

Review Article

# Low Emotional Self-regulation of Children and Adolescents with Traumatic Experiences Impacts on Their Life Quality

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**Abstract:** Emotional regulation of children and adolescents is a very important process for their development. Emotional self-regulation encouraged the children and adolescents to control aggressive emotional outbursts. This study purpose is to exam the effect of emotional self-regulation on the life quality of children and adolescents with traumatic experiences. A systematic review was conducted to examine research on effect of low emotional self-regulation on the life quality among children and adolescents with traumatic experiences. The initial search generated 1.245 research articles, 170 of which were reviewed for detailed evaluation; ultimately, 11 research articles published in the period 2012-2021 were included. Children and adolescents with traumatic experiences all over the world samples were the most represented in research articles. It used thematic synthesis to combine the research articles of low emotional self-regulation on the life quality among children and adolescents with traumatic experiences and identified key themes to explore in the impact studies. Across 11 articles, regardless of the traumatic type of event, it was found that children and adolescents' low self-regulation affects their ability to express themselves in a functional and productive way. Negative accumulated emotions, which do not externalize sexually and physically abused children and adolescents with low emotional self-regulation gradually lead to some type of emotional disconnection. In conclusion, sexual, physical abuse and war-refugee situations in childhood are more associated with the onset of post - traumatic stress disorder, emotional disorders and difficulties in self - regulation of emotions.

**Keywords:** Emotional self-regulation, children, adolescent, psychological trauma

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## 1. Introduction

In the view of [1] the emotional self-regulation of children and adolescents is important because it is associated with optimal quality of life and well-being. Previous research such as [1-4], have highlighted the function of self-regulation for positive social, emotional, and cognitive development of children and adolescents in European and North American countries [5] However, low emotional self-regulation and its relationship to the quality of life of children and adolescents who have experienced traumatic events have been little studied in various cultural settings (sources). In the view of [6], the term "self-regulation" is the general term-framework in relation to emotion, behavior and knowledge. That is, self-regulation refers to the ability to shape stimulation and behavior in the context of environmental requirements. The self-regulatory function is designed as a system in which adaptive self-control can be observed at multiple levels (such as emotional, behavioral and cognitive). The processes of self-regulation at these individual levels occur during infancy, contributing significantly to the subsequent adaptation or poor adaptation of the child to the demands of his environment [6].

[6-8] adopt a widely accepted definition of emotional self-regulation which states that emotional self-regulation is defined as "the external and intrinsic processes responsible for monitoring, evaluating, and modifying emotional responses, particularly intense and

temporal characteristics. to achieve one's goals "[9]. Fully functional emotion regulation requires the ability of the child and adolescent to be able to recognize and understand their emotional state before choosing and implementing the appropriate strategy of self-regulation of their emotion [10].

As early as the early 1990s, the empirical interest in regulating emotions increased. For this reason, several different theories have been formulated about the processes of emotion regulation. One of these theories is called the emotion regulation process model [11]. In this model, emotion regulation refers to all the processes involved in changing the duration and intensity of emotions, and emotional physiological states and behaviors. These processes can be conscious and controlled, but also unconscious and automatic [12]. The model of the process is closely related to the model of emotions, which describes an emotional experience as a result of the nature of a situation, the attention given to that situation, the appreciation of the importance of that situation, and the emotional response that determines the behavioral, physiological and experiential component of emotion [10].

Another theory developed for emotional self-regulation is the behavioral learning theory of self-regulation formulated by Bandura in 1997 [13], in the context of social learning. He argued that children focus on learning self-control from their peers, where they are motivated through rewards to develop positive patterns of emotional behavior [14].

Geneticists argue that emotional self-regulation may be an inherited ability, by extending the view of theories of emotional self-regulation. [15] invoke behavioral and genetic studies to argue that the ability to activate emotion regulation involves variants in the 5-HTT gene and the COMT genes that make it to some extent inherited.

Psychological trauma is a "psychological trauma" caused to a child or adolescent as a result of exposure to a traumatic event. The traumatic event has three characteristics: it is sudden and unexpected; it is associated with the threat to the life and physical integrity of the child or adolescent and it is placed outside the normal range of life experiences [16].

