

Trauma, Resilience and Spirituality: Neurobiological and Psychophysiological Implications

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### Abstract

Discussed herein is the horrific yet prevalent phenomenon of childhood trauma. Trauma can be defined as an event that may cause psychophysiological or neurobiological damage. Implications of traumatic events are discussed including neurobiological, psychophysiological, emotional, and social issues, as well as, maladaptive behavior development. Resilience is identified as a dynamic process that provides a barrier to traumatic experiences as well as a potential mechanism for reversing the negative neurobiological and psychophysiological effects of trauma. External interventions for developing resilience are mentioned, namely psychotherapy, social engagement and spiritual interventions. Spiritual interventions are identified as social group support found within religious communities as well as the process of renewing one's mind with God's Word.

*Keywords:* psychological, neurobiological, psychoneurological, trauma, childhood trauma, mind renewal, spirituality, religion

### Trauma, Resilience and Spirituality: Neurobiological and Psychophysiological Implications

Childhood trauma is an unfortunately common phenomenon which may result in negative neurobiological adaptations (Brewer-Smyth, & Koenig, 2014; Forkey, 2019; Mahajan, 2018). As children are in vital developmental stages, prolonged exposure to severe trauma can result in cerebral architectural development irregularities and contribute to maladaptive behavior and delayed psychophysiological development (Brewer-Smyth, & Koenig, 2014; Forkey, 2019; Oh et al., 2018). Not all children respond or react to trauma in the same manner. There is evidence suggesting that the dynamic process defined as resilience may be a protective factor against the development of maladaptive neurobiological systems and negative psychological health outcomes (Forkey, 2019; Wong, Hall, Justice, & Hernandez, 2015).

#### **Trauma and Resilience**

Childhood trauma is an all-too-common phenomenon within society. Trauma can be described as any experience that results in physiological, neurobiological or psychological impairment (Brewer-Smyth, & Koenig, 2014; Forkey, 2019; Mahajan, 2018). Research has discovered that children who have suffered from adverse childhood experiences (ACEs) can develop maladaptive neurobiological systems (Brewer-Smyth, & Koenig, 2014). Neurobiological systems that are developmentally maladaptive can result in dysfunction in the hypothalamic-pituitary-adrenal (HPA) axis and within the neuroendocrine stress system (Brewer-Smyth, & Koenig, 2014; Oh et al., 2018; Forkey, 2019). When a child is subjected to prolonged experiences of trauma without any resolve, the neuroendocrine stress system becomes dysregulated which may result in cerebral architectural malformation as well as a greater probability of future negative psychophysiological health outcomes (Forkey, 2019; Oh et al., 2019). As discussed by González, Gutiérrez, Garcell, & Hernández-Montiel (2014) and Wong et

al., (2015), early childhood development is vital and occurs rapidly throughout multiple domains including neurobiological, psychophysiological, emotional and social. Trauma has no limitations and may occur throughout a wide variety of experiences including, but not limited to, sexual, psychological, emotional and physical abuse (Mahajan, 2018).

As disheartening as the phenomenon of childhood trauma is, there is a dynamic process that may be utilized when confronting various traumatic experiences (Wong et al., 2015). That process is identified as resilience (Forkey, 2019; Wong et al., 2015; Brewer-Smyth, & Koenig, 2014). Wong et al. (2015) states that resilience is “the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances.” (p. 128). Forkey (2019) defines resilience as “a dynamic process of positive adaptation to or in spite of significant adversities.” (p. 271). From these definitions, one may infer that resilience is not necessarily the process of eliminating a challenge or significant adversity, but rather thriving despite the adversity and continuing a healthy trajectory of psychological and neurobiological development (Brewer-Smyth, & Koenig, 2014). As discussed by Brewer-Smyth and Koenig (2014), those who are exposed to trauma or adversity do not inevitably develop psychopathologies or neurobiological dysfunction. This suggests that individuals have various levels of resilience. Further research is necessary to better understand how resilience is developed: whether it is inherited, learned or both (Brewer-Smyth, & Koenig, 2014; Wong et al., 2015).

