>VIGILANCE</b>	<b>FREEZE</b>	<b>FLIGHT</b>	<b>FIGHT</b>
<b><i>Hyperarousal Continuum</i></b>	REST (Male Child)	VIGILANCE (Crying)	RESISTANCE Freeze	DEFIANCE 'Posturing'	AGGRESSION
<b><i>Dissociative Continuum</i></b>	REST (Female Child)	AVOIDANCE (Crying)	COMPLIANCE Freeze	DISSOCIATION 'Numbing'	FAINTING 'Mini-psychosis'
<b><i>PRIMARY Secondary Brain Areas Cognition</i></b>	NEOCORTEX Subcortex	SUBCORTEX Limbic	LIMBIC Midbrain	MIDBRAIN Brainstem	BRAINSTEM Autonomic
	ABSTRACT	CONCRETE	'EMOTIONAL'	REACTIVE	REFLEXIVE
<b><i>Mental State</i></b>	CALM	AROUSAL	ALARM	FEAR	TERROR

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*Progression of the Acute Response to Threat*

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*Note.* From 'Childhood trauma, the neurobiology of adaptation, and the "use-dependent" development of the brain: How "states" become "traits",' by B.D. Perry, R.A. Pollard, T.L. Blakley, W.L. Baker, and D. Vigilante, 1995, *Infant Mental Health Journal*, 16(4), p. 274. Reprinted with permission.

The threat continuum response in humans progresses along a continuum. Threatened humans engage in specific adaptive mental and physical responses, progressing from calm to arousal to alarm to fear and then terror. The more threatened the individual, the more primitive his/her style of thinking and behaving becomes. In adults, the most familiar set of responses to threat has been labeled the "fight or flight response" (Cannon, 1914; 1942). In the initial stages of threat, an alarm reaction is initiated, characterized by a large increase in activity of the sympathetic nervous system. This results in increased heart rate, blood pressure, respiration, a release of stored sugar, an increase in muscle tone, a sense of hypervigilance, and a tuning out of all noncritical information to prepare the body to deal with the perceived threat. If the threat materializes, a full fight or flight response may be activated. The locus coeruleus (LC), a bilateral

grouping of norepinephrine-containing neurons mediates this response to threat and originates in the pons, a more primitive, regulatory part of the brain (Elam, Svensson, & Thoren, 1984; Svensson, 1987). The ventral tegmental nucleus (VTN) also plays a role in regulating the sympathetic nuclei in the pons/medulla.

When faced with threat or a traumatic situation, a child may respond with a response along the hyperarousal (fight or flight) or dissociation (freeze or surrender) continuum. If a child responds with a hyperarousal response, there will be a dramatic increase in LC activity with a corresponding decrease in VTN activity. This releases norepinephrine to help the body deal with the threat. The brain regions involved in the threat-induced hyperarousal response play a critical role in regulating arousal, vigilance, affect, behavioral irritability, locomotion, attention, the response to stress, sleep, and the startle response (Andrade & Aghajanian, 1984; Bhaskaran & Freed, 1988). These “state” experiences become “traits”, as these parts of the brain may be reactivated when the child simply thinks about or dreams about the threat or traumatic event. Over time, these specific reminders may generalize (for example, any strange male may become associated with the specific perpetrator in the child’s mind). Simply put, the stress-response apparatus of the child's brain is activated again and again even when the child is separated from the original trauma or threat.

Individuals will move along the hyperarousal continuum into the dissociative continuum in the face of persisting threat depending on his/her age and the nature of the threat (Dalenberg et al., 2012; Perry et al., 1995; Schauer & Elbert, 2010). Examples of dissociation include depersonalization, derealization and fugue states. Dissociation is characterized by disorientation and a disconnection among thoughts, behaviors, sensations, and emotions, and reflects the pathological expression of the plasticity that organizes and integrates neural networks, and a

failure to perform the brain's normal response of neural systems integration (Abercrombie & Jacobs, 1988; Cozolino, 2002 ; Dalenberg et al., 2012; Glavin, 1985; Putnam, 1993; Schauer & Elbert, 2010).

From an evolutionary perspective, adult males are ear-marked to engage more in the “fight or flight” response in the face of threat due to their physical strength, while children and women, who are physically weaker are primed to employ the “freeze or surrender” response as an adaptive response (Perry et al., 1995). The “freeze” response is adaptive in that it allows for better sound localization and keener visual observation in scanning for potential environmental threats. In addition, a lack of movement acts as a form of camouflage and reduces the chance of attracting a predator. Children typically engage in a hyperarousal response designed to bring caretakers or other adults to rescue them from the stressful situation. If the hyperarousal response is unsuccessful in bringing the caretaker or adult to rescue him/her from the stressful situation, or if the caretaker is the one causing the threat, the child adopts the “surrender response” and moves along the dissociation continuum from freezing to dissociation, and in extreme cases, the child may succumb to fainting.

The interplay of age, gender and type of trauma shows that in general, younger children (and who are hence more vulnerable and dependent) engage more in dissociative rather than hyperarousal responses, as do females in comparison to males. In childhood more boys meet diagnostic criteria for externalizing disorders (e.g., ADHD, conduct disorder) whereas more girls have a higher incidence of internalizing disorders (e.g., depression, anxiety, or dissociative disorders). With increased age and a corresponding ability to fight or flee threatening situations, the dissociative response may be employed less frequently. When the trauma is of a physical nature however (e.g., injury, pain), a dissociative response is also more likely to be employed

(Bakker, Maertens, Van Son, & Van Loey, 2013; Norman, Byambaa, Butchart, Scott, & Vos, 2012; Perry et al., 1995; Twomey et al., 2000).

In conclusion, early stress has a number of long lasting effects on developing brains and has been demonstrated by a number of studies (Kiser, Heston, Millsap, & Pruitt, 1991; Teicher, Andersen, Polcari, Anderson, & Navalta, 2002 ). The implication for treatment is to work towards the integration of the different pathways of the brain, and hence of the self, that have become dissociated as a result of childhood trauma. Clinical interventions that make use of the psychotherapy relationship to integrate left brain-right brain coordination, and more specifically emotional and cognitive functioning, in the safety of the therapeutic relationship will help promote new learning and help clients to internalize the secure attachment and affective regulations of the therapeutic dyad (Cozolino, 2002).

### **Review of Related Studies**

For the present study, experiences of childhood trauma to be explored straddle two categories: Traumatic experiences of a *general nature*; and traumatic experiences of an *interpersonal nature* or *relational trauma*. Bremner, Vermetten, and Mazure (2000), make the distinction between the two as follows: “General traumatic events comprise a range of stressful and traumatic events that are mostly secondary to chance events, or events perpetrated by a stranger, as opposed to events in the abuse domains that typically involve perpetration by an individual known to the victim with a specific intent to harm the victim.”(p.1)

In line with the stated objectives of the present study, studies related to death and extreme personal illness / injury in childhood will be reviewed in the general trauma category. In the

relational trauma category, studies related to high parental conflict, physical abuse, sexual abuse, emotional abuse, and neglect in childhood will be reviewed.

**Death.** One of the most frequent stressors associated with PTSD is the death of a loved one in childhood (Hovens et al., 2012; Kalantari, Yule, Dyregrov, Neshatdoost, & Ahmadi, 2012; Tyrka, Price, Marsit, Walters, & Carpenter, 2012). The unexpected death of a parent has also been associated with an increased risk of suicidal attempts and the development of psychotic disorders (Clarke, Tanskanen, Huttunen, & Cannon, 2013; Jakobsen & Christiansen, 2011). Psychoanalytic theorists in general posit that depression in adulthood often arises in response to a current loss which reactivates a trauma associated with the childhood loss (Breier et al., 1988; Tennant, 1988). Furman (1986), a child psychoanalyst believed that the interaction of developmental factors (that is the child's personality and the nature and availability of the auxiliary ego of the mothering person) determined how a child's still maturing psyche dealt with the aftermath of a loss. Under "good enough conditions", the mothering person's auxiliary ego compensates for the child's ego weakness. When the mothering figure's auxiliary ego however does not function optimally due to unavailability (either through death, or an inability to cope effectively with the death of a spouse), or due to a failing to protect the child from an overwhelming excess of environmental stimulation, recovery after the death of a parent becomes jeopardized. In such circumstances, the stressful event of a parental death may turn into a traumatic event for the child. Similarly, the transitional events model (Felner, Terre, & Rowlison, 1988) suggests that children's adjustment following parental death is heavily influenced by the interplay of the stressful events that occur following the death, such as separation from other family members, parental distress, financial difficulties); the child's

protective resources (e.g., self-esteem, coping skills, positive parent– child relationship); and the interaction between the proximal stressful events and protective resources.

An epidemiological study by Gersten, Beals, and Kallgren (1991) suggests that children and adolescents from community samples who have experienced a parental death have a 7.5 times or 650% greater risk of developing major depressive symptoms, irrespective of the gender of the child, the gender of the parent, or whether the parental death occurred before or after the age of 11. This is in contrast to prior retrospective studies (e.g., Brown & Harris, 1978; Brown, Harris, & Bifulco, 1986) which had suggested that the effects of parental death were confined to girls who had lost their mother before the age of 11, and points to the necessity of an inclusive intervention for both boys and girls who have experienced the death of either a mother or a father.

The loss of a parent is even more devastating to children from developing countries where the death of a parent could limit the household's ability to provide its children with a good standard of living. This circumstance is even more worrisome considering that one in ten African children under the age of 15 has lost one or both parents (Hunter & Williamson, 2000). Gertler, Martinez, Levine, and Bertozzi (2003) used panel data sets from Indonesia and rural Mexico where adult deaths are largely unexpected occurrences due to acute illnesses or accidents, and concluded that parental death reduced children's health status--as given by height and weight--and educational attainment.

The loss of a parent in childhood is also considered a risk factor for the development of psychological disorders which extend into adulthood (Cluver, Orkin, Gardner, & Boyes, 2012; Elliott & Guy, 1993; Kendler, Neale, Kessler, Heath, and Eaves, 1992). Varese et al. (2012), in a

Finnish sample of 11,855 participants whose father or sibling had died before they were 5-years old found that irrespective of gender, parental history of psychiatric illness, age at exposure to loss, and age at follow-up, the unexpected death of a father or sibling significantly increased the risk of developing Bipolar Disorder or Schizophrenia in adulthood.

The DSM-5 (APA, 2013) includes both the death of close family member or close friend in the criteria for the development of PTSD symptoms. While the literature has focused almost exclusively on the associated consequences of early parental death, the studies which have explored the associations of the death of a close friend in childhood (e.g. Breslau et al., 1998; Elliott & Guy, 1993; Pennebaker, 1989), suggest that the death of a close friend in childhood increases an individual's risk of developing long lasting PTSD symptoms.

**Extreme illness or injury.** The literature notes the presence of PTSD and other psychiatric symptomatology in adults injured in motor vehicle accidents (e.g., Blanchard et al., 1995, Mayou, Bryant, & Duthie, 1993), however the literature on the impact of extreme illness or injury in childhood is sparse. Given that extreme illness or injury evokes feelings of helplessness, intense fear, and horror, Aaron, Zaglul, and Emery (1999) suggest that children hospitalized with serious injuries may meet criteria for at least two of the DSM's PTSD symptom clusters, and may benefit from psychological interventions in addition to medical interventions. This finding is in line with the literature which shows that some children who have been moderately or severely burned (Stoddard, Norman, Murphy, & Beardslee, 1989), undergone bone marrow transplantation (Stuber, Nader, Yasuda, Pynoos, & Cohen, 1991), and suffered from cancer (Stuber, Meeske, Gonzales, Houskamp, & Pynoos, 1994) display PTSD symptoms long after the event. Children hospitalized for a serious injury which involved a fear response in the child have also been found to have prevalence of the PTSD re-experiencing



cluster as well as the increased arousal PTSD cluster (Aaron et al., 1999). These results, according to the authors suggest a model of PTSD development in which only peritraumatic fear and thought suppression directly predict PTSD response. This hypothesis on thought suppression is in line with maladaptive emotion- coping strategies (e.g., Carver, Scheier, & Weintraub, 1989; Endler & Parker, 1990; McWilliams, Cox, & Enns, 2003) --especially in response to illness or injury--, and avoidance behavior in general which helps increase or maintain symptoms. On the other hand, children who had a less severe fear response, and were more willing to talk about their experiences, had fewer and less intense PTSD symptomatology. These results also suggests that children who report being most afraid of being seriously injured or killed after an extreme illness or injury display PTSD symptomatology one month after their injury.

In addition to PTSD symptomatology, extreme illness or injury in childhood has been implicated in hypochondriacal behavior in adulthood. According to Stuart and Noyes (1999), an interpersonal model can be used to explain why people meeting criteria for hypochondriasis usually have a history of traumatic experiences, including serious illness or injury. They posit that hypochondriacal care-seeking behaviors arise from insecure attachment in early relationships with caregivers, since extreme illness or injury often involves children being hospitalized and away from the home environment. This may cause a child to view others as unwilling or unable to meet his/her attachment needs. Extreme illness or injury may also heighten separation fears in children, as children may invariably need to be hospitalized for long periods during times of extreme illness or injury.

Somatization behaviors in general can also be explained by the interpersonal model. Craig, Boardman, Mills, Daly-Jones, and Drake (1993) for example, reported that adults with more somatizing behaviors had histories of childhood illnesses compared to adult non

somatizers. It may be that parental response to illness in children contributes to somatizing behaviors in adult children if children's physical complaints, rather than their emotional needs are given more attention (Mechanic, 1977; Parker & Lipscombe, 1980; Violon, 1985). This experience leads to children's expectation that their attachment needs can only be met indirectly using their physical complaints. Noyes et al. (2002) similarly reported that experiences of serious illness or injury could contribute to a sense of physical vulnerability in a child since a number of children report that extreme illness or injury prior to the age of 17 had been traumatic.