Exposure to psychological trauma involves witnessing and / or participating in one or more of a wide range of traumatic experiences. Experiences are considered traumatic if they occur directly in the child, but also if they occur in loved ones or other people around them [17].

[18] defines psychological trauma as "a sudden, life-threatening event in which a person feels terrified or helpless." It is divided into two categories according to its characteristics in the simple psychological trauma and in the multiple - complex psychological trauma. A simple trauma is considered to be the emotional imprint of a single negative event in the life of the child and the adolescent. It does not recur over time, it is easy to recognize. Complex trauma results from an accumulation of traumatic events that endure or recur over time [19].

Types of traumatic experiences are child abuse, acts of violence, war terrorism, natural and man-made disasters, life-threatening illness and chronic illness.

Reactions to psychological trauma can manifest in a variety of ways in children and adolescents as each child is unique and expresses his or her negative feelings and thoughts in different ways. For example, young children can express their feelings through play, flashbacks and nightmares. Usually, children who have experienced a traumatic event avoid conversations, people, objects, places or situations that remind them of the traumatic experience. Symptoms that can occur are increased irritability, eating and sleeping disorders, are easily frustrated and give up any effort, experience strong feelings of anxiety with the resurgence of the event and show nocturnal enuresis [20].

In many cases when the trauma is complex and lasting, new fears, sadness, loss of interest in activities, decreased concentration, decreased school performance, anger, physical discomfort, mood swings, self-injury, suicidal tendencies and substance use develop [14].

Traumatic events such as child abuse or neglect can cause bodily harm to the child, with long-term effects on the development of cognitive skills, motor skills or even life-

threatening fatalities such as head or spine injuries [21]. Other long-term physical effects on abused, neglected children include diabetes, malnutrition, vision problems, heart disease, high blood pressure, migraines, and chronic bronchitis [22]. Finally, children who have been sexually abused are more likely to be infected with hepatitis C and the AIDS virus [22]. Psychological trauma causes damage to the neuroendocrine systems in the body. Excessive stress activates the feeling of battle, which activates the sympathetic nervous system and suppresses the parasympathetic nervous system. This increases cortisone levels and disrupts the function of the central nervous system. Traumatic experiences are stored in the child's mind and the fear, arousal, and disconnection associated with the initial trauma may continue after the threat and stimulus have subsided [23].

At the level of psychopathology, children and adolescents who are exposed to chronic stress due to a traumatic event with a recurring pattern may develop a complex developmental trauma that will lead to post-traumatic stress disorder, anxiety disorders, autism, and mood disorders. Similarly, children and adolescents with traumatic experiences experience acute stress disorder during the development of the traumatic experience occurring one month after exposure to the traumatic event. Acute stress disorder can also develop into 12% post-traumatic stress disorder [16].

In addition, they have problems attaching and developing a secure bond, they perceive the world with distrust and suspicion. They have difficulty in emotional self-regulation and expression of their feelings. They find it difficult to express their desires and needs to others [24]. In many cases they adopt self-destructive behaviors and, in some cases, may represent the traumatic experience through play, eg young children who have been sexually abused, imitate and repeat their experience during play [25]. Low capacity for emotional self-regulation in children and adolescents who have experienced a traumatic experience is associated in the long run with the inability to achieve their goals of personal well-being, well-being and psycho-emotional life satisfaction [26].

Previous studies, such as that of [27] have highlighted the relationship between low emotional self-regulation in sexually abused children and difficulty in externalizing their emotions and expressing their negative emotions through aggressive behaviors. The researchers studied 62 sexually abused preschool children and 65 non-sexually abused preschool children. It was found that boys compared to girls who had been sexually abused had lower scores on the ability to empathize and emotionally self-regulate [27].

