

Relationship between violence in childhood and self-regulation in adolescence

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Abstract - This paper examines the association between childhood violence and the self-regulatory capacities during adolescent period. This relationship was examined with the help of theories such as The General Theory of Crime by Gottfredson and Hirschi, Mithaug's Self Regulation theory. Further, ABCD Model that specifically identifies the direct influence of parental behavior on children. Hence suggesting that parents play a pivotal role in providing a safe and secure environment during the development of children such that a positive impact is observed during the adolescent age. This was proven with the help of several studies including meta-analysis, natural experiment that justify the research hypothesis. Lack of self-regulatory skills is measured with the abnormalities in adolescent behavior such as drug abuse, excessive alcohol consumption. Furthermore, this paper also supports the claim with the help of biological evidence that plays a role in influencing self-regulation capacity.

keywords - violence, childhood, self-regulation, self control

Introduction

A relatively new and important area in psychological research is self regulation. Self Regulation is an interaction of personal, behavioral, and environmental triadic processes when viewed through the social cognitive lens. It is the knowledge and individual's rational decision to manage oneself in relevant contexts including environmental contingencies. The presence of this skill depends on one's beliefs and desire and hence it varies from individual to individual. Self regulation refers to development of personal thoughts, feelings and actions that are generated mindfully in order to attain personal goals. Since the personal, environmental and behavioral factors do not remain unchanged, adjustments to our self regulation are made; this justifies the cyclical nature of Self regulation. The cyclic nature is because of the our current efforts or decisions are modified by our previous experiences or learnings and hence the cycle of modification of our beliefs and thoughts take place repetitively, simultaneously adjusting the self regulation capacity. Self regulation involves triadic processes that contribute in the fulfilment of personal goals. Through the social-cognitive lens self regulation is an interaction of behavioral, personal and environmental triadic processes. These are Behavioral self-regulation, which involves self observation and moulding performances accordingly. Environmental self regulation is when observations of environmental conditions are made and its outcomes are adjusted. Covert self regulation is the observation of cognitive and affective states and adjusting them accordingly. The environmental and personal processes of triadic feedback loop systems interact bidirectionally in naturalistic settings. People who resist the use of social and physical environmental resources are more likely to be less efficient at regulating their lives. (Boekaerts et al., 1999).

Discussion

Social and physical environment is a resource for behavioral performance. One such physical environment analysed here is the violent environment, hence it is a resource for the performance and the self regulation of an individual. In order to study the self regulation capacity of an individual several factors could be measured such as the performance of crime or violence, alcoholism, cigarette smoking, drug addiction. Millions of children are witnesses or victims of violence at multiple scenarios such as at home, school, community, virtual platforms. Huston and colleagues estimated that an average 18 year old adolescent will have viewed 200,000 acts of violence on tv. An accelerated increase in the percentage of juvenile violence is noticed. Hence it is important to study the effect of childhood violence on an adolescent. The regulation capacities decrease across adolescence, but little is known about the social and environmental factors that affect this construct. One such factor that reduces self regulation is the exposure to violence in childhood. For children primary support for survival comes from the nuclear family. However, when this environment is made vulnerable for the children the impact on them comes out to be fairly negative. Children are most frequently coerced, degraded, and exposed to violence. (Perry, 2001)

"The home is the most violent place in America (Straus, 1974). In 1995, the FBI reported that 27% of all violent crime involves family on family violence, 48% involved acquaintances with the violence often occurring in the home (National Incident-Based Reporting System, Uniform Crime Reporting Program, 1999). Children are often the witnesses to, or victims of, these violent crimes." (Perry, 2001)