In summary, while the literature on the impact of extreme illness or injury in childhood on long term adult functioning is sparse, Devine, Reed-Knight, Loiselle, Fenton, and Blount (2010) have succinctly described the experience of extreme illness, which begins with an initial diagnosis and continues throughout the course of the illness. This experience is attendant with the additional stressors of medical testing, medication regimens, hospitalizations, and feelings of isolation, making this childhood experience a traumatic one. The same parallel can be drawn for extreme injury in childhood, and the overall impact of extreme illness or injury in childhood point to increased levels of somatization behaviors in adulthood, as well as a fostering of insecure attachment styles (Waldinger, Shultz, Barsky, & Ahern, 2006).

**Parental conflict.** Divorce has been associated with poor outcomes for children's wellbeing (e.g., Amato, 2000; Cherlin, Chase-Lansdale, & McRae, 1988; Jeynes, 2001; Kulka & Weingarten, 1979; Mustonen, Huurre, Kiviruusu, Haukkala, & Aro, 2011), however its negative consequences appears to be moderated by the presence of marital conflict prior to divorce (Gilman, Kawachi, Fitzmaurice, & Buka, 2003; Hetherington, Bridges, & Insabella, 1998). According to Amato et al. (1995), the effects of divorce are easily confounded with the effects of marital conflict, because couples experiencing conflict are more likely to divorce than happily

married couples. When considered separately however, the existence of parental conflict in a home has been recognized as the cause of a variety of behavioral problems in children (Jekielek, 1998), a finding which Emery (1982) reports as being consistent across countries like the United States, England and India.

Gohm et al. (1988) in a global study which included Ghana, examined the association of parents' marital status and marital quality with college students' subjective wellbeing, and reported that participants whose parents' marriages were intact and had frequent marital conflict had the significantly lowest global life satisfaction scores. The study additionally found that participants who were raised by a single, divorced parent had more associations with greater life satisfaction compared to participants who had been raised in intact marriages with high levels of conflict. These findings were consistent for participants in both individualistic and collectivist cultures.

Some studies have also suggested that high marital conflict is transmitted intergenerationally, given the higher associations of conflict behaviors that have been observed in adults from high marital conflict households (Cui & Fincham, 2010; Cui, Fincham, & Pasley, 2008). Based on the literature on the associations of both the short and long term negative psychological and economic outcomes of parental conflict on children's well-being, Hetherington et al. (1988) recommend that the combination of individual vulnerability and risk, family composition, stress and/or socioeconomic disadvantage, parental distress, and disrupted family processes should all be involved in predicting the well-being of children in high conflict parental families to ensure interventions for at risk children.

**Physical abuse.** Physical abuse of children occurs in all cultures. The World Health Organization (WHO) reports that approximately 23% of people are physically abused as children (2014). Some studies have found associations between child physical abuse and psychological problems, aggression towards others, and sexual problems (Briere & Runtz, 1988, 1990; McCord, 1983; Norman, Byambaa, Butchart, Scott, & Vos, 2012). Green (1983) wrote that physical abuse usually occurs in the context of a lack of empathic parenting, and a harsh and punitive childrearing climate. Physical abuse conveys caretakers' rage and hostility at the child, which leaves the child in constant fear of being annihilated or abandoned. The psychological effects of physical abuse include affect dysregulation, repetition compulsion, and the use of the primitive defense mechanisms of avoidance, denial, projection, and splitting. In the long term, physically abused children may identify with the aggressor and inflict physical violence on others weaker than themselves. Physically abused children in addition to having more PTSD symptoms, also tend to have more conduct, anxiety, and dysthymic psychiatric disorder diagnoses. Haviland, Sonne, and Woods (1995), using a sample of adolescents in one of the few studies that examined associations between PTSD severity, object relations disturbances, and reality testing disturbances, found evidence of greater frequencies of insecure attachment and uncertainty of perception, anxiety, and depression. In another study that used a sample of predominantly low income African-American women, Twomey, Kaslow, and Croft (2000) found that the object relations dimensions of self-description and alienation mediated the relationship between childhood physical abuse and suicidal behavior in adulthood. The generalizability of both of these object relations studies is questionable however due to the small sample size of 37 in the first study (Haviland et al., 1995) and the use of only low income African-American women in the second study (Twomey et al., 2000).

Research from low and middle income countries (e.g., Cappa & Khan, 2011) however suggests that primary caregivers' attitudes of child physical punishment as being a form of discipline influences its use in child rearing practices. In the majority of countries, including Ghana, primary caregivers did not believe in the use of physical punishment as a disciplinary measure, even though most children were still subjected to physical punishment (Cappa et al., 2011). The authors however found a discrepancy between beliefs and behaviors in that most children were still subjected to physical abuse irrespective of primary caregivers' level of education and socioeconomic status, which indicates a need for further research into the use of physical punishment in low and middle income countries. A Ghanaian study by Imoh (2013) suggests a society of two childrearing practices influenced by the extent of modern and traditional beliefs held by primary caregivers. Traditional beliefs value physical punishment as an important part of the socialization process, both in the home and in the educational system. The dominant form of punishment is caning a child, even though other forms of punishment range from squatting and standing for long hours to kneeling with/without arms in the air, slapping a child, and knocking a child in the head. Unwritten codes exist to ensure children are not abused when physically punished (e.g. cultural beliefs that ancestral spirits punish perpetrators who are cruel to children, Nsameng, 1992), however just as in other societies, factors such as caregiver characteristics, individual characteristics of a child, and dynamics between caregivers and particular children appear to play a role in the physical abuse of Ghanaian children. Imoh (2013) also reported that most Ghanaian children internalized the beliefs that physical punishment is acceptable in contrast to children in other countries. The author suggests that this finding may be due to the fact that a large number of the sample (70.3%) reported that the punishment didn't cause bleeding or permanent scarring. The results

from this report indicates a need to explore physical abuse in this cultural setting since at risk children constitute an underserved population who may need more advocacy and clinical intervention in the face of this widespread belief in the merits of physical punishment.

**Emotional abuse.** Emotional abuse comprise of acts of omission and commission committed by parent figures, and which are judged to be psychologically damaging by community standards and professional expertise (Hart, Germain, & Brassard, 1983). Doyle (2001) writes that emotional abuse damages the child's sense of trust, attachment, integrity and self-worth, while Shengold (1989) likened emotional abuse to "soul murder".

Emotional abuse in childhood is reported to rank second in the traumatic childhood experiences most highly associated with suicide attempts (Gould et al., 1994). Depressed adults with histories of emotional abuse in childhood have significantly earlier onset of depressive episodes, lifetime depressive episodes, and comorbid mental disorders compared to depressed adults without childhood emotional abuse histories. The object relations dimensions of alienation and insecure attachment have also been found to fully mediate the relationship between childhood emotional abuse and suicidal behavior in adulthood (Twomey et al., 2000).

In a non-clinical (community) sample, emotional abuse was found to be a predictor of borderline personality disorder, and self-mutilatory behavior in men, and of suicidal gestures in women (Bierer et al., 2003). Hypothalamus-pituitary-adrenal (HPA) axis reactivity, specifically cortisol hypo-responsivity has also been found to be associated with childhood emotional abuse in a sample of 230 adults without any major Axis I diagnoses (Carpenter et al., 2009). This study also showed that participants in the older age cohort (36-61 years) had significantly increased cortisol responsivity compared to participants in the younger age cohort (18 -35 years)

irrespective of gender, which suggests that emotional abuse in childhood becomes a chronic stressor over time and interferes with the formation of adaptive interpersonal relationships across the lifespan. Carpenter et al. (2009) reported that the study did not find cortisol reactivity in participants with histories of sexual abuse, physical abuse, or emotional neglect. Other studies are needed to confirm the decreased HPA reactivity in emotionally abused however as the study was cross-sectional and the authors noted the limitations of not accessing the contribution of hereditary factors and parental factors that might have influenced parental care for the participants.

Messman-Moore and Coates (2007) in a study involving a sample of 382 college women reported that early maladaptive schemas of mistrust/abuse, abandonment, and defectiveness/shame internalized by participants with childhood emotional abuse histories partially mediated and predicted interpersonal conflict (in friendships, romantic relationships, and work and school relationships) in adulthood. Similarly Crawford and Wright (2007) explored whether early maladaptive schemas of mistrust and emotional inhibition that developed after childhood emotional abuse mediated the relationship between childhood emotional abuse and later aggression in romantic relationships. The study found evidence of a full mediation of these maladaptive schemas in dating victimization and a partial mediation in aggression perpetration.

The literature also shows that parental verbal aggression (a form of emotional abuse) is associated with increased levels of depression, anxiety, dissociation, and drug use (Belsky & de Haan, 2011; Johnson, Cohen, Kasen, Ehrensaft, & Crawford, 2006; Norman et al., 2012). A cross-sectional study by Polcari, Rabi, Bolger, and Teicher (2014), involving a community sample of 2,518 young adults found similar results to the Belsky et al. study. In addition, the

authors found that verbal affection from a parent who engaged in high levels of verbal aggression towards a child did not mitigate the effects of that abuse. Another parent who was non-abusive and responded with verbal affection towards the child was unable to reverse the effects of the abuse. These results show that verbal abuse has long lasting effects on a child and cannot be reversed with praise and warmth from either the same parent or the other parent. Childhood emotional abuse has also been associated with eating disorders --as it primarily impacts self-esteem-- (Kent & Waller, 2000), immature defense organization, and damaged self-representations (Finzi-Dottan & Karu, 2006).

**Sexual abuse.** Childhood sexual abuse (CSA) affects approximately 20% of women and 5-10% of men (WHO, 2014). It is the childhood traumatic experience that is associated most with suicide attempts (Gould et al., 1994). The majority of the research on CSA has focused on women, and the studies have shown that women with CSA histories are at increased risk of being sexually assaulted, raped, and physically abused by their partners (Briere & Runtz, 1987; Follette, Polusny, Bechtle, & Naugle, 1996; Wyatt, Guthrie, & Notgrass, 1992). CSA also has a higher association with depression, anxiety, and post-traumatic stress in adults (Briere & Runtz, 1988; Elliott, 1994), and is also related specially to maladaptive sexual behavior in adulthood (Briere & Runtz, 1990), an increased number of abortions in adolescence and adulthood (Boden, Fergusson, & Horwood, 2009), and somatic preoccupation in adulthood (Sansone, Wiederman, & Sansone, 2001).

Teicher et al. (2004) report that CSA has a higher association with reduced corpus callosum areas -- the major myelinated fiber tract in the brain that connects the right and left hemispheres--, and decreased right/left cortical integration in girls. Magnetic resonance imaging has also revealed reductions in hippocampal and amygdala volumes (Bremner, 2003a; Driessen



et al., 2000; Schmahl, 2003; Stein, 1997) as well as deficits in verbal declarative memory among women with CSA histories assessed with neuropsychological testing (Heim & Nemeroff, 2001; Teicher, 2000). Roche, Runtz, and Hunter (1999) investigated whether both childhood sexual abuse and adult attachment styles could predict psychological adjustment as measured by the absence of trauma-related symptoms using a sample of 307 women at a Canadian university. Their results suggested that participants with intrafamilial CSA histories had significantly higher trauma-related symptoms compared to participants who reported extrafamilial CSA histories. This is in line with attachment and self-psychology theories which posit that relational trauma from caregivers has more deleterious consequences. Based on these findings, it would appear that girls with sexual abuse perpetuated by non-family members sustain less damage to their concept of self and self-esteem as compared to the damage made to their concept of other and trust in interpersonal relatedness. Girls with sexual abuse perpetuated by family members on the other hand are negatively impacted in both their worldviews of the self and other, and have more severe interpersonal difficulties that continue into adulthood (Roche et al., 1999). Roche et al. also reported that CSA influenced adult attachment styles, in that participants with no CSA history had more secure attachment styles, while participants with intrafamilial CSA histories were less secure, more fearful, and less dismissive than participants with extrafamilial CSA histories. Participants' attachment styles were also found to mediate the relationship between CSA and psychological adjustment in adulthood in that while both CSA and attachment styles could predict psychological adjustment, CSA no longer predicted adjustment when attachment style was controlled for. Elliott (1994) investigated the impairment caused by CSA in a United States national sample of 2,963 professional women, and concluded that adults with CSA histories had significantly more impairment in interpersonal relationships, specifically in regards

to their interpersonal discomfort, maladaptive interpersonal patterns, and interpersonal hyper sensitivity. The level of impairment in interpersonal relationships however was mediated by CSA which occurred within the nuclear family, and by frequent chronic abuse.

In addition, Whiffen and MacIntosh (2005), in reviewing the literature on CSA and emotional distress in adulthood report that shame or self-blame, interpersonal difficulties, and avoidant coping strategies are other mediators between CSA and well- being in adulthood. Emotional distress also appears to mediate the relationship between CSA and the adverse outcomes of alcohol abuse and revictimization. In a cross-sectional Colombian sample of 1,039 families by Ramírez, Pinzón-Rondón, and Botero (2011), the authors reported that CSA was positively associated with the number of children in the household, and the mother's childhood experience with abuse, intimate partner violence, and external violence. CSA was negatively associated with parental communication, the mother's age and the family income. These findings suggest that policies aimed at intervening with households of lower socio-economic statuses, and primary intervention with mothers with childhood abuse histories may help reduce incidences of CSA.

Coker-Appiah and Cusack (1999) estimate the prevalence of CSA in Ghana to be around 33% based on a sample of 2,069 female participants. Of those who reported being victims of sexual violence (forced sex), 31% disclosed the incident to parents, friends, or a family member. The study reported that none of the incidents were reported to law enforcement agencies or the Department of Social Welfare. Similarly, a nationwide study(Pappoe & Ardayfio-Schandorf, 1998) using 3,041 female participants aged between 14 and 72 years revealed that 6% of the sample had CSA histories, with 50% failing to disclose the incident out of fear of reprisal from either the perpetrator or the victim's own family. Only 10% of the abuse was reported to the

police (Pappoe et al., 1998). A similar pattern in the literature of CSA being perpetuated predominately by individuals known to the victim was found in the Ghanaian studies (Coker-Appiah et al., 1999; Pappoe et al., 1998). In addition to the fear of reprisal, these studies (Coker-Appiah et al., 1999; Pappoe et al., 1998) also indicate that CSA in Ghana is largely underreported due to the absence of severe physical injury, the economic costs of seeking justice or medical attention, and negative experiences with law enforcement agencies. According to Boakye (2009), the specific cultural factors of (i) patriarchal attitudes which promote the assertion of masculinity; (ii) myths which assert that males are incapable of controlling their sexual desires; (iii) myths which identify sexual abusers as suffering from extreme forms of mental illnesses; and (iv) the collective shame problem which seeks to protect victims and their families from the shame that will accompany public knowledge of the sexual abuse, contributes to the underreporting and perpetuation of sexual abuse in the country. In such collectivist cultures with patriarchal attitudes, public awareness campaigns which show the prevalence of CSA and demystify the victim role given to perpetrators, as well as advocacy efforts to get governmental buy-in for protective policies for children may be the beginning step to lower CSA incidences.