A difference between girls and boys was also found in the research of [28], which examined 322 preschool children attending kindergartens in Italy who had been bullied or witnessed such incidents. Boys who were bullied had lower levels of emotional self-regulation than girls who experienced similar situations resulting in more antisocial and aggressive behaviors as a measure of their anxiety and fear. The result of [29] research explains that low levels of emotional self-regulation as found in the previous two studies are likely to significantly affect the achievement of personal goals of the child and adolescent but also to alter the meaning and feeling of satisfaction from his life. They studied 56 refugee adolescents between the ages of 11 and 18 in a U.S. school and found that adolescents with low emotional self-regulation had difficulty integrating into the community, having difficulty with individual well-being (eg, sleep and eating disorders) as they did not find solutions to manage negative situations to reduce the likelihood of manifesting strong negative emotions and behaviors towards others. They developed dysfunctional interpersonal relationships with their peers, had a low level of empathy and a sense of reciprocity [29].

[30] add that refugees with low emotional self-regulation are more likely to develop post-traumatic stress disorder than refugees with better emotional self-regulation. They studied 81 refugee children exposed to traumatic experience and found that refugees with low emotional self-regulation could not control their anger at reviving the traumatic experience compared to refugees with high emotional self-regulation.

The research objectives are as follows:

1. Exploring the influence of demographic factors, such as the age of the child on the ability of emotional self-regulation in children and adolescents who have suffered a traumatic event.
2. Exploring the impact of low emotional self-regulation of children and adolescents with traumatic experiences on the quality of life of children and adolescents.
3. Exploring how traumatic experiences in children negatively affect their self-regulation and thus reduce it.

## 2. Method

A systematic literature review was conducted following PRISMA-P protocol guidelines by [31]. This research method is chosen as it is considered that individual studies with the collection of primary data cannot offer what the systematic review offers. This means that the systematic review has the ability to evaluate findings that contradict each other or confirm a hypothesis to a large extent, thus enhancing the degree of generalization of the result. The advantage of the systematic review method over other research methods is that the systematic review can allow reliable conclusions to be drawn based on relatively scientifically sound research rather than individual studies [32].

The present systematic review seeks to clarify the advantages and disadvantages of the existing literature and to include studies that could improve the degree of generalizability of the study result. Articles were identified on 14/4/2021, in Google Scholar and PubMed databases. A research strategy was developed based on the type of trauma and the degree of emotional self-regulation of children and adolescents. The following search terms were used in this review: “children's emotional regulation”; “psychological trauma effects”; “psychological trauma”; “childhood trauma”; “low self-regulation”. Approved articles imported to the Rayyan systematic review software for controlling and evaluating.

### 2.1. Eligibility criteria

The studies that will be included in this systematic review will have been published in reputable scientific journals and scientific databases in the period 2011 - 2020. Studies before 2011 will be excluded because they are not considered to fall under the criterion of conducting studies of the last decade.

In detail, the criteria for the inclusion of the studies included in the analysis are the following: participants in the studies will be only children and adolescents aged 3-19 years who have been exposed at least once or repeatedly to a traumatic event such as abuse, sexual abuse / neglect, war violence - immigration and chronic disease. There is no geographical restriction on the population of children and adolescents to be studied in the systematic review. This means that surveys from around the world will be included. It is not necessary for children to have homogeneous characteristics in terms of country of residence, socio-economic background and educational level.

