

LONG-TERM CONSEQUENCES OF EARLY NEGLECT AND ABUSE

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SUMMARY

Introduction: Early neglect and abuse are a major societal problem, with negative consequences for the victim. There is clear evidence that early neglect and abuse are related to an increased prevalence of mental health problems. On the other hand there are children that show resilience towards negative influences in early childhood. In this paper I will describe results of empirical studies that reveal the negative consequences of adverse childhood experiences (ACE) as well as studies on resilience.

Methods: Studies relevant for the topic are reviewed.

Results: In many individuals adverse childhood experiences lead to impaired functioning of neural structures that increase the risk for later psychopathology and maladaptive functioning. However, according to one of the major principles of developmental psychopathology we see multifinality of outcome as some individuals show signs of resilience.

Conclusion: Efforts to prevent adverse influences on children early in life are urgently needed to prevent long-lasting negative consequences that go along with subjective suffering and enormous societal costs. More research is needed to understand the mechanisms of vulnerability and resilience.

Key words: early childhood - long-term consequences – neglect – abuse - empiric studies

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INTRODUCTION

Childhood maltreatment is a worldwide phenomenon that affects a huge number of children. In the meta-analysis of Stoltenborgh et al. (2013) the global prevalence of child maltreatment was estimated to be around 25% with significant variations in prevalence rates between countries. Today it is widely acknowledged that childhood maltreatment has deleterious effects on the development of children. Moreover, the negative effects seem to increase over the developmental course (Green et al. 2010).

As there are different definitions of childhood maltreatment it is necessary to start with a distinction between different forms of these negative life events. “Adverse childhood experiences” (ACE) is more and more used as an umbrella term that summarises all different forms of traumatic events in early childhood. In general, ACE can be differentiated between neglect and abuse (Teicher & Samson 2016). Physical neglect can be described as the failure to provide for the child’s basic needs in a variety of important areas like food, clothing, physical safety, supervision and both medical and dental health. Emotional neglect is the failure to provide for the child’s basic emotions. This includes being unresponsive to a child that is under physical or psychological stress, a failure to meet the child’s social needs or to overstrain a child by expecting things that are beyond the capacities of the child (Teicher & Samson 2013). Childhood abuse can be distinguished in the three categories physical, sexual and emotional abuse. Physical abuse is defined as deliberately hurting a child causing injuries such as bruises, broken bones, burns or cuts. Children who are physically abused suffer violence such as being hit, kicked, burned, slapped or having objects thrown at them. The term sexual abuse com-

prises all unwanted sexual activity, where perpetrators use force, make threats or take advantage of a victim that is not able to give consent to this sexual activity. (American Psychological Association 2018)

While physical and sexual abuses are quite easily to define and are widely known, emotional abuse is more unclear to many professionals. This term includes verbal abuse like constantly humiliating or embarrassing a child. Other features of emotional abuse are manipulation of the child, destroying things of value of the child or placing the child in situations that are harmful. This is for example the case if the child is forced to be witness of domestic violence, which has long lasting negative effects on children even if they have not been attacked themselves.

NEUROBIOLOGICAL EFFECTS OF ADVERSE CHILDHOOD EXPERIENCES

Teicher & Samson (2016) give an excellent overview about the long lasting negative consequences of ACE on neurobiological structures. There is a huge body of studies showing that ACE are associated with consistent alterations in brain structures, especially in the limbic system and the frontal cortex. Corpus callosum, anterior cingulate, prefrontal cortex, orbitofrontal cortex and hippocampus are mostly affected. The amygdala, the brain region where affects are processed, shows an enhanced reactivity towards threatening stimuli, and the striatum a diminished response to anticipated reward. This means that children and adolescents who have experienced ACE show a perceptual bias in the way that they detect threats in situations that are neutral to other children or adolescents. In other situations where children and adolescents usually expect a reward, maltreated children are less able to anticipate such a

pleasant outcome of the situation. Taken together this means that the equilibrium between positive and negative situations and expectations is moved to a more negative picture of the world. Consequently, Teicher & Samson (2016) describe these maltreatment-associated brain changes as being adaptive responses to negative childhood experiences.

In spite of these large number of effects on the nervous system it should not be forgotten that the long-term consequences of ACE do also affect other aspects of somatic health. In these individuals, the reactivity to stress is increased, and they show higher rates of inflammatory processes (Danese et al. 2007). More recent findings reveal that the telomeres of individuals that have experienced ACE are shorter in comparison to unaffected individuals (Bürgin et al. 2019). Telomeres are parts of the DNA that protect the end of chromosomes and can be used as markers of the biological age: the shorter the telomeres the shorter the life-expectancy.