**Neglect.** Child neglect is a condition in which a caretaker responsible for a child either deliberately or by extraordinary inattentiveness permits the child to experience avoidable present suffering and/or fails to provide one or more of the ingredients generally deemed essential for developing a person's physical, intellectual, and emotional capacities (Polansky, Hally, & Pollansky, 1975). Childhood neglect is the most prevalent adverse experience in childhood (National Center on Child Abuse and Neglect, 1995), although its' associated sequelae have not been investigated as much as other types of childhood abuses (e.g., Wolock & Horowitz, 1984).

The literature on childhood neglect indicates that neglect is associated with severe cognitive problems that are often worse than those associated with other types of childhood abuse including social withdrawal, a lack of social skills, internalizing behaviors, a higher risk of running away from home, long term consequences on cognitive abilities, and an increased risk of prostitution in females(De Bellis, Hooper, Spratt, & Woolley, 2009; Erickson & Egeland, 1996; Hildyard, & Wolfe, 2002; Kaufman & Widom, 1999 ; Manly, Kim, Rogosch, & Cicchetti, 2001; Perez & Widom, 1994; Widom & Kuhns, 1996). Teicher et al. (2004) report that neurobiologically,early neglect has a higher association with reduced corpus callosum areas in boys compared to sexual abuse, physical abuse or PTSD. Childhood neglect also interferes with the optimal development of the neural systems responsible for mediating cognitive, emotional, social, and physiological functioning that allow children to form and maintain relationships both with other children and adults throughout their lives(Perry, 2002).

De Paul and Guibert (2008) propose that child neglect occurs because of caregivers' inability to perceive children's signals of need and respond with helping behaviors, or that when caregivers' perceive children's distress signals, they are unable to respond due to a lack of empathy for the child's position. A longitudinal study by Johnson, Smailes, Cohen, Brown, and Bernstein (2000) investigated the associations between four types of childhood neglect: cognitive neglect, emotional neglect, physical neglect, and supervision neglect; and personality disorder symptoms during adolescence and early adulthood in a community sample of 738 youths and their mothers. The study found increased risk of different personality disorders for those with experiences of childhood emotional, physical, or supervision neglect. Emotional neglect was found to be associated with increased risks for avoidant personality disorders (PDs) and paranoid personality traits during adolescence and early adulthood. Physical neglect was found to be

associated with increased risks for schizotypal PD traits, while supervision neglect was associated with elevated borderline, paranoid, and passive-aggressive PD traits. The study found no evidence for an association between cognitive neglect in childhood and an increased risk of a development of a PD in adulthood.

A prospective study using a North London sample of community women found that childhood neglect no longer predicted adult anxiety or depression when adult attachment styles were included in the prediction model (Bifulco et al., 2006). This indicates that as with other types of childhood abuse, insecure attachment mediates the relationship between childhood neglect and adult psychopathology.

**Multiple childhood traumatic experiences.** Even though research on child abuse usually focuses on one type of abuse, multiple types of abuses are frequently found in most families (Biere & Runtz, 1990; Kessler, Davis, & Kendler, 1997; Kessler, 2000; Silverman, Reinherz, & Giaconia, 1996). Using a sample of 3,494 adults Felitti et al. (1998) explored adult general and mental health diseases and risk behaviors associated with seven categories of adverse childhood experiences (ACEs) -- psychological abuse, physical abuse, sexual abuse, violence against mother, living with household members who were substance abusers, living with household members who were mentally ill/suicidal, and living with household members who were ever imprisoned--, and found a graded relationship between the number of categories of adverse childhood experienced by a child and risky health behaviors and diseases in adulthood. These risky health behaviors and diseases included alcoholism and other drug abuse, depression, suicide attempts, smoking, poor self-rated health, increased sexual partners and sexually transmitted disease, increased physical inactivity and severe obesity, ischemic heart disease, cancer, chronic lung disease, skeletal fractures, and liver disease. The authors reported that

persons experiencing multiple categories of childhood exposure were more likely to have multiple health risk factors. The study also found strong interrelations among the seven categories of adverse childhood experiences, with one category of an adverse childhood experience endorsed by half of the sample, and more than two categories of negative childhood experiences endorsed by a quarter of the participants.

In an epidemiological study, Anda et al. (2006) likewise found a strong graded relationship to the prevalence and risk of affective and somatic disturbances, hallucinations, substance use and abuse, early intercourse, promiscuity and sexual dissatisfaction, impaired memory of childhood, high perceived stress, difficulty controlling anger, intimate partner violence perpetration, and comorbid outcomes as a person's ACE score increased. Increased numbers of ACEs have also been associated with the personality traits of higher neuroticism, lower conscientiousness, lower agreeableness, and with higher emotion-focused coping strategies. An increased number of ACEs has also been found to partially mediate the relationship between current stressors and well-being, indicating that ACEs increase the risk of having lower well-being or a clinical disorder later in life through one possible mechanism of the use of maladaptive coping strategies to deal with life stressors (Mc Elroy & Hevey, 2014).

**Social support.** A number of studies have pointed to the role of social support in mitigating the effects of childhood trauma (e.g., Gohm et al. 1988; Runtz & Schallow, 1997). A qualitative study by Doyle (2001) found that having family members--siblings, grandparents and aunts in particular--, friends, teachers, other professionals, religious groups, and non-human support through pets, toys, and books, provided support and helped children cope with their abuse childhoods. Gold, Milan, Mayall, and Johnson(1994) explored the role of parental support as one of the mediators of CSA in a sample of college women and found that low levels of

parental support was predictive of anxiety and depression scores. A structural equation modeling analysis of the latent variables of social support from family and friends, and ways of coping with childhood sexual and physical maltreatment in a sample of 302 participants in a Canadian university found evidence for the role of perceived social support, and both positive and negative coping strategies, in mediating the relationship between childhood physical abuse and sexual abuse and adult adjustment (Runtz et al., 1997). Social support has also been found to partially mediate the relationship between multiple experiences of childhood abuse and PTSD in a sample of adult women (Vranceanu, Hobfoll, & Johnson, 2007). Based on findings from a sample of children with CSA experiences, Tremblay, Hébert, and Piché, (1999) alternatively propose that social support has a direct, rather than a mediating role in wellness outcomes. Unlike most CSA studies which use a retrospective recall of trauma, the Tremblay et al. study explored CSA in a sample of children rather than adults and this may have led to the different results the authors obtained. Other studies (e.g., Burton, Stice, & Seeley, 2004; Mc Elroy & Hevey, 2014) however have found no evidence for the role of perceived social support in either mediating or moderating the relationship between stress and wellbeing, although the authors suggest that this might be due to measurement issues (e.g. brief Likert scales, different measurements of perceived versus actual enacted support).

Pennebaker and Susman (1988) proposed a psychosomatic theory of inhibition in which the natural tendency to talk to others about events in one's life-- including traumatic experiences-- is inhibited out of shame or a fear of punishment. Inhibition, which requires more psychological work in the short run, causes increases in autonomic nervous system activity (Fowles, 1980). In the long run, inhibition becomes a cumulative stressor which over time becomes associated with increases in stress related diseases. In a study involving 200 community

dwelling adults, Pennebaker (1989; 1993) reports that childhood trauma was less likely to be confided to someone, which prevented the victim from receiving social support during the traumatic period than was adult trauma, possibly because children are more afraid of retribution for “telling” on a non-conforming and powerful adult. While most of the research on the benefits of social support in mitigating the effects of traumatic studies have been correlational in design, Pennebaker (1989) in an experimental study asked participants to write or speak about their traumatic experiences, and found psychological states of disinhibition or “letting- go” evidenced by a change in writing style, accelerated and low volume speech when participants could disclose their traumas. This study provided empirical support for the importance of social support as a means of disclosing and reducing the negative outcomes associated with traumatic experiences.

**Complex trauma.** Childhood negative experiences often involve complex trauma or child abuse of an ongoing nature. Complex trauma refers to a type of trauma that occurs repeatedly and cumulatively, usually over a period of time and within specific relationships and contexts (Courtois, 2004). Complex trauma occurs in the interpersonal trauma category and thus, its most detrimental consequences are the loss of a child’s core capacities for self-regulation and interpersonal relatedness. Cook et al. (2005) report that children exposed to complex trauma have significantly more impairment in the following seven domains: (i) *Attachment* difficulties in tuning into others’ emotional states and with perspective taking, problems with boundaries, social isolation, and distrust of others; (ii) *Biological* disruptions, which are manifested in somatization, analgesia, problems with balance, coordination and body tone, sensorimotor developmental problems, and medical problems ranging from pelvic pain to autoimmune disorders ; (iii) *Affect regulation* problems in which children have difficulties with emotional



self-regulation, labeling and expressing their feelings, knowing and describing their internal states, and communicating their needs and wishes; (iv) *Dissociation*, which is manifested by amnesia, impaired memory for state-based events, depersonalization and derealization, two or more distinct states of consciousness, and distinct alterations in states of consciousness; (v) *Behavioral control* difficulties in modulating impulses, managing aggression towards others, controlling self-destructive behavior, engaging in pathological self-soothing behaviors, reenactment of their trauma in behavior or play; and sleep disturbances, eating disorders, substance abuse, excessive compliance, and oppositional behavior; (vi) *Cognition* difficulties which include a lack of sustained attention, difficulties processing novel information, orientation in time and space, attention regulation, and executive functioning; and (vii) negative *Self-concept* which comprises of low self-esteem, shame and guilt, disturbances of body image, poor sense of separateness, and a lack of a continuous predictable sense of self.

The developmental epidemiology of potential trauma and post- traumatic stress symptoms (PTS) in a longitudinal study involving community children (Copeland, Keeler, Angold, Costello, 2007) suggests that few children exposed to trauma -- violence, sexual trauma, other injury or trauma, witness to trauma, and vicarious trauma/learning about trauma -- prior to the age of 16 experience PTS symptoms. Being an adolescent at the time of trauma however was found to be a strong predictor of painful recall and subclinical PTSD symptoms. In addition, being exposed to a previous trauma, having a previously diagnosed anxiety disorder, and coming from an impoverished or poorly educated family environment significantly predicted PTS responses in the following year. The study also found that anxiety and depression were the most common psychopathology experienced by victims apart from PTSD. Although this study focused specifically on risk factors for developing PTS and PTSD symptoms, a likely explanation would

be that while being older in age (i.e. adolescent) at the time of a childhood trauma served as a risk factor for developing PTS/PTSD symptoms, it possibly protected against the developmental consequences of complex trauma, which has been associated with traumas from caregivers in early childhood , and negatively impacts the development of secure attachments and the capacity for interpersonal relatedness.

## **Summary**

The reviewed literature shows that the deleterious consequences associated with traumatic childhood experiences cut across neurobiology, mental health, physical health, and attachment domains. From the neurobiological domain, traumatic experiences in childhood leave individuals at higher risks for alexithymia, deficits in left brain/right brain interhemispheric organization, emotion dysregulation, over-arousal of the stress response centers in the brain, reduced hippocampal and amygdala volumes, and increased cortisol responsivity (Andrade & Aghajanian, 1984; Bhaskaran & Freed, 1988; Carpenter et al., 2009; Chaplin et al., 1988; Cicchetti et al., 1991; Driessen et al., 2000; Gross, 1998; Teicher et al., 2004). Mental health difficulties associated with negative childhood experiences are varied and include borderline personality disorder, antisocial personality disorder, somatization, substance abuse disorders, suicidal behaviors, and sexual disorders.

The most common psychopathology associated with childhood trauma are PTSD, anxiety, and depression (Belsky & de Haan, 2011; Briere & Runtz, 1988, 1990; Haviland et al., 1995; Johnson, et al., 2006; McCord, 1983). Physical health problems associated with childhood trauma include smoking, increased sexually transmitted diseases, ischemic heart disease, cancer, chronic lung disease, skeletal fractures, liver disease, migraines, chronic fatigue,

obesity, hypertension, and irritable bowel syndrome (CDC, 2011; Felitti et al, 1998). In the attachment domain, childhood abuse has been associated with insecure adult attachment styles, lower self –esteem, damaged self-representations, increased likelihood of misperceiving the intents or actions of others, interpersonal discomfort, maladaptive interpersonal patterns, and interpersonal hypersensitivity (Elliott, 1994; Finzi-Dottan & Karu, 2006; Hadley et al., 2003; Twomey et al., 2000; Whiffen & MacIntosh, 2005)

Researchers of childhood traumatic experiences have typically focused on the effects of one specific kind of traumatic experience; however studies that have looked at multiple types of childhood traumatic experiences indicate that participants in retrospective studies of childhood abuse usually have experience with more than one type of childhood abuse (Biere & Runtz, 1990; Kessler et al., 1997; Silverman et al, 1996). Individuals with more than one childhood trauma experience are at higher risk of engaging in risky health behaviors, developing more physical and mental health disorders, have more insecure attachment styles, use more maladaptive coping strategies, and have more neurotic personality traits and less conscientiousness and agreeableness personality traits (Anda et al., 2006; Felitti et al, 1998; McElroy & Hevey, 2014). Of the two categories of general trauma and relational trauma, trauma that falls in the second category leads to more deleterious consequences as it impacts the capacity for interpersonal relatedness and trust (Bremner, et al., 2000; Schore , 2001).

The role of social support for victims of childhood traumatic experiences is mixed, with some studies finding no evidence for the role of perceived social support as a coping strategy, mediator or moderator of the relationship between childhood trauma and wellness outcomes (Burton et al., 2004; Mc Elroy & Hevey, 2014). Other studies however have found evidence that family or friends have been able to provide support and help children cope with childhood

trauma (Doyle, 2001; Gohm et al. 1988; Gold et al., 1994; Pennebaker, 1993; Runtz & Schallow, 1997).