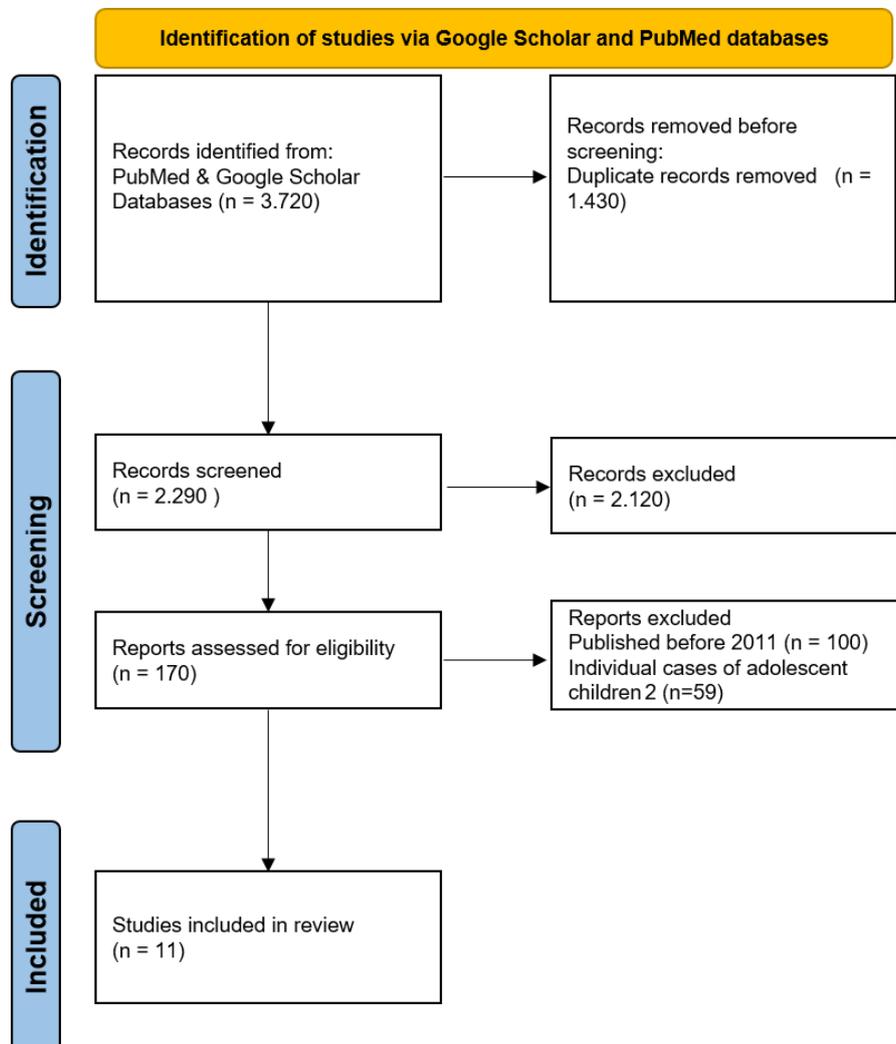
The language in which the research articles will be written in the systematic review will be English. Any other language is excluded from the study. The reason for exclusion is that English is considered the official language worldwide and most reputable scientific journals use it for study publications. Studies in English also increase the likelihood that studies from around the world will be included if the publication is in English.

The research studies that will be included in the analysis should clearly state their research result in an appropriate consistent and reliable way depending on the research method they have chosen. For example, in quantitative studies it will be examined whether there is reliability in the scale of the research tool. The research results of the studies that will be excluded will be those that are not based on objective measures but on self-report that create confusion in the degree of their reliability. Contemporary and diachronic studies with primary research data will be selected. Individual cases of adolescent children that meet all the above criteria will be excluded. Only scientific research articles

published in reputable scientific journals and scientific databases will be included in the research for analysis.

### 3. Results

Figure 1 outlines the selection process of the studies included in the analysis. Initially, 1,245 studies were detected in the online PubMed databases and 2475 studies in Google scholar using the keyword search algorithm described in the methodology. Subsequently, 1,430 studies that were twice identified in the databases were removed. From the 2,290 studies that emerged, the summaries for the first identification of the criteria set for the selection of the studies were read and it was found that the 2,120 studies did not meet the criteria from the summary and thus were excluded. The 170 studies that emerged were fully reviewed throughout their text and it was found that 159 did not meet all the criteria that had to be met to be included in the analysis. Finally, 11 studies met all the criteria set for the selection of studies in the systematic review.



**Figure 1.** PRISMA Flow diagram of the study selection process of the bibliographic review. Source: Page et al. (2020)[47].

#### 3.1. Basic characteristics of the included studies

Table 1 outlines the main characteristics of the included studies in this analysis. Included three studies that examined emotional self-regulation of sexual abused children

and adolescents. Included two studies that examined emotional self-regulation of children and adolescents who were victims of acts of violence, war terrorism – immigration. Included one study that examined emotional self-regulation of children and adolescents with life-threatening illness and chronic illness. Included five studies that examined emotional self-regulation of physically abused and neglect children and adolescents. The average age of children and adolescents was 7 years and the range age of children and adolescents was 3.5 to 19 years. Nearly half (47%) of children and adolescents experienced abuse for years.