The high statistical value of childhood violence could be a possible extended reason for adolescents' low self regulation which further dives into several other issues such as violence, drug addiction and others. Further, if not physical violence but media violence sourced through television channels, video games, films, series has shown that it increases aggression and

antisocial behavior which is a later product after an imbalance in the self regulation is created. Violence could be further witnesses in communities, schools which also leads to changes in self regulation capacity. Childhood violence in the form of emotional abuse in verbal form, family violence- relational escalations in which one or more family members engage in verbal or physical violence (Willems, Jian-Bin, Bartels 2018- 11) , emotional abuse through child neglect performed by parents, physical abuse, and other experiences with maltreatment in childhood is linked with cognitive harm. The cognitive harm is in the form of hindrance in emotional and behavioral development , interference in peer relations , increasing anti-social behavior, and the development of lower self -control, increasing delinquency, and peer rejection. As a result of the mal treatments and limited parental care relationships , the adolescents are more prone to be highly impulsive and unable to regulate their emotions. (Chapple, Constance L, Tyler, Kimberly A, Bersani, Bianca E 2005).

Self regulation and self control

Being a victim or a witness of violence at an early age has led children in an improper control of their emotions , thoughts , and actions. Regulation of certain desires becomes hard for them and hence there is a high likelihood of their involvement in drug usage, addiction, rape, violence. One such theory suggests that poor self regulatory behavior in the form of high impulsivity can lead to poor self control. Witnessing violence at a young age makes children more impulsive , even during normal circumstances, and through this they can barely control themselves not only under traumatic but sometimes also normal circumstances.

According to Gottfredson and Hirschi self control is the “differential tendency of people to avoid criminal acts regardless of the circumstances in which they find themselves.” Whereas self regulation is overall control over oneself which includes impulsivity, diet, sexual desires, introversion, aggression. Self regulation refers to a goal-directed behavior, but self control directly refers to conscious impulse control. One major difference that is significantly recognised is that self control is deliberate and under conscious control however, self regulation is non-voluntary . Self regulation can be applied to many concepts such as -emotional regulation, regulation of thoughts and prejudices, regulation over diet which affects appetite behaviors. (Willems, Jian-Bin, Bartels 2018-11)

Self regulation of adolescence is studied in this paper because those who can regulate their behavior achieve better in school. So this establishes a link between self regulation and achievement which could be a possible factor for schools to consider while focusing on the development of the students. Self regulation in children could be measured using three factors- motivation to learn, use of appropriate strategies, and metacognitive skills. (Boekaerts et al., 1999) A self regulated adolescent can be referred to as a learner who is metacognitive, motivated to learn and strategic. Metacognitive refers to the ability to interact in a learning situation. Motivation is when the students perform challenging tasks instead of giving up on them. It also refers to the positive perspective through which they tackle failures. They do this by persisting in their efforts using effective strategies in order to accomplish their goals and achieve success. Since most effective self regulatory strategies include anticipation, concentration, effort, and appropriate self reflection , it is only used when the goal is valued highly by the individual. When a goal is valued as significant , the individual is more likely to be an ineffective self regulator. (Boekaerts et al., 1999)

By being strategic they employ the best and suitable technique appropriately for completing the challenging task. Students can be effective or ineffective in self regulating themselves and this is determined by the quality and quantity of self regulatory processes. Effective processes are identified through interviews with experts , empirical evidence, clinical studies suffering through self-regulatory dysfunctions.

The behavior of a highly self-regulated individual is different from that of an individual with poor self-regulation. Low self regulatory skill is associated with a surge of personal problems. Researchers have gathered evidence for students who lack regulatory skills in regard to the academics performing poorly. (Zimmerman, 1989). Other ways through which self regulation could be measured is through the intake of improper diet , failure to take medicines regularly, regulation of diseases -for example people who lack the ability to self- regulate display higher levels of symptoms and are hospitalised more frequently. Female adolescents are undergoing a prevailing problem of managing their weight which results in binge-eating, anorexia and bulimia. The same way , male adolescents misguidedly regulate efforts of building muscles and a stronger body has often led to consumption of steroids and drugs . Adolescents are prone to diseases because of the lack of self regulatory skill and behavior such as binge drinking of alcohol, performing unprotected sex. In severe cases, low self regulatory skills and poor impulse control has led to crimes and uncontrolled aggression. Researchers question the nature and causes of self -regulatory dysfunctions. From a social cognitive perspective, researchers say that self regulatory dysfunction is because of the poor forethought and performance control strategies. (Boekaerts et al., 1999)

Theoretical explanation of self-regulation

Social cognitive views suggest that there is a considerable role of socialising agents such as parents , teachers and peers in the development of self regulation. During childhood, children rely heavily on these social factors in order to acquire required skills. Researchers consider regulation as a dynamic concept that varies across different concepts. This makes the researchers question the validity of the self regulation assessment. Different theories are developed in order to investigate the role of self regulation in varying concepts.