In summary, the evidence from the literature points to the need for an integrated approach in the treatment of health and social issues across the lifespan, especially in developing countries such as Ghana in which mental health disorders are largely attributed to spiritual origins (Kyei, Dueck, Indart, & Nyarko, 2014), and results in a mind-body divide in clinical interventions. Bremner (2003b) describes the overlap between neurobiology, mental and physical health, and social outcomes such as depression, PTSD, dissociative disorders, substance abuse, and borderline personality disorder as “trauma spectrum disorders”. Likewise, Caspi (2003) suggested that the high rate of psychiatric comorbidity in individuals with childhood negative experiences indicate a common etiology that is modulated by both genetics and the environment (i.e. repeated exposures to stressors such as childhood maltreatment). Interventions that focus equally on rebuilding victims’ attachment systems, teach self-regulation, and work to integrate left to right brain coordination may be one way to mitigate the long term consequences associated with childhood trauma across these multiple domains.

### **Statement of Specific Hypotheses and Predictions**

In line with the reviewed literature, the study seeks to test the following hypotheses:

1. Adults with childhood trauma experiences will have significantly lower self-esteem scores, poorer object relations, and more PTSD symptoms compared with adults with no childhood trauma experiences.

2. Childhood traumas of a relational nature will result in significantly lower self-esteem scores, poorer object relations, and more PTSD symptoms in adulthood compared with childhood traumas of a general nature.
3. Adults with multiple (two or more) childhood trauma experiences will have significantly lower self-esteem scores, poorer object relations, and more PTSD symptoms compared with adults with a single experience of a childhood.
4. Social support (i.e. having someone to confide in during childhood trauma experiences) will moderate the relationship between childhood trauma and self-esteem, object relations, and PTSD in adulthood.

## Chapter III

### Method

#### Participants

Two hundred and fifty community dwelling adults (51.6% women,  $M_{\text{age}} = 32$ , age range: 21–64 years) were recruited from polytechnics, universities, and places of work (which included governmental agencies, the telecommunications industry, banking industry, multinational corporate companies, and a law firm) in Accra, the capital of Ghana. Eighty percent (80%) of the sample was employed, 62% of the sample was single and 73.6% of participants had at least a college degree or higher. The present sample, when compared to the Greater Accra Metropolis population demographic data (Ghana Statistical Service, 2012), had more individuals with higher educations and who were single (See Table 2 for the sample's full demographic information.)

Table 2

*Participant Characteristics*

	<i>n</i>	%
<u>Age Group:</u>		
21-34	181	72.4
35-49	58	23.6
50-64	7	2.8
<u>Gender:</u>		
Men	116	46.4
Women	129	51.6
<u>Marital Status:</u>		
Single	155	62.0
Married	85	34.0
Separated/Divorced/Widowed	9	3.56
<u>Education Level:</u>		
High School	16	6.4
Some Higher National Diploma (HND)	5	2.0
HND	26	10.4
Some college	15	6.0
College	91	36.4
Advanced Degree	93	37.2
<u>Occupation:</u>		
Managerial	40	16.0
Professional	66	26.4
Healthcare	7	2.8
Education	15	6.0
Security	6	2.4
Management Support	45	18.0
Student	39	15.6
Unemployed	7	2.8
Other	21	8.4

## **Procedures**

Using a convenience sampling procedure, participants were randomly approached individually by either the author or one of two research assistants at the places of work and education where organizational consent for conducting the study had been obtained, and invited to participate in the study. Individuals who consented to take part in the study were administered the survey in a paper and pencil format which required 30 minutes on average to complete. The study's inclusion criteria required that participants be Ghanaian, at least 21 years of age, literate in the written and spoken English language, and possess at least a high school level education. Exclusion criterion for the study was being an individual in the clinical (inpatient hospitalization) population.

Due to the sensitivity of the information requested from participants, an anonymous study format was adopted. Participants were provided with an oral consent form which included the clause "by completing this survey and returning it, you agree that your responses become part of the overall results reported for this research" in lieu of a written consent form. (Participants' signatures on the informed consent forms would have been the only identification linking participants with their responses.) Each participant was then given a written copy of the oral consent form (Appendix B), which included the information of a local psychologist to be contacted in the event of experiencing any distress from participating in the study. Participants were also provided with security envelopes to seal in their responses before handing over their completed questionnaire. The incentive given for participating in the study was a complimentary pen.



The Rutgers University Institutional Review Board reviewed and approved all protocols (Appendix C) for this study.

## **Measures**

**Demographic data.** Participants' gender, age, marital status, highest level of education achieved, and occupation were collected under the demographic section of the administered questionnaire. Participants were presented with close-ended options for each demographic category and asked to circle the response that best represented them. For the education and occupation categories, participants were additionally presented with open-ended options to fill in their highest level of education or occupation if these not represented in the close-ended options.

**Perceived childhood traumatic experiences.** Participants' perceived experiences of childhood trauma were assessed with the Childhood Traumatic Events Scale (CTES, Pennebaker & Susman 1988). The CTES asks participants to respond on a yes/no format to six early traumatic experiences: death (family or close friend), divorce or separation, sexual trauma, physical violence, extreme illness/injury, or other trauma experiences that occurred prior to the age of 17. General traumas assessed by the CTES are death and extreme illness/injury, while relational traumas assessed are divorce or separation, sexual trauma, and physical violence. For each of these traumas, participants' also subjectively rate the trauma on a three-point Likert scale (1 = *not at all traumatic*, 2 = *somewhat traumatic*, 3 = *extremely traumatic*), and the degree to which participants' perceive available social support as measured by their ability to confide in someone during the time of trauma on a three-point Likert scale (1 = *not at all*, 2 = *somewhat*, 3 = *a great deal*). Perceived social support for each participant was summed up across each trauma reported. The CTES was chosen as the instrument of choice for this study as it assesses

participants' subjective experience of whether they experienced a childhood trauma. This bypasses cultural biases that can occur in cultural definitions of trauma (for example, physical abuse as defined by American culture is very different from physical abuse defined in Ghanaian culture, as the latter does not recognize punishment with a switch or other hard object as physical abuse).

For the present study, the CTES was modified in the following ways: (i) childhood traumas of perceived emotional abuse and neglect (relational traumas) were included to obtain a more comprehensive knowledge of the frequency of different kinds of childhood traumatic experiences in the country, (ii) the item assessing parental divorce was replaced with an item which assessed parental conflict in line with the literature (e.g., Gohm et al., 1998) which shows parental conflict has a more direct effect on children than parental divorce, (iii) participants' perception trauma prior to the age of 17 were divided into two age groups of trauma that occurred between the 0-10 years, and traumas that occurred between 11-16 years in order to explore whether childhood traumas were more frequent in one of these age groups compared to the other in the country.

**Self-esteem.** Participants' subjective ratings of self-esteem were measured by the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). The 10-item RSES instrument uses a 4-point Likert scale (ranging from 1 = *strongly agree* to 4 = *strongly disagree*), to index participants' self-reported self-esteem ratings. Examples of items on the scale are "I feel that I'm a person of worth", and "On the whole, I am satisfied with myself". Rosenberg (1965) reports that the RSES demonstrates a Guttman scale coefficient of reproducibility of .92, and test-retest reliability correlations over a two-week period of .85 and .88, which indicates excellent stability. The RSES also demonstrates concurrent, predictive and construct validity, as it correlates

significantly with other measures of self-esteem, including the Coopersmith Self-Esteem Inventory (Coopersmith, 1981), and with measures of depression and anxiety in the predicted direction (Rosenberg, 1965). For the present study, the positively worded version of the measure (Greenberger, Chuansheng, Dmitrieva, & Farruggia, 2003) was used to make the scale's items more comprehensible to a non native English speaking population. The adopted version by Greenberger et al., (2003) has shown that the item-rewording does not influence mean self-esteem scores and eliminates the two-factor structure of the RSES. The positively worded version of the RSES has also been shown to have cross-cultural validity in 53 countries - including the African countries of Tanzania and Zimbabwe- in college and community samples (Schmitt & Allik, 2005). An example of a modified item on the scale is "I feel I do have much to be proud of", compared to the original RSES item of "I feel I do not have much to be proud of." In the present sample, a high level of reliability (Nunnally & Bernstein, 1994) of .88 was observed for the RSES reworded scale.

**Object relations.** Participants' object relations capacities were assessed with the Bell Object Relations Inventory (BORI, Bell, 1995; Bell, Billington, & Becker, 1986). The BORI is a 45-item self-report inventory which uses a True/False format to measure object relations. The four subscales of the Object Relations scale are *alienation* (lack of basic trust in relationships, inability to attain closeness, and hopelessness about achieving and maintaining stable and satisfying levels of intimacy), *insecure attachment* (painfulness in interpersonal relations, sensitivity to rejection, and excessive concerns about being liked or respected), *egocentricity* (mistrusting others' motivations, and believing others exist only in relation to oneself, and manipulating others for one's own aims), and *social incompetence* (shyness, uncertainty about how to interact with the opposite sex, inability to make friends, absence of close relationships,

and unsatisfactory sexual adjustment). The Insecure Attachment scale is usually the only elevated scale among high-functioning individuals (Bell, 1995). Examples of items on the scale are “I may withdraw and not speak to anyone for weeks at a time” (alienation), “I feel that I have to please everyone or else they might reject me” (insecure attachment), “I usually end up hurting those closest to me” (egocentricity), and “I often feel nervous when I am around members of the opposite sex” (social incompetence).

The BORI was standardized on clinical and non-clinical samples, including psychiatric inpatients and outpatients, community active adults, and undergraduate students. The BORI subscales have been found to have high internal consistency and split-half reliability ranging from .78 to .90. No significant age, gender biases, or significant social desirability response bias have been found to be associated with the BORI (Bell et al., 1986). In the present study, Cronbach alphas for the BORI subscales ranged from .64 to .74, which indicate low to moderate levels of reliability for the BORI in this sample (Nunnally & Bernstein, 1994).

**Trauma symptomatology.** Participants’ subjective ratings of trauma symptomatology were measured with the Trauma Symptom Checklist-40 (TSC-40; Briere & Runtz, 1989). The TSC-40 is a 40-item self-report inventory that uses a 4-point Likert scale ranging from 0 = *never*, to 3 = *often* to evaluate symptomatology in adults associated with childhood or adult trauma. The 40-item scale covers six subscales: anxiety, depression, dissociation, sexual abuse trauma index (SATI), sexual problems, and sleep disturbance. Participants are asked to rate their experiences of specific symptoms in the past two months. The TSC-40 total scores have a reliability of .90, and the mean internal consistency for the subscales is .69 (Elliott & Briere, 1992). The TSC-40 scale has been shown to discriminate abused from non-abused individuals within both clinical and nonclinical samples (Elliot et al., 1992). Examples of items on the scale are “I may withdraw

and not headaches” (anxiety), “insomnia” (depression), “memory problems” (dissociation), “fear of men or women” (SATI), “low sex drive” (sexual problems), and “insomnia” (sleep disturbance). In the present study, Cronbach alphas for the TSC-40 subscales ranged from .67 to .80, which indicate moderate to high levels of reliability for the TSC-40 in this sample (Nunnally & Bernstein, 1994).

## **Design**

The present study employs a non-experimental (correlational) cross-sectional design to examine the associations between childhood traumatic experiences and (i) low self-esteem in adulthood; (ii) object relations deficits; and (iii) posttraumatic stress symptomatology. The study’s covariates were participants’ age, gender, marital status, and educational levels.

## **Operational Definitions**

- Adult interpersonal wellbeing: participants’ self-esteem and object relations scores on the RSES and BORI.
- Adult wellbeing: the absence of or low PTSD symptoms as measured by participants’ TSC-40 scores.
- Social support: participants’ perceived ability to confide in others about their traumatic experiences at the time as measured on the CTES.

## **Data Analyses**

Data from the present study were analyzed by using the International Business Machine (IBM) Corporation’s Statistical Package for the Social Sciences (SPSS, version 21) software for Windows (IBM Corp, 2012). Analyses proceeded as follows:

- Univariate analyses of variances (ANOVAs) were used to test hypothesis 1, which investigated whether significant differences in level of self-esteem, quality of object relations, and PTSD symptomatology existed between adults with childhood traumatic experiences compared with adults with no childhood trauma.
- ANOVAs were again employed to test hypothesis 2, which investigated whether significant differences in level of self-esteem, quality of object relations, and PTSD symptomatology existed as a result of general traumatic experiences versus relational traumatic experiences.
- ANOVAs were similarly used to test hypothesis 3, which investigated whether significant differences in level of self-esteem, quality of object relations, and PTSD symptomatology existed between adults with a single experience of a childhood traumatic experience compared with adults with multiple (two or more) childhood traumatic experiences.
- A hierarchal regression analysis was used to test hypothesis 4, which investigated whether social support moderated or interacted with childhood trauma to lessen the associated negative consequences with self-esteem, quality of object relations, and PTSD symptomatology in adulthood.

### **Data Management/Handling Procedures**

**Accuracy.** The author was solely responsible for the study's data entry. Data was first captured in EpiData 3.1(Lauritsen & Bruss, 2003), a software program for entering and documenting data, before being exported to SPSS. EpiData has validity checks for each field/category entry which define the permissible range of numerical values that can be assigned to each field (for example, 1 for males and 2 for females). This minimizes errors that occur by

inadvertently keying in numerical values that are outside the numerical range for each specific field (for example mistakenly entering a 3 response to identify a female participant). EpiData's validity checks also preclude inadvertent duplication of responses by rejecting entries of questionnaires with identification numbers already captured in the system. The captured data was then exported to SPSS, the analysis software used for the study. In SPSS, the data was checked for extreme values/outliers by running frequencies and descriptive statistics for the study's variables. No outliers were detected in the study's data.