**Table 1.** summarizes the studies that met the inclusion criteria and were included in the research.

Source	Type of trauma	Sample/Study Description	Results
Chang, C., Kaczurkin, A. N., McLean, C. P., & Foa, E. B. (2018). Emotion regulation is associated with PTSD and depression among female adolescent survivors of childhood sexual abuse. <i>Psychological Trauma: Theory, Research, Practice, and Policy</i> , 10(3), 319.	Sexual abuse	Cross-sectional quantitative study. Examining the degree of correlation between emotional self-regulation difficulties in the development of emotional disorders and post-traumatic stress disorder in 90 sexually abused adolescents aged 14-17 years	Low emotional self-regulation was associated with greater intensity and severity of post-traumatic stress disorder and depression symptoms.
Elsayed, D., Song, J.-H., Myatt, E., Colasante, T., & Malti, T. (2019). Anger and Sadness Regulation in Refugee Children: The Roles of Pre- and Post-migratory Factors. <i>Child Psychiatry &amp; Human Development</i> . doi:10.1007/s10578-019-00887-4	Acts of violence, war terrorism - immigration	Cross-sectional quantitative study. The degree of emotional self-regulation in children aged 5 to 13 who are considered Syrian refugees and experienced stressful situations before settling in Canada was examined.	Pre- and post-migration stressors play a key role in regulating refugee sentiment during resettlement.
Guidotti, L., Solari, F., Bertolini, P., Gebennini, E., Ghiaroni, G., & Corsano, P. (2019). Reminiscing on acute and chronic events in children with cancer and their parents: An exploratory study. <i>Child: Care, Health and Development</i> . doi:10.1111/cch.12673	Life-threatening illness and chronic illness	Cross-sectional quantitative study. The effect of chronic life-threatening disease (cancer) on the emotional self-regulation ability of Italian children aged 4 to 8 years was examined.	In most cases of children with low emotional self-regulation it is observed that there were problems in controlling behavior, emotion and interpersonal relationships.
Haskett, M. E., Stelter, R., Proffit, K., & Nice, R. (2012). Parent emotional expressiveness and children's self-regulation: Associations with abused children's school functioning. <i>Child abuse &amp; neglect</i> , 36(4), 296-307.	Physical abuse and neglect	Cross-sectional quantitative study. The extent to which parents' emotional expressiveness affects the emotional self-regulation and school success of children aged 4 to 7 years was examined.	The expression of positive and negative feelings of the parents was associated with various aspects of the children's self-regulation and their school success.
Hébert, M., Langevin, R., & Oussaïd, E. (2018). Cumulative childhood trauma, emotion regulation, dissociation, and behavior problems in school-aged sexual abuse victims. <i>Journal of affective disorders</i> , 225, 306-312.	Sexual abuse	Cross-sectional quantitative study. Examining the degree of emotional self-regulation in the occurrence of behavioral problems in 309 sexually abused children	Chronic childhood trauma affects the onset of behavioral problems and creates emotional disconnection.
Khamis, V. (2019). Posttraumatic stress disorder and emotion dysregulation among Syrian refugee children and adolescents resettled in Lebanon and Jordan. <i>Child Abuse &amp; Neglect</i> , 89, 29–39. doi:10.1016/j.chiabu.2018.12.013	Acts of violence, war terrorism - immigration	Cross-sectional quantitative study. Examination of the prevalence and prognostic factors of post-traumatic stress disorder in relation to the ability of emotional self-regulation of 1000 children and adolescents, Syrian refugees, aged 7 to 18,	Refugee children and adolescents who were more exposed to war situations showed greater difficulty in emotional self-regulation and the development of post-traumatic stress disorder.