According to Zimmerman self regulation is a part of a general social cognitive theory of behavior. He argues that it is self -directed and feedback controlled . The next theory represents the personality perspective on self regulation. Through the social cognitive perspective, the self regulation process is divided into three cyclical phases such as forethought, performance

(volitional behavior), and self reflection process. Forethought is when an individual is influenced and provokes them to act a certain way. Performance involves processes that occur during motoric efforts and it influences our attention and action. Self reflection occurs after the action takes place. The process of responding to the action is self reflection. This is a cyclic process hence, one self reflection can affect forethought regarding the subsequent motoric efforts. This way the self-regulatory cycle is completed.

Another theory by Mithaug- 'Mithaug's Self Regulation theory' suggests that people make efficient adjustments to maximise personal goal attainment from their environment. This theory works parallel to cognitive, behavioral, cognitive-behavioral models of adjustments. It further details how individual undergo problem solving and solution-doing mechanisms that lead to such personal gains. Hence it helps in making predictions between self regulated gain and the goal attainment effort. In addition, it also states how concepts such as competence, intelligence, self-determination and innovation are possible logical factors that affect self regulation. Researchers tend to use the term "self regulation" interchangeably with "self control".

Language

One such model that explains the role of language, on the development of poor self regulation among children is the ABCD Model-The researchers say that there are two essential, interrelated factors in the behavior of parents that affect the optimal development of their children. Hence, if any factors are not appropriately fulfilled by the parents, then there is a high likelihood that the child won't develop to the fullest potential in a positive manner. These two factors are as follows-sensitive and responsive parenting which develops a secure environment for the child. This way the child is not vulnerable to traumatic experiences with their parents. This in turn will allow them to respond to normal situations in a more controlled manner in the future than those who had a traumatic experience with their parents. Second is, the appropriate use of language in relation to internal states and specifically to affect. Verbal violence by parents could hamper the development of a child. Though its effect might not be seen in childhood itself, verbal violence can affect the control and regulation of the child in the near future. Further, regulation skills in a child is developed because of the result of new neural integrations that develop because of parent child interactions. The parent is not able to assist the child in developing internalised self control or any other form of emotional expression. The preschool-parent attachment relationship is influenced by earlier parental-(i)child experiences including traumatic experiences that include family violence and (ii) effects associated with the parent.

Violence

It is important to understand the meaning of violence before investigating its relationship with the self regulation capacities in adolescents. Family Violence- Family violence is defined as relational escalations in which family members usually one or more family members engage in verbal or physical violence. Those exposed to family violence exhibit vulnerability in reduced physical, mental, and social well-being. In particular, it is necessary to look at the negative effect of family violence on adolescents as it not only hinders the adolescents' current well being but also their well being as adults which would further create an imbalance in their future children's well being. Family violence could be a frequent destructive conflict including overt aggression within family which can be harmful. Family Violence increases emotional stress in adolescents, which could lead to behavioral, physiological, and cognitive dysregulation and lower self-control. Furthermore, family violence is a powerful predictor of sleep problems. Many studies conducted suggest that family violence can predict the presence of harsh discipline and lesser parental warmth and acceptance. This results in the adolescents' lack of ability in regulating their impulses. Parental relationships that include family violence tend to have lower parent-child relationship quality and lower sibling relationship quality.