**Missing data.** Participants whose responses on the three dependent variables (self-esteem, object relations, PTSD symptomatology) had a greater than 5% missing rate were eliminated from the analyses since participants' total scores were computed on the scoring system for psychological tests, which assumes that all items on the instrument would be completed for accurate interpretation. For the 10-item self-esteem scale (RSES), participants who had more than one item missing ( $n = 3$ ) were excluded from the analyses, and for the 45-item object relations (BORI) instrument, participants who had more than three items missing ( $n = 18$ ) were excluded from the analyses. For the 40-item PTSD (TSC-40) instrument, participants who had more than two items missing ( $n = 19$ ) were excluded from the analyses. For analyses involving the independent variable of childhood trauma, participants who reported childhood trauma but did not report whether they experienced a childhood trauma prior to or after the age of 10 ( $n = 187$ ), their subjective rating of how traumatic the childhood trauma had been experienced ( $n = 186$ ), or their perception of social support during the traumatic experience ( $n = 162$ ), were excluded from the analyses.

**Rational for statistical tests used in study.** For hypotheses 1, 2, and 3, the analysis of variance (ANOVA) was conducted to examine group differences in self-esteem, object relations,

and PTSD symptoms. For hypothesis 4, the multiple regression analysis was conducted because this hypothesis sought to investigate whether social support during times of childhood trauma buffered the relationship of perceived trauma with current self-esteem, object relations, and PTSD symptoms.

**Assessment of covariances.** Correlations between participants' age, gender, marital status, educational levels, childhood traumatic experiences, age at time of the trauma, subjective rating of severity of the trauma, PTSD symptomatology, self-esteem and object relations scores indicated no significant group differences in the outcome variables, with the exception of the TSC-40 sexual problems subscale, which showed gender differences in reported sexual problems (Table 3). The TSC-40 individual subscales however were not used as stand-alone categories in the data analyses. No other covariates were found in the data.



## Chapter IV

### Results

#### Overview

This study investigated whether self-esteem issues, interpersonal difficulties, and PTSD symptoms in adulthood differed between (a) individuals with or without childhood traumatic experiences; (b) individuals with childhood trauma experiences of a relational nature compared with childhood trauma experiences of a general nature; (c) individuals with multiple versus a single childhood trauma experience; and (d) individuals who had social support during the time of the childhood trauma compared to those who did not in a Ghanaian sample.

#### Descriptive Statistics and Reliability Coefficients

Descriptive data for the RSES, the BORI, TSC-40, and the four BORI and six TSC-40 subscales are presented for the total sample and by gender (Table 3).

Table 3

*Mean Scores, Item Mean Scores, Standard Deviations, and Scale Reliability of Outcome Measures by Gender*

Scale	All ( <i>N</i> )	<i>Mean</i>	<i>SD</i>	Men ( <i>n</i> )	<i>Mean</i>	<i>SD</i>	Women ( <i>n</i> )	<i>Mean</i>	<i>SD</i>	$\alpha$	<i>F</i>
RSES	243	14.92	4.05	115	15.27	4.13	128	14.60	3.97	.87	1.65
BORI:	243	198.32	26.17	115	200.71	27.50	128	198.16	24.83	.79	1.84
Alienation	243	51.59	7.50	115	52.22	7.93	128	51.02	7.07	.74	1.58
Insecure											
Attachment	243	47.26	9.03	115	47.89	8.98	128	46.70	9.08	.76	1.04
Egocentricity	243	53.11	8.82	115	53.74	8.93	128	52.55	8.73	.64	1.11
Social											
Incompetence	242	46.55	6.72	114	47.28	7.16	128	45.91	6.27	.65	2.54

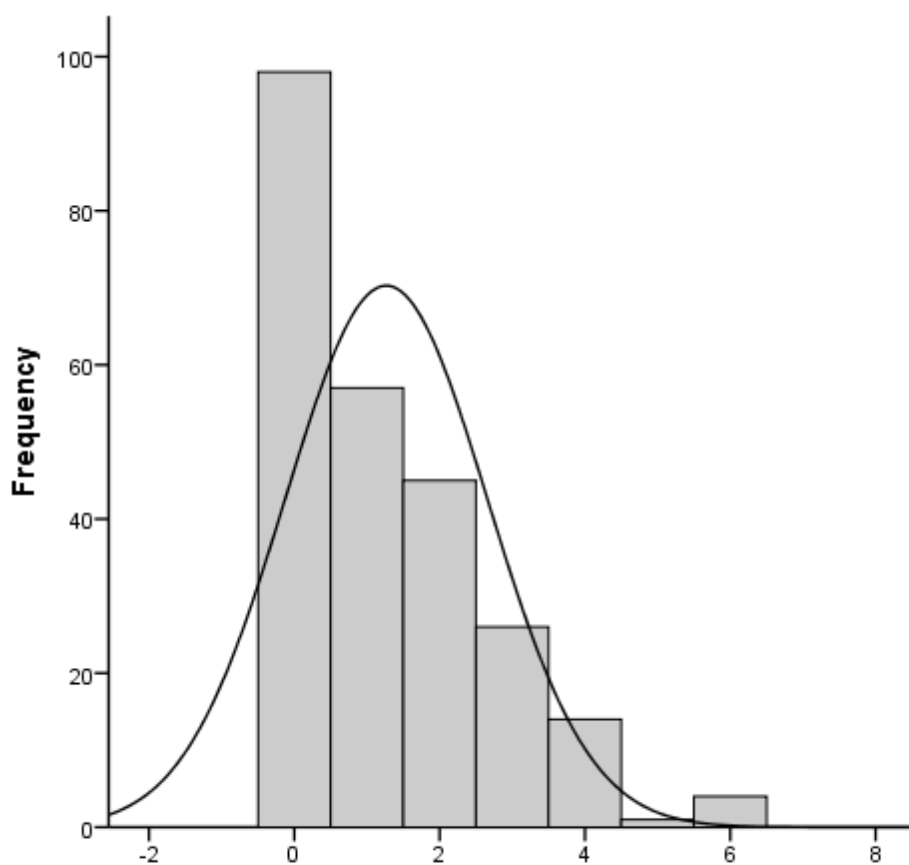
TSC- 40:	240	17.39	13.18	112	18.29	14.23	128	16.59	12.19	.91	1.00
Anxiety	240	3.96	3.09	112	3.90	3.27	128	4.01	2.93	.67	.07
Depression	240	4.07	3.40	112	4.08	3.51	128	4.05	3.32	.70	.00
Dissociation	239	2.45	2.72	112	2.53	2.73	127	2.39	2.72	.71	.16
Sexual Abuse											
Trauma											
Index	240	2.34	2.77	112	2.54	2.94	128	2.17	2.61	.70	1.03
Sexual											
Problems	240	2.75	3.49	112	3.36	3.79	128	2.23	3.13	.80	6.40*
Sleep											
Disturbance	240	4.18	3.41	112	4.50	3.76	128	3.90	3.06	.74	1.81

*Note.*  $\alpha$  = Cronbach's alpha; \* $p < .05$

The study's data show that men reported having significantly more sexual problems than women,  $F(1, 239) = 6.40, p = .012$ . As indexed by eta squared however, the 2.6% effect size of this difference in the population is small (Cohen, 1992). No other significant differences existed between males and females on self-esteem, object relations, and the other PTSD symptoms.

### **Rates of Childhood Trauma**

The number of childhood trauma experiences reported by participants (Figure 1) ranged from 0 to 6 ( $M = 1.27, SD = 1.39$ ) and was skewed with a right tail. Childhood traumas in the general trauma category (Table 4) comprised the majority of traumas experienced by participants in this community sample. The two most common childhood traumas reported by participants were the death of a close friend or family member, and having an extreme physical illness or injury in childhood (Table 5). The third most common reported childhood trauma was witnessing high conflict between one's parents, while the least reported trauma was sexual abuse. Experiences in the "any other trauma" category involved separation from parents ( $n = 9$ ), growing up in poverty ( $n = 6$ ), going to boarding school ( $n = 4$ ), multiple migrations ( $n = 1$ ), and repeating a class ( $n = 1$ ). No significant differences were observed for age at which the trauma was experienced,  $F(1, 61) = 3.55$  and participants' perception of how traumatic the experience had been,  $F(1, 62) = .53$ .



*Figure 1.* Histogram with the normal distribution curve showing the frequency of multiple forms of childhood traumatic experiences ( $N = 250$ ).

Table 4

*Frequencies of Childhood Traumatic Experiences*

	<i>N</i>	%
Childhood Trauma Frequencies:		
Participants with no childhood trauma	98	40.0
Participants with a single childhood trauma	57	23.3
Participants with multiple childhood traumas	90	36.7
Total	245	100.0
General/Relational Trauma Frequencies:		
Participants with childhood traumas in the general category	103	70.1
Participants with childhood traumas in the relational category	38	25.9
Participants with childhood traumas in both categories	6	4.0
Total	147	100

Table 5

*Childhood Trauma, Age of Trauma, and Subjective Rating of Experienced Trauma Reported by Participants*

Childhood Trauma Type	No (N)	%	Yes (N)	%	0-10 years (N)	11 -16 years (N)	Not traumatic(N)	Traumatic (N)
Death of a very close friend/ family member	155	64.6	85	35.4	27	58	10	71
High conflict parental marriage	186	76.9	56	23.1	30	23	6	46
Traumatic sexual experience	230	95.0	12	5.0	8	4	2	10
Physical violence	224	92.6	18	7.4	5	13	4	14
Emotional abuse	209	85.3	36	14.7	7	29	7	29
Neglect	220	90.2	24	9.8	3	21	7	17
Extreme illness or injury	185	76.1	58	23.9	25	33	14	44
Any other trauma	212	91.0	21	9.0	4	17	3	18

## **Childhood Trauma and Object Relations Correlations**

The correlations of childhood trauma and object relations in adulthood (Table 6) show positive associations among the three groups of: (i) participants with childhood trauma versus participants without childhood trauma, (ii) participants with childhood traumas in the general versus the relational category, and (iii) participants with a single versus multiple childhood traumas and object relations. In general, overall deficits in object relations were found to have a weak positive correlation with all three groups of childhood trauma examined. The aspect of object relations that appeared most vulnerable to participants in all three groups examined was insecure attachment.



Table 6

*Correlations of the BORI Total Scale and Subscales with Childhood Trauma, Category of Childhood Trauma, and Frequency of Childhood Trauma*

	<u>Bell Object Relations Inventory (BORI)</u>				
	Alienation	Insecure Attachment	Egocentricity	Social Incompetence	Total
Childhood trauma and					
no childhood trauma <sup>a</sup>	.06	.26**	.23**	-.07	.19**
Relational and general					
traumas <sup>b</sup>	.20**	.32**	.24**	.12	.29**
Multiple and single					
childhood traumas <sup>c</sup>	.17*	.23**	.12	.31**	.25**

*Note.* <sup>a</sup> $N_{no\_trauma} = 98$ , <sup>a</sup> $N_{trauma} = 147$ ; <sup>b</sup> $N_{relational} = 38$ , <sup>b</sup> $N_{general} = 103$ ; <sup>c</sup> $N_{single} = 57$ , <sup>c</sup> $N_{multiple} = 90$ ; \* $p < .05$ , \*\* $p < .01$

### **Childhood Trauma and PTSD Symptoms Correlations**

Correlations between the childhood trauma subsamples and both specific PTSD symptoms and overall PTSD symptoms (Table 7) indicate that overall PTSD symptoms had significant positive correlations and small effect sizes among all three subsamples. Individuals with childhood trauma, and individuals with childhood trauma in the relational category both had significantly positive correlations with each of the six PTSD (anxiety, depression, dissociation, sexual abuse trauma index (SATI), sexual problems,

and sleep disturbances) symptoms. Finally, the significant positive correlations found for the PTSD symptoms of dissociation and sexual abuse trauma index between participants with one form of childhood trauma and participants with multiple forms of childhood trauma, indicate that these two PTSD symptoms differ between individuals with a single form of childhood trauma and individuals with multiple forms of childhood trauma.

Table 7

*Correlations of the TSC-40 Total Scale and Subscales with Childhood Trauma, Category of Childhood Trauma, and Frequency of Childhood Trauma*

	<u>Trauma Symptom Checklist-40 (TSC-40)</u>						
	Anxiety	Depression	Dissociation	SATI	Sex. Prob.	Sleep Dist.	Total
Childhood trauma							
and no childhood trauma <sup>a</sup>	.22**	.21**	.14*	.18**	.23**	.17**	.25**
Relational and general traumas <sup>b</sup>	.21**	.25**	.23**	.24**	.26**	.18**	.29**
Multiple and single childhood traumas <sup>c</sup>	.64	.11	.23**	.18*	.13	.39	.17*

*Note.* <sup>a</sup> $N_{no\_trauma} = 98$ , <sup>a</sup> $N_{trauma} = 147$ ; <sup>b</sup> $N_{relational} = 38$ , <sup>b</sup> $N_{general} = 103$ ; <sup>c</sup> $N_{single} = 57$ , <sup>c</sup> $N_{multiple} = 90$ ; \* $p < .05$ , \*\* $p < .01$

## **Childhood Trauma and Adult Interpersonal Functioning and Wellbeing**

The study's first hypothesis stated that adults with childhood trauma experiences would have significantly lower self-esteem scores, poorer object relations, and more PTSD symptoms compared with adults with no childhood trauma experiences. The results (Table 8) revealed no significant self-esteem differences between the two groups. Participants with childhood traumatic experiences reported significantly higher object relations difficulties than participants with no childhood trauma histories;  $F(1, 226) = 8.35, p < .01$ . As indexed by omega squared (Dodd & Schultz, 1973), 3% of the variance in object relations difficulties could be accounted for by childhood trauma. The results further suggested that participants with childhood trauma experiences had significantly higher PTSD symptomatology;  $F(1, 226) = 14.90, p < .001$ . As indexed by omega squared, 6% of the variance in PTSD symptoms could be accounted for by childhood trauma.

Table 8

*Self-esteem, Object relations, and PTSD Differences between Adults with and without Childhood Traumatic Experiences*

	RSES Scores		<i>F</i> (1,240)	BORI Scores ( <i>N</i> =228)		<i>F</i> (1,226)	TSC-40 Scores: ( <i>N</i> = 228)		<i>F</i> (1,226)
	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>	
No Trauma	14.44	3.82	1.31	192.57	25.84	8.35**	13.11	12.51	14.90***
Childhood Trauma	15.04	4.07		202.44	24.55		19.80	12.96	

*Note.* No childhood trauma: RSES, *n* = 95, BORI, *n* = 87, TSC-40, *n* = 90. Childhood trauma: RSES, *n* = 147, BORI, *n* = 141, TSC-40, *n* = 138. \*\**p* < .01, \*\*\**p* < .001.