### **Spirituality: A Factor in Trauma and Resilience?**

As discussed, those who have suffered or are suffering from trauma are not inevitably ill-fated to manifest psychopathologies or long-term neurobiological abnormalities (Brewer-Smyth, & Koenig, 2014). Evidence supports the inference that those yielding a high level of resilience have a greater predisposition to mitigate adverse outcomes (Brewer-Smyth, & Koenig, 2014).

Though further research is warranted to better understand resilience, whether it is inherited or learned, there are several proposed interventions to develop extrinsic resilience including psychotherapy, spiritual interventions, and social engagement. Developing one's resilience may contribute to reversing or mitigating neurobiological and psychological abnormalities associated with trauma (Oh et al., 2018). Spiritually speaking, studies have elucidated correlations between spirituality and positive promotion of mental health and overall well-being (Brewer-Smyth, & Koenig, 2014). A spiritual practice that has proven to promote psychophysiological well-being is religious attendance (Brewer-Smyth, & Koenig, 2014). The literature does not reveal any specific denomination or religion; thus, one may infer that any group support could theoretically develop the necessary underlying psychological processes to promote posttraumatic well-being. Further research is necessary to better understand the underlying psychological processes and timing of interventions that promote and foster psychophysiological well-being in the context of spirituality and religion (Brewer-Smyth, & Koenig, 2014).

Although not an empirical scientific perspective, the Word of God reveals a process to develop one's psychophysiological well-being: an essential methodology for spiritual development and a process for developing resilience. That process is the renewal of one's mind with God's Word (Romans 12, AMP). There are multiple places throughout the Word of God that support the benefits of renewing one's mind and taking control of one's cognitions including, but not limited to, Romans 12:2, Colossians 3:2, Philippians 4:8, 2 Corinthians 10:5, Proverbs 23:7, Matthew 6:25, John 4:1 and Ephesians 6:11. The Word of God does not fit within the scientific framework of empirical research, however, the literature does support the inference of developing resilience through psychological mechanisms similar to those referenced in the

aforementioned scriptures. Brewer-Smyth and Koenig (2014) mention this process as “mind renewal”.

### **Conclusion**

Childhood trauma is a horrific phenomenon that is unfortunately prevalent throughout society (Mahajan, 2018). Children who are continuously exposed to trauma for prolonged periods of time have a great risk for neurobiological dysregulation and psychological deficiencies (Brewer-Smyth, & Koenig, 2014; Forkey, 2019; Mahajan, 2018). Neurobiological dysregulation may contribute to neuroendocrine system dysfunction, maladaptive cerebral architectural development and maladaptive development of other vital organ systems (Brewer-Smyth, & Koenig, 2014; Oh et al., 2018; Forkey, 2019; Mahajan, 2018). Dysfunction of neurobiological systems may contribute to developmental delays across multiple domains including psychophysiological, emotional and social (Brewer-Smyth, & Koenig, 2014; Oh et al., 2018; Forkey, 2019; Wong et al., 2015). Although the literature reveals the harsh reality of the impacts of childhood trauma, it also reveals hope. As discussed by Brewer-Smyth and Koenig (2014), not all individuals are symptomatic after a traumatic event. Exposure to trauma does not inevitably result in psychopathologies, cognitive impairment or maladaptive behaviors (Brewer-Smyth, & Koenig, 2014). Individuals who show little to no post traumatic effects may have a higher degree of resilience providing them with the ability to better manage traumatic experiences (Brewer-Smyth, & Koenig, 2014; Forkey, 2019). A number of interventions are suggested for developing resilience such as psychological, social and spiritual. The Word of God, albeit not fit for the scientific empirical framework, does provide an approach that literature supports as a methodology that may promote resilience; Brewer-Smyth and Koenig (2014) reference the approach as “mind renewal”. Given the state of the literature, further research is

still warranted. Little is known concerning whether resilience is intrinsic or extrinsic to an individual, the psychobiological mechanisms associated with trauma and resilience, the outcomes of various interventions and optimal timing of said interventions (Brewer-Smyth, & Koenig, 2014; Mahajan, 2018). Future research should be directed towards these domains to further expand the literature regarding the relationship between trauma, resilience and spirituality.

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