Further to the abstract knowledge about the effect of violence on behavior, researchers have investigated the biological effect of violence on the human body. Environment and genes- In the scientific community, it is believed that the environment affects the expression of genes. It also affects the neural circuitry of the developing brain. Conditions of life that are attached with depressed social problems (which includes the impact of family violence) modifies the growth and differentiation of the central nervous system. A study was conducted by Reiss and his colleagues where they researched the effect of shared and nonshared environments on psychological development in siblings. The shared environment acts as a control as the siblings will have the same socioeconomic and cultural factors, the same parents, the same community, religion etc. whereas the non-shared environment is where there is a change in environment for each sibling. Reiss used the following groupings: monozygotic twins who share the same genetic code, genetically unrelated step-siblings who shared the same environment, and (iii) twins raised apart who had the same genetic characteristics, but not the same shared environment. The researcher inferred that parents matter the most during childhood for the development of children. This was done using a heritability/environment equation-Falconer's formula= $H^2=2(r(MZ)-r(DZ))$. This measures the effect of shared environment on similarity of siblings due to the shared aspects of the environment in which they were raised in. The research on adolescent development showed that genetic and shared environment of siblings played a major role in uniquely changing each sibling's psychological attributes. The authors concluded that "the nonshared factors had most influence on most domains of adolescent functioning, and that the psychoanalytic perspective"

In addition, further studies have shown that children who received a comfortable and warm attitude from their parents, especially mothers, were less likely to have behavioral problems and had more self-esteem. On the other hand, children who were harshly punished were more likely to experience more aggression towards themselves and others. Recent research suggest that traumatic childhood experiences changes the brain structure and functioning. This makes an individual react to non-traumatic event events as if they were constrained in the same past traumatic experience. The memory of the same past traumatic experience is presumably activated due to which they react in accordance to their experience with their past traumatic incident. Researchers have found statistical evidence for the gene-environment interactions. The social

environment that includes safety, and nurturance. The environment can lead to a shift in the epigenetic variation and can also alter neurodevelopment and the network of biological systems that interact with the brain.

Physical effects

Research states that adolescents evince a more vigorous reaction in the amygdala, a part of the brain that plays a major role in responding to threat, than do children or adults in response to negative stimuli. Exposure to stress when witnessing a violent or traumatic experience leads to reorganisation of the hypothalamic–pituitary–adrenal axis. As the adolescent age is marked by the development of the prefrontal cortex- a part that subserves multiple aspects of the self-regulation capacities-, exposure to violence can affect its development and hence affect the self-regulatory skills of an adolescent. High levels of stress through maltreatment and violence are associated with lower executive functioning because of the decrease in volume of the prefrontal cortex. Though it is stated that self-regulatory skills and the self-control decrease across adolescence, it is not the same for young adults. Young adults are able to comprehend the situations efficiently and hence have a higher control over their emotions and actions compared to adolescents.

As threat activates the brain's stress-response neurobiology, it can affect the brain development by altering neurogenesis, migration, synaptogenesis, and neurochemical differentiation. The brain development leads to certain permanent changes after the multiple rehearsals of the activation of the same neural connections. These changes include altering synaptic number and microarchitecture, dendritic density, and the expression of a host of important structural and functional cellular constituents such as enzymes or neurotransmitter receptors. These modifications lead to functional changes in emotional, behavioral and cognitive functioning.

Repeated stress that is sourced from traumatic experiences including violence inhibits the development of neurons in the dentate gyrus (part of the hippocampus) and atrophy of dendrites in the CA3 region of the hippocampus. Recent studies have shown a dysregulated, sensitized stress response neurobiology in children and adolescents following exposure to trauma or violence. The employment of newer methods for research demonstrated altered EEG findings in abused children suggesting hippocampus/limbic and cortical abnormalities.