### **Category of Childhood Trauma and Adult Interpersonal Functioning and Wellbeing**

The study's second hypothesis stated that adults with childhood traumas of a relational nature would have significantly lower self-esteem scores, poorer object relations, and more PTSD symptoms in adulthood compared with childhood traumas of a general nature. The results (Table 9) showed no evidence that childhood trauma and low self-esteem were associated. In addition, participants with relational trauma experiences reported having more object relations difficulties;  $F(1, 133) = 4.70, p < .05$ . As indexed

by omega squared, 3% of the variance in object relations difficulties could be accounted for by childhood trauma. Finally, participants with relational trauma experiences in childhood had significantly higher PTSD symptoms compared to participants with general trauma experiences;  $F(1, 226) = 9.73, p < .01$ . As indexed by omega squared, 6% of the variance in PTSD symptoms could be accounted for by type of childhood trauma.

Table 9

*Self-esteem, Object relations, and PTSD Differences between Adults with General versus Relational Childhood Traumatic Experiences*

	<b>RSES</b>		<b>F</b>	<b>BORI Scores</b>		<b>F</b>	<b>TSC-40</b>		<b>F</b>
	<b>Scores</b>		<b>(1,139)</b>	<b>(N=135)</b>		<b>(1,133)</b>	<b>Scores</b>		<b>(1,226)</b>
	<b>(N=141)</b>						<b>(N=132)</b>		
	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>	
<b>General</b>	14.95	4.06	0.02	199.27	23.33	4.70*	17.06	11.73	9.73**
<b>Trauma</b>									
<b>Relational</b>	15.05	4.09		209.56	27.03		24.50	13.38	
<b>Trauma</b>									

*Note.* General childhood trauma: RSES,  $n = 103$ , BORI,  $n = 99$ , TSC-40,  $n = 96$ .

Relational childhood trauma: RSES,  $n = 38$ , BORI,  $n = 36$ , TSC-40,  $n = 36$ .

\* $p < .05$ , \*\* $p < .01$ .

## **Number of Childhood Traumatic Experiences and Adult Interpersonal Functioning and Wellbeing**

Hypothesis 3 investigated whether adults with multiple (two or more) forms of childhood trauma experiences had significantly lower self-esteem scores, poorer object relations, and more PTSD symptoms compared with adults with a single childhood experience. The results (Table 10) did not indicate differences in self-esteem between participants with single versus multiple forms of childhood trauma experiences.

Significantly higher object relations difficulties were found for participants with multiple forms of childhood traumatic experiences;  $F(1, 139) = 4.99, p < .05$ . As indexed by omega squared, 3% of the variance in object relations difficulties can be accounted for by multiple childhood traumas. The results also indicate that participants with multiple forms of childhood traumas had more PTSD symptoms compared to participants with a single childhood trauma experience;  $F(1, 131) = 9.73, p < .001$ . As indexed by omega squared, 6% of the variance in PTSD symptoms can be accounted for by experiencing multiple forms of childhood traumas.

Table 10

*Self-esteem, Object relations, and PTSD Differences between Adults with One versus Multiple Forms of Childhood Traumatic Experiences*

	RSES Scores (N=147)		F (1,145)	BORI Scores (N=141)		F (1,139)	TSC-40 Scores: (N=138)		F (1,131)
	M	SD		M	SD		M	SD	
Single Trauma	15.18	4.67	0.10	196.75	23.46	4.99*	17.06	11.73	9.73***
Multiple Trauma	14.96	3.67		206.08	24.67		24.50	13.38	

Note. Single childhood trauma: RSES,  $n = 57$ , BORI,  $n = 55$ , TSC-40,  $n = 96$ . Multiple childhood trauma: RSES,  $n = 90$ , BORI,  $n = 86$ , TSC-40,  $n = 36$ . \* $p < .05$ ; \*\*\*  $p < .001$

**Childhood Trauma, Social Support, and Interpersonal Functioning and Wellbeing in Adulthood**

Hypothesis 4 investigated whether social support (i.e. having someone to confide in during childhood trauma experiences) moderated the relationships of childhood trauma with self-esteem, object relations, and PTSD in adulthood. Before building the prediction models, the continuous predictor variable (number of childhood traumatic experiences) was centered. The interaction term was created using social support and the centered

predictor variable. In analyzing the data on social support, the three social support categories of no support ( $n=35$ ), some support ( $n=23$ ), and a lot of support ( $n=30$ ) were re-coded two categories (0= no support, 1= social support). Preliminary analyses revealed no correlations between the individual BORI and TSC-40 subscales and social support; thus, the analyses were conducted by using the overall scale scores.

The data showed no main effects for social support and self-esteem, object relations, and PTSD symptoms (Table 11). No significant interactions were also found between social support and self-esteem, object relations deficits, and PTSD symptoms in adulthood, which suggests that having social support during childhood traumatic experiences did not influence self-esteem;  $\beta = -.16$ ,  $t(84) = .51$ ,  $p = .61$ , object relations functioning;  $\beta = .10$ ,  $t(84) = .33$ ,  $p = .74$ , and psychological wellbeing in adulthood;  $\beta = .25$ ,  $t(83) = .79$ ,  $p = .43$ .



Table 11

*Hierarchical Regressions Predicting Adult Self-esteem, Object relations, and PTSD Scores with Childhood Trauma and Social Support (N=88)*

Step	Variables	$R^2$	$\Delta R^2$	$B$	$SE$	$\beta$	$t$	Sig
<u>Self-esteem:</u>								
Step 1	Childhood trauma	.02	.02	-.77	.74	-.13	-1.04	.31
	Social support			.95	.99	.12	.96	.34
Step 2	Interaction	.02	.00	1.09	2.12	.16	.51	.61
<u>Object relations:</u>								
Step 1	Childhood trauma	.00	.00	-1.52	4.21	-.04	-.36	.72
	Social support			-.06	5.65	-.00	-.01	.99
Step 2	Interaction	.00	.00	3.98	12.11	.10	.33	.74
<u>PTSD symptoms:</u>								
Step 1	Childhood trauma	.00	.00	-1.14	2.18	-.06	-.52	.60
	Social support			-.39	2.95	-.02	-.13	.90
Step 2	Interaction	.01	.00	-.20	2.96	.25	.79	.43

## **Summary of Results**

Results from the present study suggest that participants with childhood trauma, and especially participants with relational traumas and multiple childhood traumas, had significantly poorer object relations and greater PTSD symptoms in adulthood. With a few exceptions, the findings of the present study are consistent with the results from studies from other cultural contexts (Belsky & de Haan, 2011; Felitti et al., 1998; Messman-Moore & Coates, 2007; Polcari et al., 2014; Whiffen & MacIntosh, 2005).

Hypothesis 1 stated that adults with childhood trauma experiences would have significantly lower self-esteem scores, poorer object relations, and more PTSD symptoms compared with adults with no childhood trauma experiences. This hypothesis was supported for object relatedness and PTSD symptomatology. The results showed that participants with childhood trauma had poorer object relations and more PTSD symptoms. The hypothesis concerning self-esteem and childhood trauma was not supported as the study found no evidence for significant differences in self-esteem scores between participants in the two groups.

Hypothesis 2 stated that adults with childhood traumas of a relational nature would have significantly lower self-esteem scores, poorer object relations, and more PTSD symptoms in adulthood compared with adults who had experienced childhood traumas of a general nature. With the exception of self-esteem scores, which were not significantly different between participants in the two groups, this hypothesis was supported. Participants with childhood relational traumas had significantly poorer object relations and more PTSD symptoms in adulthood.

Hypothesis 3 stated that adults with multiple (two or more) childhood traumatic experiences would have significantly lower self-esteem scores, poorer object relations, and more PTSD symptoms compared with adults with a single childhood trauma experience. This hypothesis was supported for quality of object relations and PTSD symptomatology. Participants with childhood relational traumas had significantly poorer object relations and more PTSD symptoms in adulthood. No self-esteem differences were again observed between participants with a single childhood trauma and participants with multiple childhood traumas.

Hypothesis 4 stated that social support (i.e. having someone to confide in during childhood trauma experiences) would moderate the relationship between childhood trauma and self-esteem, object relations, and PTSD in adulthood. This hypothesis was not supported.

## Chapter V

### Discussion

The purpose of the current study was to investigate the long term associations of childhood traumatic experiences with adult self-esteem, quality of object relations, and current PTSD symptomatology in order to guide clinical interventions and advocate for public policies that support mental healthcare interventions in Ghana.

In the present sample, 40% of participants reported no traumatic experiences in childhood, while 23.3% of participants reported a single childhood trauma experience. Participants who reported multiple childhood traumatic experiences comprised 36.7% of the sample. In order of frequency, the death of a family member or close friend (35.4%), an extreme illness or injury in childhood (23.9%), high parental marital conflict (23.1%), emotional abuse (14.7%), neglect (9.8%), physical violence (7.4%), and sexual abuse (5.0%) were the most common childhood traumas reported by the present sample ( $M_{\text{trauma}} = 1.27$ , range : 0 – 6 childhood traumas). Based on findings from the present sample, childhood traumas of a general nature (73%) may be more prominent in community dwelling adults in Accra with demographic variables similar to the present sample.

#### **Association of Childhood Trauma with Adult Self- Esteem**

The results of this study found no evidence for associations between adult self-esteem and childhood traumatic experiences. This finding was consistent among participants with childhood trauma histories irrespective of the frequency of different forms of trauma experienced, or the category (i.e. relational versus general) of trauma experienced. Theoretical assumptions (e.g., Kohut & Wolf, 1978) and clinical experience

(e.g., Finzi-Dottan & Karu, 2006; Kent & Waller, 2000; Messman-Moore & Coates, 2007) both associate poor self-esteem with interpersonal traumatic experiences. Thus, it is likely that the high prevalence rates of childhood trauma in the general category, rather than the relational category lessened the severity of the impact of childhood traumas on individuals' self-esteem.

### **Association of Childhood Trauma with Adult Interpersonal Relatedness**

In line with the existing literature, the current study found evidence of associations between childhood abuse and impairments in interpersonal relationships in adulthood. Participants with childhood trauma histories had significantly higher object relations deficits compared to participants with no childhood trauma histories. Among participants with childhood trauma experiences, participants with childhood traumas of a relational nature and participants with multiple forms of childhood trauma were more impaired in their object relations capacity. This is in line with the theory and clinical studies of attachment (e.g., Bowlby, 1969; Roche et al, 1999; Twomey et al., 2000) which have consistently shown that childhood trauma that falls in the relational category such as emotional abuse, physical abuse, sexual abuse, or neglect impede the normal capacity for attachment with a safe other. Although the relation of the perpetrators of the childhood traumas to participants was not investigated in the present sample, the conformity of findings in the present study with that of the literature on object relations may suggest a similar occurrence in the Ghanaian context.

Associations of the various impairments in object relations and childhood trauma from the present sample revealed insecure attachment, egocentricity, alienation, and

social incompetence were the object relations impairments most associated with childhood trauma in order of frequency. This is consistent with the literature on object relations (Bell, 1995; Bell, Greig, Bryson, & Kaplan, 2001) which shows that insecure attachment is the most common object relations impairment in nonclinical populations. Although Bell (1995) reports that elevations on the BORI alienation subscale are more common among individuals with personality and psychotic disorders and is almost never found with normal populations, participants in the present study, albeit high-functioning adults, included adults with childhood abuse histories which increased risks of having subclinical or clinical levels of psychological symptoms and personality disorder traits. The elevated alienation scores in this nonclinical sample can thus be explained by participants' with the clinical symptom of childhood trauma. Individuals who score high in alienation experience relationships as unsatisfying and have difficulty managing intimacy. In the present sample, individuals with relational trauma in childhood, as well as individuals with multiple forms of childhood traumatic experiences had significantly elevated alienation scores. This suggests that individuals with a single childhood trauma experience in the general trauma category are less susceptible to having the object relations impairment that leads to alienation, and is again commensurate with the global literature on the long term consequences of childhood trauma which shows more negative sequelae for multiple trauma experiences and relational trauma (e.g., Cook et al., 2005; Courtois, 2004; Schore, 2001). Interestingly, findings from the current sample suggest that the object relations impairment that results in shyness and nervousness, difficulty making friends and interacting with members of the opposite sex (social incompetence), is least susceptible to a single form of childhood trauma of either a relational or a general

among participants with multiple forms of childhood traumatic experiences. This suggests that a unique object relations impairment associated with multiple forms of childhood traumatic experiences is an anxiety in, and an avoidance of social interactions.

### **Association of Childhood Trauma with PTSD Symptoms in Adulthood**

Associations of the PTSD symptoms and childhood trauma from the present sample suggest that all six PTSD symptoms (anxiety, depression, dissociation, sexual abuse trauma index [SATI], sexual problems, and sleep disturbances) were positively associated for childhood trauma and childhood traumas in the relational category, with childhood trauma of a relational nature leading to more PTSD symptoms. The findings from this study also indicated that excluding the positive relationship observed for the dissociation and SATI PTSD symptoms and multiple perceived childhood traumas, no relationships exist between multiple childhood traumas and the other PTSD symptoms in adulthood.

Thus, based on the study's results, individuals with multiple forms of childhood traumatic experiences would be more likely to have elevations on only two PTSD symptoms (Dissociation and SATI). An elevation on the SATI symptom for participants with multiple forms of childhood trauma indicated that sexual abuse would be more likely to occur with another form of childhood trauma in community dwelling educated adults between the ages of 21-64 in Accra. This finding is consistent with the literature (e.g. Gould et al., 1994; Kessler et al., 1997; Twomey et al., 1999) showing that sexual abuse is usually reported by individuals with multiple forms of childhood traumatic experiences. The significantly elevated SATI scores observed in the sample makes it

likely that more of the participants in the present study had experienced sexual abuse in childhood than was reported on the CTES.