Adverse childhood experiences and mental disorders

The consequences of ACE on personality development and psychological well-being are broad. Impaired psychosocial functioning is indicated by failing in education and job, having more family problems and problems with peers or being more often dependent on social welfare. In adolescents with delinquent behaviour ACE are much overrepresented. Childhood maltreatment can be associated with disorders in the perception of one's own body, difficulty in establishing trusts, intimacy or self-confidence, and these impairments can lead to a negative image of oneself (Muller & Lemieux 2000). Other symptoms like low self-esteem, feelings of guilt, sexual difficulties, suicidality or self-harming behaviour can also be consequences of ACE (Mandelli 2015).

In general, ACE are considered unspecific risk factors for many mental disorders. Most psychiatric problems can be worsened by ACE, and the incidence rate of psychiatric problems is higher after childhood maltreatment. Mental problems like depression, anxiety disorders, posttraumatic stress disorders, psychosis, alcohol, cannabis or other drug abuse, eating disorders and personality disorders are more prevalent in individuals that have experienced ACE are (Gibson et al. 2017). While many mental health professionals see sexual and physical abuse as the most influential risk factor for the development of depression, Mandelli and colleagues (2015) demonstrate in their meta-analysis that neglect and emotional abuse have a more severe impact on depression in adults and that these risk factors might be more specific for depressive disorders than sexual or physical abuse. In patients with personality disorders, many of them have a history of adverse childhood experiences, but it has to be acknowledged that there is also a substantial proportion of personality disordered patients with no childhood traumata (Schmeck & Schlüter-Müller 2009).

Interaction of ACE with genetic vulnerability

In the last decade many studies have been conducted showing that ACE is much more harmful for those individuals with a genetic vulnerability to develop a mental disorder. For example, Bornovalova and colleagues (2013) studied the effects of childhood abuse on adult borderline personality disorder. As part of the Minnesota Twin Family Study, they assessed 1382 pairs of twins. Age at first assessment was 11-17 years, age at follow up 24.9 years. Even with the use of very sophisticated statistical methods the authors were not able to confirm a causal effect of childhood abuse on borderline personality disorder traits. Common genetic influences that overlap with internalising and externalising disorders explain the association between childhood abuse and borderline personality disorder traits. This means, that interactions of genes with environmental influences are necessary to change a vulnerability into a disease. Elski et al. (2012) investigated the aetiology of borderline personality disorders in a sample of 1116 pairs of twins followed from birth to the age of 12 years. Borderline personality disorder related characteristics that were assessed at the age of 12 were highly heritable, and could be more often found in children with a history of poorer cognitive functions, impulsivity and increased behavioural and emotional problems at age 5 years. Maltreatment in childhood also predicted borderline personality traits in these 12 year old children. However, this association was much stronger for maltreated children with a family history of psychiatric illness. The relative risk of showing extreme signs of borderline personality traits was 13.4 times higher in those children with a positive family history of mental problems and a history of maltreatment. Those with a positive family history of mental problems but who didn't experience maltreatment had a relative risk of 2.5 to develop borderline personality traits. Those with no family history of mental disorders but with experiences of maltreatment had a 2.15 times higher risk to develop severe borderline personality traits. These results demonstrate impressively that negative childhood experiences are not the only and most important factor to explain the development of a severe personality disorder.

RESILIENCE

Resilience can be described as an individual's ability to successfully cope with adversity or to overcome negative experiences with competent psychosocial functioning (Cicchetti & Rogosch 2012). The study of resilience can be seen as a paradigmatic shift in respect to the effects of negative childhood experiences. While it is very clear that many children experience negative effects on their development in later life, some children are able to overcome even severe negative experiences in childhood. Many studies have demonstrated that special gene variants may serve as protective factors against the development of psychopathology in individuals who

have a history of childhood maltreatment. One of the first of these studies was conducted by Caspi and colleagues (2002) who could show that individuals who carry the long allele of the MAOA-gene show much less conduct disordered behaviour after maltreatment than comparable subjects who carry the short allele of this gene. In respect to the development of depressive disorders the same research group could show, that the effect of live stress on the development of depressive disorders is moderated by a polymorphism in the serotonin transporter (5-HTT) gene (Caspi et al. 2003)

In their study on interactions of genes with environmental influences, the research group of Wilson et al. (2012) could demonstrate that childhood abuse was associated with a higher percentage of cases with borderline personality disorder only in those individuals who are carriers of the polymorphism AA/AG of the enzyme tryptophan hydroxylase (TPH1).

All these studies yield evidence for the fact that negative adverse events have the strongest impact on children with a special vulnerability to develop mental disorders. In this way ACE can be seen as non-specific risk factors that increase the probability of developing a severe psychiatric problem. Which kind of disorder this will be, this depends on the specific vulnerability of the individual.

CONCLUSION

Efforts to prevent adverse influences on children early in life are urgently needed to prevent long-lasting negative consequences that go along with subjective suffering and enormous societal costs. More research is needed to understand the mechanisms of vulnerability and resilience.

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