A meta-analysis investigated the effect of violence on a cross cultural sample of children. The meta-analysis considered 28 studies with 25,000 participants in order to investigate the relationship between family violence and self control. The variable - family violence included several factors such as measures of severe punishment, slapping, hitting, physical, threats, verbal fights within the family, fierce arguments and criticising family members, expressive anger. Overall, it included family violence, marital violence, and parent-child violence. Self control included measures of self regulation, effortful control and perseverance. 25 out of the 28 studies reported on independent studies, counting 143 effect sizes and a total sample size of $N=26,214$. These studies were taken from credible sources such as Journal of Family Studies, Journal of Youth and Adolescence and Journal of Crime and Delinquency. The studies were sourced from 20 different journals. These studies were published between 1990 to 2017 and are hence relevant to validate the relationship between family violence and adolescents' self regulation of the current generation. Though most of them were conducted in the USA, some were conducted in Asia and Europe. 20 studies were conducted in the USA, 2 were conducted in HongKong and the rest 6 were each conducted in Australia, Germany, Israel, South Korea, Switzerland and the UK.

This makes the meta-analysis high on generalisability as the cultural bias is fairly considered; this way the studies could be an accurate representation of the population and increases the reliability of the results. A wide range of adolescents was considered ranging between 10.00 to 21.70 years (Mean-13.41 years) which allows the results to be applicable on major population of the adolescents from all around the globe. Most studies outlined cross-sectional associations (26 studies, 104 effect sizes), with 5 studies (39 effect sizes) reporting longitudinal associations from family violence to self-control. The researchers examined the association between family violence and adolescence.

Although 28 studies were considered, only 3 of them reported longitudinal associations between the two variables- self control and family violence. Some researchers believe that three studies are still sufficient to meta-analyze the relationship however, the estimates become weaker as the number of studies are below 5. The findings reveal that family violence and self control in adolescents are small to moderately, negatively associated with $r = -0.191$. This shows that family violence and self control correlate with each other.

More family violence is associated with lower self control in adolescents. Researchers conducted a follow-up comparison. When the age was centered at 10 years, the analyses relating age with family violence and self control had a vital effect. These statistical values suggest that the magnitude of this association decreases as the adolescent grows older. This finding suggests that adolescents gradually become self-sustained individuals over the course of their adolescent age where they were initially dependent on their parents.

In addition, researchers also calculated the effect of time lag on the association between family violence and self control. They found a significant effect. This result shows that longer the time in-between measurements- family violence and self control, the smaller the effect size. This finding suggests that the longer time lag between the two variables fades away the direct effect of family violence on self control in adolescents.

Another study that measures the differing self regulation skills of children from two schools providing two different types of environment- low risk environment and high risk environment is chosen. This study explains the effect of violence present in school or community among the peers on the children. 90 children of both sexes between age 6 -11 were chosen. They were attending the first year of the General basic Education from the LaDelfina School. 30 seven year old children of both sexes were chosen. They were attending second year of the General Basic Education from Maria Auxiliadora school. Both of these schools are located in Argentina. The two groups were chosen because they were considered at risk as they belonged to poor families.

The parents of the students from La Defina school had severe emotional and social problems. The neighbourhood of these students has a high rate of unemployment, poor financial conditions, emotional and family problems. Children from both groups suffer abuse in a dangerous environment and abandonment.

Factor Analysis of Argentine Questionnaire on Children's Perception of Relationships with Parents (N=1421) showed that there were 5 different relationships: Acceptance (higher in relation to mothers than fathers), Normal or Acceptable Control (same for both parents), 3) Strict Control, non-pathological but less accepted (higher for mothers than fathers), and Extreme Autonomy (same for both parents). The Argentine version of Kerns' Scale of Security in Attachment was a self-report item that gathered children's perception about the security in their parent-child relationships. The results from the questionnaire showed that the coefficients ranged from 0.64 to 0.93 for attachment to the mother and 0.81 to 0.88 to the father. For a sub-sample of children aged 7-8 years Cronbach alphas for Companionship, Conflict and Help / aid were .75, .72, and .70 respectively, however in the case of Security and Closeness they were .55 and .59, respectively. This is assumed to be because of the small age of the participants.