Analyses from the present study point to significant differences between individuals with and without childhood trauma experiences, individuals with relational and general trauma experiences, and individuals with multiple forms of childhood trauma compared to individuals with a single form of childhood trauma experiences. These findings are consistent with the literature on the long-lasting consequences of childhood trauma on psychiatric symptomatology (e.g., Briere & Runtz, 1988; Elliott, 1994; Vranceanu et al., 2007), and parallel the long- lasting associations of childhood trauma on individuals' object relations/interpersonal functioning. The study's results suggest that community dwelling educated adults in the Accra metropolis with childhood trauma of a relational nature, or with multiple forms may have unaddressed subclinical or even clinical levels of psychiatric symptomatology, and could be functioning at a lower than optimal psychological wellbeing level. Thus, it is likely that such individuals may be impaired in their work, family, social and/or physical health functioning in addition to having impairments in their psychological functioning. Such individuals constitute at risk populations who may need social, psychological, medical, and/or spiritual interventions to improve their holistic functioning.



## **Social Support as a Moderator of Childhood Trauma**

Due to the low number of participants' reporting social support during childhood trauma in the present sample ( $n= 88$ ), the finding that social support did not moderate childhood trauma and adult self-esteem, object relations, and psychological is inconclusive. Some studies from Western cultures have found support for the moderating role of social support in childhood trauma on adult interpersonal and psychological outcomes (e.g., Doyle, 2001; Runtz & Schallow, 1997), while others (Burton, Stice, & Seeley, 2004; Mc Elroy & Hevey, 2014) have found no support for the moderating role of social support in negative outcomes of childhood trauma, and attributed this to different measurements of perceived versus actual support.

With regards to the present sample, the negative finding found for social support in the subsample that reported receiving social support may be explained in a number of ways: Firstly, the most common childhood traumas reported by participants comprised of traumas in the general category (i.e. death of a close friend/family member, and extreme illness/injury in childhood). In addition, the relational trauma that was most experienced by participants was high parental conflict, which is a trauma that is not directly committed against the self. Given the high prevalence of non-relational traumas among participants, these traumas will be widely known by the adults in the child or adolescent's life, making the trauma a collective and shared one for the affected child or adolescent and his/her social support. This is contrasted to the low likelihood of seeking social support for relational traumas due to a fear of retribution or stigmatization for disclosing the trauma, which prevents victims from utilizing social support for experienced relational traumas.

Secondly, the supernatural belief systems in Ghanaian society (e.g., Kyei et al., 2014) may serve as a protective factor against low self-esteem, difficulties in interpersonal relationships, and psychological ill-being for individuals with trauma abuse histories and led to seeking of spiritual interventions rather than social support in times of trauma. Scriptures such as “And we know that all things work together for good to those who love God” (Romans 8: 28a, New King James Version) and “And forgive us our debts, as we forgive our debtors” (Matthew 6:12, New King James Version) may lead victims of trauma to find solace and seek resolution from a higher Power.

Thirdly, it may be that belongingness in a collectivist culture makes social support a ubiquitous commodity for all experiences, good or bad that individuals experience. Thus, the non-significant relationship found in the study may be attributed to the differences in perceived versus actual support that has been reported in the literature.

Finally, social support in the study was conceptualized as having the opportunity to disclose childhood trauma to another. While the literature shows that this element of social support is associated with less adverse health outcomes, as it helps the individual understand the trauma better and decreases autonomic nervous associated with inhibiting thoughts, feelings, and behaviors that arise in response to the trauma (Graham-Bermann, Kulkarni, & Kanukollu, 2011; Pennebaker & Susman, 1988), other elements of social support, such as the availability of others; emotional support; practical support; negative response; and satisfaction with support (Andrews, Brewin, & Rose, 2003; Joseph, Andrews, Williams, & Yule, 1992) , which were not assessed in this study may have provided a fuller understanding of the role of social support in the Ghanaian cultural context.

## **Clinical Implications**

The results from this study suggested that the population of community dwelling adults in Accra with childhood trauma histories had more impairment in their attachment capacities, although the observed impairments were not clinically significant. In regards to PTSD symptoms however, community dwelling adults with childhood traumas, and especially childhood traumas in the general category had more PTSD symptoms that approached clinical significance.

Findings from this sample suggest that community dwelling adults in Accra with perceived childhood traumas are high functioning. Thus, for community dwelling adults with multiple childhood traumas and/or relational traumas in childhood who are not functioning optimally due to the presence of PTSD symptoms, the therapeutic relationship can be used to help clients work through and integrate the dissociated emotions and cognitions associated with the traumatic experience(s) in order to integrate those past experiences and obtain symptom relief.

Although trauma in the general trauma category was associated with less deleterious consequences than trauma in the relational category, childhood traumas that fall in the general trauma category have also been found to be associated with negative outcomes in adulthood in the literature. The negative outcomes associated with parental death for example include mental health problems, traumatic grief, and a greater external locus of control. While the study did not explore the consequences associated with the death of a parent versus the death of a close friend, the DSM-5 (American Psychiatric Association, 2013) includes both losses in the first criterion for PTSD. Given the

prevalence of general traumas in the reported sample, clinicians may need to focus equally on the impacts of losses that arise from both general and relational traumas with individuals exhibiting psychological distress.

### **Limitations and Directions for Future Studies**

The study's limitations included the use of a convenience sample and retrospective recall of childhood trauma to obtain a preliminary understanding of childhood trauma in community dwelling adults in Accra. The sample was representative of higher functioning individuals with higher SES, which precludes generalization of the study's findings to the total community dwelling adult population in urban cities in Ghana. In addition, the heterogeneity of childhood traumas investigated precluded in-depth analyses of the specific relationships between each individual type of childhood trauma and object relations capacity and psychological wellbeing, and these factors will need to be investigated in future studies. Self-esteem for example, is most impacted by emotional childhood abuse (Briere & Runtz, 1989; Finzi-Dottan & Karu, 2006); however the present sample did not have enough power to assess whether participants with only emotional abuse histories differed in their level of self-esteem. It is recommended that future studies explore if different results will be obtained in a different and larger sample.

The present study also investigated associations between childhood trauma and object relations deficits, and PTSD symptoms in adulthood, however the physical outcomes associated with childhood trauma was not investigated. Given that physical outcomes have been shown to be negatively affected by traumatic events (Anda et al. 2006; Felitti et al., 1998) in the literature, it is recommended that culturally-based studies

investigate the long term associations of substantiated versus alleged childhood trauma and physical health outcomes such as psychosomatic complaints (e.g., gastrointestinal problems, migraine headaches), cardiovascular diseases, and type II diabetes with Ghanaian adults.

Although the present study explored the possible moderating role of social support on adult outcomes, the study did not explore the role of other elements of social support or coping strategies – including religious/spiritual beliefs– as buffers between childhood trauma and psychological and interpersonal outcomes in adulthood, which should be explored in further studies with this population. In addition, future studies will need to parse out the impact of relational traumas perpetuated by caretakers or adults known by victims versus relational traumas perpetuated by strangers on adult interpersonal functioning and psychological functioning in this population.

Finally, culture-specific traumas will also need to be investigated in further studies to find out whether these experiences have more detrimental consequences for individuals in this culture. In the present sample, one such trauma reported by participants was going to boarding school in early adolescence. This might have resulted in unresolved grief related to separation and psychological loss of one's parents and home. The long lasting implications of such separations, if any, on adult interpersonal functioning will also need to be explored in further studies. Finally, it is recommended that further studies clarify the role of social support with this population, using participants who have experienced more relational traumas in childhood.

## **Policy Recommendations**

As the first step in creating an awareness of the long lasting consequences of childhood trauma and other adverse experiences to policy makers, policy briefs which use empirical findings from the local culture, and outline why untreated trauma may be detrimental at the individual level, may be directed to the Ministry of Health in Ghana.

Given the limited number of mental health care professionals in the country, and the stigmatization associated with seeking mental health care services (Kyei et al., 2014), it is recommended that social marketing campaigns utilize the popular local soap opera format with storylines of characters seeking professional services for mental health problems (see for example Asmah, Twerefou, & Smith, 2013) to normalize mental health seeking behaviors and educate the public on the range of disorders that mental healthcare professionals treat.

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**309.81 Posttraumatic Stress Disorder**

**Note:** The following criteria apply to adults, adolescents, and children older than 6 years.

- A. Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways:
  - 1. Directly experiencing the traumatic event(s).
  - 2. Witnessing, in person, the event(s) as it occurred to others.
  - 3. Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
  - 4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse).  
**Note:** Criterion A4 does not apply to exposure through electronic media, television, movies, or pictures, unless this exposure is work related.
- B. Presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:
  - 1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s). **Note:** In children older than 6 years, repetitive play may occur in which themes or aspects of the traumatic event(s) are expressed.
  - 2. Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s).  
**Note:** In children, there may be frightening dreams without recognizable content.
  - 3. Dissociative reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings.)  
**Note:** In children, trauma-specific reenactment may occur in play.
  - 4. Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
  - 5. Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
- C. Persistent avoidance of stimuli associated with the traumatic event(s), beginning after the traumatic event(s) occurred, as evidenced by one or both of the following:
  - 1. Avoidance of or efforts to avoid distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).
  - 2. Avoidance of or efforts to avoid external reminders (people, places, conversations, activities, objects, situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).

- D. Negative alterations in cognitions and mood associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
1. Inability to remember an important aspect of the traumatic event(s) (typically due to dissociative amnesia and not to other factors such as head injury, alcohol, or drugs).
  2. Persistent and exaggerated negative beliefs or expectations about oneself, others, or the world (e.g., “I am bad,” “No one can be trusted,” “The world is completely dangerous,” “My whole nervous system is permanently ruined”).
  3. Persistent, distorted cognitions about the cause or consequences of the traumatic event(s) that lead the individual to blame himself/herself or others/
  4. Persistent negative emotional state (e.g., fear, horror, anger, guilt, or shame).
  5. Markedly diminished interest or participation in significant activities.
  6. Feelings of detachment or estrangement from others.
  7. Persistent inability to experience positive emotions (e.g., inability to experience happiness, satisfaction, or loving feelings).
- E. Marked alterations in arousal and reactivity associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
1. Irritable behavior and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects.
  2. Reckless or self-destructive behavior.
  3. Hypervigilance.
  4. Exaggerated startle response.
  5. Problems with concentration.
  6. Sleep disturbance (e.g., difficulty falling or staying asleep or restless sleep).
- F. Duration of the disturbance (Criteria B, C, D, and E) is more than 1 month.
- G. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- H. The disturbance is not attributable to the physiological effects of a substance (e.g., medication, alcohol) or another medical condition.

*Specify whether:*

**With dissociative symptoms:** The individual’s symptoms meet the criteria for posttraumatic stress disorder, and in addition, in response to the stressor, the individual experiences persistent or recurrent symptoms of either of the following:

1. **Depersonalization:** Persistent or recurrent experiences of feeling detached from, and as if one were an outside observer, of, one’s mental processes or body (e.g., feeling as though one were in a dream; feeling a sense of unreality of self or body or of time moving slowly).
2. **Derealization:** Persistent or recurrent experiences of unreality of surroundings (e.g. the world around the individual is experienced as unreal, dreamlike, distant, or distorted).

**Note:** To use this subtype, the dissociative symptoms must not be attributable to the physiological effects of a substance (e.g., blackouts, behavior during alcohol intoxication) or another medical condition (e.g. complex partial seizures).

*Specify if:*

With delayed expression: If the full diagnostic criteria are not met until at least 6 months after the event (although the onset and expression of some symptoms may be immediate).

### **Posttraumatic Stress Disorder for Children 6 years and Younger**

- A. In children 6 years and younger, exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways:
  - 1. Directly experiencing the traumatic event(s).
  - 2. Witnessing, in person, the event(s) as it occurred to others, especially primary caregivers.  
**Note:** Witnessing does not include events that are witnessed only in electronic media, television, movies, or pictures.
  - 3. Learning that the traumatic event(s) occurred to a parent or caregiving figure.
- B. Presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:
  - 1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s). **Note:** Spontaneous and intrusive memories may not necessarily appear distressing and may be expressed as play reenactment.
  - 2. Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s).  
**Note:** In children, there may be frightening dreams without recognizable content.
  - 3. Dissociative reactions (e.g., flashbacks) in which the child feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings.) Such trauma-specific reenactment may occur in play.
  - 4. Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
  - 5. Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
- C. One (or more) of the following symptoms, representing either persistent avoidance of stimuli associated with the traumatic event(s) or negative alterations in cognitions and mood associated with the traumatic event(s), must be present, beginning after the event(s) or worsening after the event(s):  
**Persistent Avoidance of Stimuli**
  - 1. Avoidance of or efforts to avoid activities, places, or physical reminders that arouse recollections of the traumatic event(s).

2. Avoidance of or efforts to avoid people, conversations, or interpersonal situations that arouse recollections of the traumatic event(s).
- Negative Alterations in Cognitions**
3. Substantially increased frequency of negative emotional states (e.g., fear, guilt, sadness, shame, confusion).
  4. Markedly diminished interest or participation in significant activities, including constriction of play.
  5. Socially withdrawn behavior.
  6. Persistent reduction in expression of positive emotions.
- D. Alterations in arousal and reactivity associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
1. Irritable behavior and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects (including extreme temper tantrums).
  2. Hypervigilance.
  3. Exaggerated startle response.
  4. Problems with concentration.
  5. Sleep disturbance (e.g., difficulty falling or staying asleep or restless sleep).
- E. The duration of the disturbance is more than 1 month.
- F. The disturbance causes clinically significant distress or impairment in relationships with parents, siblings, peers, or other caregivers or with school behavior.
- G. The disturbance is not attributable to the physiological effects of a substance (e.g., medication or alcohol) or another medical condition.

*Specify whether:*

**With dissociative symptoms:** The individual's symptoms meet the criteria for posttraumatic stress disorder, and in addition, in response to the stressor, the individual experiences persistent or recurrent symptoms of either of the following:

1. **Depersonalization:** Persistent or recurrent experiences of feeling detached from, and as if one were an outside observer, of, one's mental processes or body (e.g., feeling as though one were in a dream; feeling a sense of unreality of self or body or of time moving slowly).
2. **Derealization:** Persistent or recurrent experiences of unreality of surroundings (e.g. the world around the individual is experienced as unreal, dreamlike, distant, or distorted).