		who have settled permanently in Lebanon and Jordan.	
Langevin, R., Hébert, M., Allard-Dansereau, C., & Bernard-Bonnin, A. C. (2016). Emotion regulation in sexually abused preschoolers: The contribution of parental factors. <i>Journal of traumatic stress, 29</i> (2), 180-184.	Sexual abuse	Cross-sectional quantitative study. Investigation of parental factors in emotional self-regulation of 153 sexually abused children aged 3.5 to 6.5 years.	The result showed that factors such as parents' emotional expressiveness contribute to the development of emotional self-regulation skills.
Marusak, H. A., Martin, K. R., Etkin, A., & Thomason, M. E. (2015). Childhood trauma exposure disrupts the automatic regulation of emotional processing. <i>Neuropsychopharmacology, 40</i> (5), 1250-1258.	Physical abuse and neglect	Experimental study. It was investigated whether the ability of 16-year-old children to emotionally self-regulate changed after being exposed to traumatic events.	Low emotional self-regulation in combination with the traumatic event is a prognostic risk of psychopathological disorder.
McLaughlin, K. A., Peverill, M., Gold, A. L., Alves, S., & Sheridan, M. A. (2015). Child maltreatment and neural systems underlying emotion regulation. <i>Journal of the American Academy of Child &amp; Adolescent Psychiatry, 54</i> (9), 753-762.	Physical abuse and neglect	Experimental study. It was investigated whether child abuse is associated with neurological responses during the passive display of negative and positive emotional stimuli in an attempt to emotionally self-regulate and react in adolescents aged 13-19 years.	The abused adolescents showed increased activity in the area of the amygdala and the anterior cortex during the attempt of emotional self-regulation.
Peh, C. X., Shahwan, S., Fauziana, R., Mahesh, M. V., Sambasivam, R., Zhang, Y., ... & Subramaniam, M. (2017). Emotion dysregulation as a mechanism linking child maltreatment exposure and self-harm behaviors in adolescents. <i>Child abuse &amp; neglect, 67</i> , 383-390.	Physical abuse and neglect	Cross-sectional quantitative study. It was investigated whether reduced ability of emotional self-regulation is associated with the occurrence of increased cases of self-injury and depressive symptoms in 108 abused adolescents aged 14-19 years.	Increased cases of self-harm are associated with low emotional self-regulation of abused adolescents.
Roberts, Y. H., Ferguson, M., & Crusto, C. A. (2013). Exposure to traumatic events and health-related quality of life in preschool-aged children. <i>Quality of Life Research, 22</i> (8), 2159-2168.	Physical abuse and neglect	Cross-sectional quantitative study. The relationship of exposure to traumatic events in quality of life and psychosocial health in 170 children aged three to five years attending the Head Start program in the United States was investigated.	Multiple exposures to traumatic events in combination with the increase in the age of the child with low emotional self-regulation function as risk factors for the occurrence of pathological conditions that disrupt physical and mental health.

### 3.2. Risk of bias across studies

An assessment tool to measure the risk of bias in systematic reviews was conducted following ROBIS protocol guidelines by [33]. Table 2 illustrates the summary of concerns for risk of bias.

**Table 2.** Review judged at risk of bias

<b>Domain</b>	<b>Concern</b>	<b>Rationale of concern</b>
Concerns regarding specification of study eligibility criteria.	Low	No potential concerns regarding eligibility standard specifications were identified.
Concerns regarding methods used to identify and or select studies	Low	Both title and abstract screening and full-text paper evaluation processes were reported and involved multiple reviewers. However, this factor was rated "yes" because it was reported to have acted independently.
Concerns regarding used to collect data and appraise studies	Low	All studies were individually evaluated by at least two reviewers, and the corresponding data was individually abstracted. The quality of the study was formally evaluated using the appropriate tool
Concerns regarding in synthesis and findings	Low	The authors fully addressed the heterogeneity in the analysis and examined it using subgroup analysis.
Risk of bias	Low	All studies adequately reflect the results of this systematic review.

ROBIS tool assessed the risk of bias in this systematic review as low.

### 3.3. Outcomes

#### 3.3.1. The effect of the type of traumatic experience experienced by the child or adolescent on the ability of emotional self-regulation and child well-being

Research was studied, which reported traumatic experiences of children and adolescents related to sexual abuse, physical abuse, neglect, acts of violence - war - immigration, and chronic illness. Negative accumulated emotions, which do not externalize sexually abused children by repeatedly reliving the traumatic experience with reduced capacity for emotional self-regulation, can gradually lead to some form of emotional disconnection (Hébert, Langed, & Oussaï). The [34] studied 309 sexually abused children aged 6-12 years in the region of Quebec and found that low emotional self-regulation of sexually abused children associated with the occurrence of behavioral problems. The ability of children to self-control their thoughts and feelings from the resurgence of childhood trauma decreased and their degree of emotion and emotional intensity at the time of resuscitation increased.