Guide for Behavior Observation in children (Ison & Fachinelli, 1993). This guide evaluates behavioral disorders in children and explores nine factors such as: physical and verbal aggression, negativism, transgression, impulsiveness, hyperactivity, attention deficit, self aggression, inhibition, and child acceptance by his / her peers.

In order to study the validity of the construct, the values obtained in the various sub scales of the Guide by two groups of children: with and without behavior problems, were compared.

Certain factors were analysed using statistical methods to study the Parental style relationships, attachment dimensions, quality of friendship, self-control, and behavioral disorders, in children at risk and not at risk. Results for the comparison between the children at risk and not at risk as to perception of relationships with their parents and attachment showed that there were two significant differences between the two groups. While the researchers were observing the univariate analysis of variance, they found that children at risk perceived less acceptance, and more Pathological Control and extreme autonomy. Further, children at risk had lower significant mother and father reliance. When the social measure was considered, children at risk showed less companionship, Help/Aid, and Conflict. The comparison between children at risk and those not at risk in self control and disruptive behavior. Children who were at risk made more mistakes in commands with more incorrect answers. Certain qualities such as physical and / or spoken aggression, negativism, transgression, impulsiveness, hyperactivity, attention deficit and self-aggression were more evident in the children from risk school.

A child's engagement in social circumstances is highly dependent on the early child parental interactions that happened in the childhood. When the parental interactions are not healthy or adequate, it sets the ground for problematic relationships for the children in the future. Children who are at risk perceive a parental style that is more punishing than persistent. Also, children at risk are less likely to make permanent relationships because of the limited tendency of sharing trust and dependence with the partners. Although the children in sample were not fully adolescents, the effect could be generalised on teenagers as a wide range of ages was chosen in the sample.

The effect of family violence in a nuclear family, where the relationships are more likely to be stronger, on the child's self control capacities was investigated. The role of mother's violent images on the child was deeply observed as a child has a stronger bonding with their mothers in most of the cases. Thus, a traumatic experience of violence with a person who the child is deeply connected to has a higher connection in bringing a significant impact on the child.

The data for this study was derived from the Children of the National Longitudinal Survey of Youth (NLSY-Child). The NLSY79 Child sample includes a cross section of children born to a nationally representative sample of women. The exogenous variables were measured in 1988 and endogenous variables such as violence and peer rejection were measured in 2000 and 1996 respectively. NLSY-Child HOME instrument includes measure of corporal punishment which was used to assess the maltreatment faced by children. One measure of corporal punishment, "Did you have to spank your child in the last week," as a rough measure for physical abuse. This was measured as 0 is no and 1 is yes. Approximately 65% parents spanked their children in the last week. The measures of self control of children of age 11-13 was taken from 1996 NLSY-Child assessment. Their mothers of the children were assessed on a series of attitudinal and behavioral measures of problem behavior and self-control. The 11 items in the BPI that measured self-control were entered into a principal components factor analysis with varimax rotation. After the analysis, one factor emerged. The 7 items that had factor loading scores higher than .45 (Tabachnick & Fidell, 1997, p. 677) comprised the self-control scale and measured impulsivity, insensitivity to others, and incorrigibility. .77 was alpha reliability of this scale. The mean for self-control among the children was 17.9, with a range of 7 to 21, demonstrating that the sample had relatively high levels of self-control.

Another dependent variable measured was violence. Violence was measured by a two-item composite variable in which the youth were asked whether they had "got in a school/work fight" and "hit or threatened to hit another person." in the past year. Responses were coded such that a 0 = no and 1 = yes. The range of violence is 0 to 2 with a mean of .438, demonstrating that only 44% of youths in the sample had been engaged in violence in the past year. Researchers predicted adolescent violence by self control ($\beta = -.14$, $p = .000$). Furthermore, the model predicted that boys and younger youths were more likely to be violent than girls and older youths ($\beta = .10$, $p = .002$; $\beta = -.11$; $p = .001$ respectively).