**Note:** To use this subtype, the dissociative symptoms must not be attributable to the physiological effects of a substance (e.g., blackouts, behavior during alcohol intoxication) or another medical condition (e.g. complex partial seizures).

*Specify if:*

With delayed expression: If the full diagnostic criteria are not met until at least 6 months after the event (although the onset and expression of some symptoms may be immediate).

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## Appendix B: Consent Form

### Ghanaian Adults' Wellbeing Survey

You are invited to participate in a doctoral research study that is being conducted by Joana Kyei, M.Phil., who is a student in the Graduate School of Applied and Professional Psychology Department (GSAPP) at Rutgers University, USA under the faculty supervision of Dr. Monica Indart, a licensed clinical psychologist. The purpose of this study is to learn about the wellbeing of Ghanaian adults. Approximately 250 participants between the ages of 21 and 64 will participate in the study. This study will take approximately 30 minutes to complete. The study procedures include completion of a number of questionnaires that include questions about your personality, specific childhood experiences, and any physical symptoms you may be experiencing currently.

One of the risks of participating is having to answer questions that might be upsetting. Should you require counseling due to your participation in this study, please contact Mrs. Nana Yaa Nyarko, a clinical psychologist at the Department of Consumer and Family Sciences, University of Ghana for free counseling. Mrs. Nyarko can be reached at 0244 656877.

Participation in this study is **voluntary** and **anonymous** meaning you can choose not to participate. If you do agree to participate, any information you provide is anonymous, meaning that I will not record any information about you that could identify you, such as your name, date of birth, address, or phone number. Additionally, you may decide to discontinue your participation at any time.

As a token of appreciation for taking time to participate in this study, you will receive a complimentary pen. By completing this survey and returning it, you agree that your responses become part of the overall results reported for this research. If you have questions at any time about the research or the procedures, you may contact Ms. Kyei ([joana.kyei@gmail.com](mailto:joana.kyei@gmail.com)) or Dr. Indart at:

Graduate School of Applied and Professional Psychology  
Rutgers University  
152 Frelinghuysen Road  
Piscataway, NJ 08854, USA  
Tel: +1 732 445 2000  
Email: [mjindart@aol.com](mailto:mjindart@aol.com)

If you have any questions about your rights as a research subject, you may contact the IRB Administrator at:

Rutgers University Institutional Review Board for the Protection of Human Subjects  
Office of Research and Sponsored Programs  
3 Rutgers Plaza  
New Brunswick, NJ 08901-8559, USA  
Tel: +1 848 932 0150  
Email: [humansubjects@orsp.rutgers.edu](mailto:humansubjects@orsp.rutgers.edu)

APPROVED

JUL 24 2013

Approved by the  
Rutgers IRB

EXPIRES

JUL 23 2014

Approved by the  
Rutgers IRB



## Appendix C: IRB Approval

**RUTGERS UNIVERSITY**  
**Office of Research and Sponsored Programs**  
**ASB III, 3 Rutgers Plaza, Cook Campus**  
**New Brunswick, NJ 08901**

July 31, 2013

**P.I. Name:** Kyei  
**Protocol #:** 13-646R

Jane J Kyei  
152 Frelinghuysen Rd  
Piscataway NJ 08854

Dear Jane Kyei:

✓  
( Initial / Amendment / Continuation / Continuation w/ Amendment )

**Protocol Title:** "As the Twig is Bent so the Tree is Inclined: The Influence of Childhood Experiences on Adult Interpersonal Functioning and Well-Being"

This is to advise you that the above-referenced study has been presented to the Institutional Review Board for the Protection of Human Subjects in Research, and the following action was taken subject to the conditions and explanations provided below:

<b>Approval Date:</b>	7/24/2013	<b>Expiration Date:</b>	7/23/2014
<b>Review Type:</b>	Full-Board	<b>Approved # of Subject(s):</b>	250

This approval is based on the assumption that the materials you submitted to the Office of Research and Sponsored Programs (ORSP) contain a complete and accurate description of the ways in which human subjects are involved in your research. The following conditions apply:

- **This Approval-**The research will be conducted according to the most recent version of the protocol that was submitted. **This approval is valid ONLY for the dates listed above;**
- **Reporting-**ORSP must be immediately informed of any injuries to subjects that occur and/or problems that arise, in the course of your research;
- **Modifications-**Any proposed changes **MUST** be submitted to the IRB as an amendment for review and approval prior to implementation;
- **Consent Form(s)-**Each person who signs a consent document will be given a copy of that document, if you are using such documents in your research. The Principal Investigator must retain all signed documents for at least three years after the conclusion of the research;
- **Continuing Review-**You should receive a courtesy e-mail renewal notice for a Request for Continuing Review before the expiration of this project's approval. However, it is **your responsibility** to ensure that an application for continuing review has been submitted to the IRB for review and approval prior to the expiration date to extend the approval period;

**Additional Notes:**  
-Full-Board Approval  
-This protocol involves greater than minimal risk to subjects

**Failure to comply with these conditions will result in withdrawal of this approval.**

Please note that the IRB has the authority to observe, or have a third party observe, the consent process or the research itself. The Federal-wide Assurance (FWA) number for the Rutgers University IRB is FWA00003913; this number may be requested on funding applications or by collaborators.

Respectfully yours,



Acting For--  
Dr. Beverly Tepper, Ph.D.  
Professor  
Chair, Rutgers University Institutional Review Board

cc: Monica Indart

Appendix D: Measures

**Demographic Questionnaire**

*Please circle/fill in the appropriate answer*

---

1. Gender	(a) Male
	(b) Female
2. Age	(a) 21- 34 years
	(b) 35 - 49 years
	(c) 50- 64 years
3. Marital Status	(a) Single/Never married
	(b) Married
	(c) Separated/Divorced
	(d) Widowed
4. Highest Level of Education	(a) High School Equivalent
	(b) Some Higher National Diploma
	(c) Higher National Diploma
	(d) Some College
	(e) College Degree
	(f) Advanced Degree
	(g) Other -----
5. Occupation	(a) Managerial
	(b) Professional (Accountant, Lawyer, Banker, etc.)
	(c) Healthcare
	(d) Education
	(e) Security
	(f) Management Support (secretary, receptionist, etc.)
	(g) Student
	(h) Retired/Unemployed
	(i) Other -----

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### Trauma Symptom Checklist -40

*How often have you experienced each of the following in the **last month?***

Symptom	Never	1	2	Often
	0			3
1. Headaches				
2. Insomnia (finding it hard to fall asleep at night)				
3. Weight Loss (without dieting)				
4. Stomach problems				
5. Sexual problems				
6. Feeling isolated from others				
7. "Flashbacks" (sudden, vivid, distracting memories)				
8. Restless sleep				
9. Low sex drive				
10. Anxiety Attacks				
11. Sexual over activity				
12. Loneliness				
13. Nightmares				
14. "Spacing out" (Going away in your mind)				
15. Sadness				
16. Dizziness				
17. Not feeling satisfied with sex life				
18. Trouble controlling your temper				
19. Waking up early in the morning and can't get back to sleep				
20. Uncontrollable crying				
21. Fear of men				
22. Not feeling rested in the morning				
23. Having sex that you didn't enjoy				
24. Trouble getting along with others				
25. Memory problems				
26. Desire to physically hurt yourself				
27. Fear of women				
28. Waking up in the middle of the night				
29. Bad thoughts or feelings during sex				
30. Passing out				
31. Feeling that things are "unreal"				
32. Unnecessary or over-frequent washing (of parts of, or whole body)				
33. Feelings of inferiority				
34. Feeling tense all the time				
35. Being confused about your sexual feelings				
36. Desire to physically hurt others				
37. Feelings of guilt				
38. Feelings that you are not always in your body				
39. Having trouble breathing				
40. Sexual feelings when you shouldn't have them				

### **Rosenberg Self-Esteem Scale**

*Please record your answer for each item by placing an "x" in the relevant column.*

	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
1. On the whole, I am satisfied with myself.				
2. At times I think I am pretty darn good (proud of who I am).				
3. I feel that I have a number of good qualities.				
4. I am able to do things as well as most other people.				
5. I feel I do have much to be proud of.				
6. I really feel useful at times.				
7. I feel that I am a person of worth or at least equal to others.				
8. I think I have enough respect for myself.				
9. All in all, I am inclined to think that I am not a failure.				
10. I take a positive attitude toward myself.				

### Bells Object Relations Inventory

*Please answer the following questions according to your most recent experience. If a statement tends to be true for you, please check "x" in the Column headed True. If a statement tends to be false for you, please check "x" in the column headed False.*

	True	False
1. I have at least one stable and satisfying relationship.		
2. If someone dislikes me, I will always try harder to be nice to that person.		
3. I would like to be a hermit (solitary person) forever.		
4. I may withdraw and not speak to anyone for weeks at a time.		
5. I usually end up hurting those closest to me.		
6. People treat me more like a child than an adult.		
7. If someone whom I have known well goes away, I may miss that person.		
8. I can deal with disagreements at home without disturbing family relationships		
9. I am extremely sensitive to criticism.		
10. Exercising power over other people is a secret pleasure of mine.		
11. At times I will do almost anything to get my way.		
12. When a person close to me is not giving me his or her full attention, I often feel hurt and rejected.		
13. If I become close with someone and he or she proves untrustworthy, I may hate myself for the way things turned out.		
14. It is hard for me to get close to anyone.		
15. My sex life is satisfactory.		
16. I tend to be what others expect me to be.		
17. No matter how bad a relationship may get, I will hold on to it.		
18. I have no influence on anyone around me.		
19. (Personally) People do not exist when I do not see them.		
20. I've been hurt a lot in life.		
21. I have someone with whom I can share my innermost feelings and who shares such feelings with me.		
22. No matter how hard I try to avoid them, the same difficulties crop up (arise) in my most important relationships.		
23. I yearn (desire) to be completely "at one" with someone.		

	True	False
24. In relationships, I am not satisfied unless I am with the other person all the time.		
25. I am a very good judge of another people (i.e. who they really are).		
26. Relationships with people of the opposite sex always turn out the same way with me.		
27. Others frequently try to humiliate me.		
28. I generally rely on others to make my decisions for me.		
29. I am usually sorry that I trusted someone.		
30. When I am angry with someone close to me, I am able to talk it through (discuss it with them).		
31. Manipulating others is the best way to get what I want.		
32. I often feel nervous when I am around members of the opposite sex.		
33. I often worry that I will be left out of things.		
34. I feel that I have to please everyone or else they might reject me.		
35. I shut myself up and don't see anyone for months at a time.		
36. I am sensitive to possible rejection by important people in my life.		
37. Making friends is not a problem for me.		
38. I do not know how to meet or talk with members of the opposite sex.		
39. When I cannot make someone close to me do what I want, I feel hurt or angry.		
40. It is my fate to lead a lonely life.		
41. People are never honest with each other.		
42. I put a lot into relationships and get a lot back.		
43. I feel shy about meeting or talking with members of the opposite sex.		
44. The most important thing to me in a relationship is to exercise power over the other person.		
45. I believe that a good mother should always please her children.		

### Childhood Trauma Events Scale

The following questions refer to events you may have experienced **prior to the age of 17**. Please circle the answer in the right column that best corresponds to your experience.

1. (a) Prior to the age of 17, did you experience the death of a very close friend or family member?	Yes	No	
(b) If yes, approximately how old were you?	0-10 years	11-16 years	
(c) If yes, how traumatic was this?	not at all	somewhat	extremely
(d) If yes, how much did you confide in others about this traumatic experience at the time?	not at all	somewhat	often
2. (a) Prior to the age of 17, would you assess your parents as having a high conflict marriage (fighting, separate bedrooms, infidelity, etc.)?	Yes	No	
(b) If yes, approximately how old were you?	0-10 years	11-16 years	
(c) If yes, how traumatic was this?	not at all	somewhat	extremely
(d) If yes, how much did you confide in others about this traumatic experience at the time?	not at all	somewhat	often
3. (a) Prior to the age of 17, did you have a traumatic sexual experience (rape, molestation, etc.)?	Yes	No	
(b) If yes, approximately how old were you?	0-10 years	11-16 years	
(c) If yes, how traumatic was this?	not at all	somewhat	extremely
(d) If yes, how much did you confide in others about this traumatic experience	not at all	somewhat	often

at the time?			
4. (a) Prior to the age of 17, were you a victim of physical violence (beating, robbery, assault)?	Yes	No	
	0-10 years	11-16 years	
(b) If yes, approximately how old were you?	not at all	somewhat	extremely
(c) If yes, how traumatic was this?	not at all	somewhat	often
(d) If yes, how much did you confide in others about this traumatic experience at the time?			
5. (a) Prior to the age of 17, did you experience emotional abuse (being told you were good for nothing, useless, etc.)?	Yes	No	
	0-10 years	11-16 years	
(b) If yes, approximately how old were you?	not at all	somewhat	extremely
(c) If yes, how traumatic was this?			
(d) If yes, how much did you confide in others about this traumatic experience at the time?	not at all	somewhat	often
6. (a) Prior to the age of 17, did you experience neglect (not provided for physically, emotionally, or education-wise)?	Yes	No	
	0-10 years	11-16 years	
(b) If yes, approximately how old were you?	not at all	somewhat	extremely
(c) If yes, how traumatic was this?	not at all	somewhat	often
(d) If yes, how much did you confide in others about this traumatic experience at the time?			
7. (a) Prior to the age of 17, were you	Yes	No	



extremely ill or injured?			
(b) If yes, approximately how old were you?	0-10 years not at all	11-16 years somewhat	extremely
(c) If yes, how traumatic was this?			
(d) If yes, how much did you confide in others about this traumatic experience at the time?	not at all	somewhat	often
8. (a) Prior to the age of 17, did you experience any other major upheaval that you think may have shaped your life or personality significantly?	Yes	No	
(b) If yes, what was it? ----- -----	0-10 years not at all	11-16 years somewhat	extremely
(c) If yes, approximately how old were you?	not at all	somewhat	often
(d) If yes, how traumatic was this?			
(e) If yes, how much did you confide in others about this traumatic experience at the time?			

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