

EDITORIAL

Stress-Related Neuroendocrine and Hypothalamic-Pituitary-Adrenal Axis Alterations in Bereavement/Traumatic Condition

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Bereavement-traumatic loss, is a period or state of sadness or mourning after a loss, especially after the death of some loved one; close relative, sibling or even a friend [1]. This traumatic loss of someone dearest is more stressful and difficult to recover compared from that of bereavement from natural death [2]. The sudden parental loss is one of the most traumatic event that can happen to a child and as a result increases the long-term risk of psychological and physical disorders [3]. In childhood bereavement due to terrorism, the children have been exposed to war related casualties and their associated psychological responses are linked with terrorism like increased emotional and behavioral problems, depression, suicide [4-8], post-traumatic stress disorder (PTSD) [9, 10], alcohol/substance use [11] etc. Preschool children usually do not appreciate death as last stage and irreparable, and may behave as if the departed family member will come to life again [12]. Children above the age of ten years are better able to

understand the inevitability of death, instead they have a tendency to believe that it will not have any effect on them or their family members [13]. The variable effects of parental loss on children and may comprise of heightened behavioral and emotional distress [4], increased adversity of family [14, 15] and increased outcomes of suicide trajectories of negative feelings and depression [5, 8, 16, 17].

Functioning of the hypothalamic-pituitary adrenal (HPA) axis may be altered by high levels of psychosocial stress may alter the [18], a physiological systems that aids in concentrating and maintaining the body's cognitive, metabolic, behavioral and emotional activity in response to perceived dangers [12, 19]. In order to facilitate coping and adaptation, stress responses are activated as a result of chronic stress, which has been hypothesized to put a strain on several physiological systems of the body. Even while these responses are useful, the stress of constant adaptation may cause changes to these regulatory systems. It has been proposed that these psychosocial pressures ultimately lead to the dysregulation of the HPA axis [20]. In most of the bereavement these systems function less efficiently and effectively [20]. It is thought that the stress response is principally coordinated by hormones of the HPA axis [21]. Neuroendocrine alterations in HPA axis activity were also observed previously in about 60% to 80% of depressed patients [22-24].

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Literature suggests that the risk of developing obesity in adults can be increased by physiological stress [25]. Similarly, trauma related stress disorders were also reported to significantly increase the rate of obesity [26]. Especially under stressful situations, it appears likely that certain hormones in circulation and important neuroanatomical circuits control the body's energy homeostasis and psychological.

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