Another such study that further validates the role of parents' gender on the greater influence on the child's self control and self regulatory capacities was chosen. This study investigates the relationship between mothers and their respective children. In addition, it also discusses the child's ability to cope with their emotions (this could be a factor of self-regulation). Coping with emotions is bringing balance to one's emotional state and hence this study implicitly measures a child's emotional regulation. 60 five year olds were chosen for this longitudinal study. The assessment tested the children's patience and tolerance towards frustration. Out of all toys, one was a wrapped surprise gift -covered by a scarf- was put in the centre of the room. The mother asked their respective children to wait before opening the surprise gift. During this 13 minute waiting period, mothers completed a form that measured a child's self control in a parent-child conflict. The findings show that the security

ratings and attachment classifications to emotional openness was approximately $0.50p < 0.001$. The children's attachment behaviour upon reunion was associated (between 0.40 and 0.50, $p < .001$) to their ability to cope during the 13 minute long waiting task. This shows that children who had higher security were able to organize themselves better. These findings show that the ability to cope with frustration during the waiting period was associated with the quality of children's attachment to their mothers.

A meta-analysis of 114 studies was done to examine the effect of childhood exposure to violence. The direct victimisation or physical witness of violence led to post traumatic stress in children. This stress further leads to long term effects on the neural development of the brain that are possible reasons for the problematic behaviors during adolescence. Further, it leads to Inflammation, stress reactivity, autoimmune disorders, cardiovascular disease, depression, antisocial behavior and lastly substance abuse. A few of the listed diseases are a result of low self regulation of the adolescent. Hence the quality of parenting is a major determinant of their child's self regulatory behavior in adolescence. Researchers define family as the biological parents who carry their child's genes. "The environmental family, that is, the biological and nonbiological relatives or cohabitants with whom the child lives; and the caretaking family, who may or may not overlap with the above individuals and may or may not live with the child" (Weissman, 2016). The provision of secure, safe and non-violent behaviors are key risk and protective factors for children's MEB functioning which further helps the child develop his or hers self regulatory skills, coping strategies, and deal with stressful events.

Families that show aggressive behaviors are also another reason for a child's poor academic performance, delinquency, violent behavior, depression, and substance use.

Gender differences

It is considered that the female brain is highly sensitive when compared to that of male. Hence, the effect of childhood violence on female adolescents should have a much severe impact on their self-regulatory skills when compared to that of the male adolescents. A study with a specific target of female children was chosen in order to see the effect. Girls who experiences challenges such as family conflict and violence before their puberty undergo an accelerated brain development because of the exposure to threat. Neuroimaging has shown that those who have experienced violence and have regulated fear have an accelerated brain development as shown by the connection between the cortical and subcortical brain structures which has an impact on emotional regulation. The stress from traumatic experience results in molecular and cellular indications of biological aging including telomere length and epigenetic age. Genetic, environmental, neurobiological, and behavioral factors play a role in an individual's response to situations, especially those including stress and adversity. Neural mechanisms such as cortical sensory processing capacity plus the ability of the prefrontal cortex to filter emotional stimuli deduce the differences in responses in risky environments.

Conclusion

Childhood violence leads to biological and structural changes in the brain that is associated with the poor self-regulated behavior in adolescents. Parenting is the decisive factor that defines if the youth will perform crimes it is important that parents provide supervised settings to their children where they are punished for inappropriate or bad behaviors, provide nurturance, as it will allow the youths to withstand the temptations to commit crimes. Most of the studies show a correlation between violence poor self regulatory capacities and self-control (impulse control). As mentioned before, the negative consequences of violence (in various forms) such as antisocial behavior, drug addiction, aggression and others. In order to prevent such behaviors in the adolescent period it is necessary to understand the effect of any form of violence on the child's cognition, brain development, emotional regulation, and psychological attitude. This devastating effect shall encourage parents, caregivers, teachers and others who are in close contact with children to make mature and wise decisions to create a safe and less violent environment for children. Though the negative influences of violence are analyzed here, it is also equally necessary to look at the positive influence of moderated violence on the coping and development strategies of children. Violence could possibly train and develop certain neural systems to efficiently withstand and fight traumatic experiences.

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