Similarly, the research of [35] examines the relationship of parental factors to the acquisition of emotional self-regulation skills in 75 sexually abused children aged 3.5 to 6.5 years, of French descent. who lived in Montreal, Canada. The majority of sexually abused children lived in a single-parent family, with a low annual income, while the mothers of these children had a low level of education. Children have repeatedly experienced episodes of sexual abuse as in about half of the cases children have a complete history of attempted or attempted intrusion by third parties. The study also involved 78 children of similar age who had not been abused and compared with 75 sexually abused children in terms of the degree of ability of emotional self-regulation. It was found that sexually

abused children had much higher scores of mood swings and negativity than non-abused children. The results showed that parental factors contributed to certain dimensions of their children's emotional self-regulation such as the manifestation of behaviors related to trying to over-regulate emotion such as euphoria, anger and impulsivity. Also, parents with a history of child sexual abuse showed a lower degree of willingness to emotionally support their children resulting in their children displaying a lower capacity for emotional self-regulation [35]. Similarly, [36] research argues that the emotional expressiveness of Syrian refugee parents towards their children and the freedom of expression of children's feelings in their family environment seem to contribute to the formation of higher abilities of emotional self-regulation. Thus, children and adolescents who were able to express negative or positive emotions in their family environment were less likely to develop symptoms of post-traumatic stress disorder. Traumatic experiences of children associated with events of war and violence can lead to the development of mental disorders which are to some extent a consequence of their ability to have low emotional self-regulation. [37] studied 103 children aged 5 to 13 who were Syrian refugees and settled permanently in Canada. They sought to investigate the effect of stress and everyday difficulties faced by children during migration on their ability to emotionally self-regulate. Factors such as the intense daily suffering of children during migration and intense stress were associated with the inability of children to emotionally regulate their grief and anger. According to "immunization" theory, people who are exposed to high levels of difficulty (eg, pre-migratory factors that cause intense stress) are "immunized", that is, they are better prepared to manage the difficulties of life that cause intense stress. . Based on this theory, it appears that several of the refugee children who experienced higher levels of stress and daily hardships during immigration had better emotional adjustment and self-regulation to their new living conditions in Canada. They did not often mentally relive the events of war or immigration, resulting in a better response to negative thoughts or feelings [37].

Chronic illness problems in children and adolescents with low emotional self-regulation have long-term effects on their mental health and well-being. [38] studied 15 children aged four to eight years suffering from cancer in an oncology hospital in Italy and found that the more they were allowed by their environment to express their emotions, whatever they were, the better they could respond to them. The style of emotional repression did not help children to externalize what they were feeling; resulting in a greater correlation between their children's reduced capacity for emotional self-regulation. It was also observed that the more children with low emotional self-regulation increased the degree of recollection of experiences in relation to their illness, the more difficult it was to exhibit high levels of executive function (ie ability to pay attention, memory, organization). In most cases of children with low emotional self-regulation it is observed that there were problems in controlling behavior, emotion and interpersonal relationships. Also, the more the children's parents expressed their feelings verbally or non-verbally, the better the children were able to respond to negative thoughts and feelings. However, a different impact is reflected for each child on their ability to regulate their emotion, as it seemed to depend on both the duration of the personal traumatic experience and the way they remember the traumatic events surrounding their illness [38].

### **3.3.2. Influence of demographic factors on the ability of emotional self-regulation in children and adolescents with traumatic experiences**

The studies of [35,37,39] found a significant effect of gender on the ability of emotional self-regulation of children and adolescents with traumatic experiences. In particular, [39] found that sexually abused boys had greater difficulties with emotional self-regulation than sexually abused girls, as they were more likely to display aggressive behaviors in the classroom. A similar difference was found between sexually abused girls and boys, of whom boys had higher rates of emotional distress and lower levels of emotional self-regulation. In the study of [37], girls achieved a higher score of emotional self-regulation

for negative emotions of anger and sadness than boys. Differences in grief management patterns between girls and boys exposed to higher and lower levels of migratory stressors are explained by the principle of the specialty. The principle of the specialty states that each group of immigrants has unique characteristics (eg reasons for immigration, cultural elements) and that these unique characteristics can sometimes contribute positively and sometimes negatively to the degree of ability of emotional self-regulation. In this case, the effects of the children's current experiences due to the daily suffering during migration on their grieving abilities were mitigated because they had previous life experiences in their home country, Syria, which caused them intense stress (e.g. state of war).

In contrast, the results of the research of [34], did not show an effect of gender on the degree of emotional self-regulation and therefore both boys and girls with low emotional self-regulation seem to show some form of emotional detachment, especially depersonalization. and de-realization.

Regarding the effect of age on the ability of emotional self-regulation of children and adolescents with traumatic experiences, statistically significant differences were found in the research of [39] and [37]. In the study by [39], younger children who have been abused have difficulties in social and behavioral adjustment to the school environment and these difficulties are closely related to low emotional self-regulation. In the study of [37], a higher degree of low emotional self-regulation is found mainly in older children than in younger children, as they have more ability to remember and relive mentally unfavorable experiences during migration.

As in the [36,37] argues that the older a child was, the more difficult it was to regulate his feelings of sadness and anger. Children and adolescents who were more exposed to war situations showed a greater predisposition to post-traumatic stress disorder symptoms, as well as a lack of emotional self-regulation. Gradually, however, it seems that both the symptoms of post-traumatic stress disorder seemed to subside with the placement of children in Lebanon or Jordan.

### **3.3.3. Ways in which the traumatic experience negatively affects the self-regulation of children and adolescents thereby reducing it**

Two of the eleven studies highlight the relationship between child psychological trauma in the way the neurological and biochemical function of the brain results, resulting in overactivity mainly in the amygdala area and this implies difficulty in proper self-regulation of emotional stimuli associated with revitalization. trauma or other similar conditions.

The study by [40] aimed to determine the relationship between child abuse and neurological responses during the passive projection of negative and positive stimuli in order to highlight the degree of emotional self-regulation in children. The study involved 42 adolescents aged 13-19, who had at least one experience of physical or sexual abuse. Participants had to watch for any negative or positive emotional stimuli given to them and form an emotional response as a result of this projection. Child abuse increases the risk of negative emotional reactions to negative stimuli. Although abused teens regulate the amygdala's reactions to negative elements to a similar degree as abused teens, they use areas of the brain that are involved in trying to gain more emotional self-control. Child abuse in most cases of adolescents examined is associated with an increased response in the amygdala area in response to negative emotional stimuli. Responding to negative stimuli after child abuse is not simply the result of concomitant psychopathology. Exposure to threatening experiences potentially increases the uptake of negative emotional information into the brain due to the possible relevance of experiences to detecting new threats, creating a state of readiness. If abused adolescents are called upon to devote more cognitive resources to shaping emotional responses, effective emotional self-regulation can be more difficult to achieve, especially when adolescents have experienced abusive

situations that cause them constant stress. The negative emotional effects of stressful events increase among adolescents with a history of chronic abuse [40].

Traumatic events in the life of the child, in whatever form, are one of the strongest risk factors for the occurrence of a psychopathological condition. [41] hypothesized that childhood trauma functions as a predictor of emotional self-regulation deficits. For this reason, they sought to investigate through fMRI examination, whether there is involvement of brain functions in the reduction of emotional self-regulation in cases of 51 adolescents aged 16 years, with traumatic experiences who were treated in psychiatric clinics in Detroit, USA. Teenagers exposed and relived through images of a traumatic experience. The results of the study showed that adolescents failed to reduce hyperactivity in the anterior cortex of the amygdala during an attempt to self-regulate their emotion. As a result, they also showed low levels of emotional self-regulation as their tonsillar response levels increased. The researchers concluded that exposure to childhood trauma causes changes in the way the brain works neurologically and biochemically, thus interpreting external stimuli that have elements in common with the traumatic event as a threat.

#### **3.3.4. Effect of low emotional self-regulation of children and adolescents with traumatic experiences on their quality of life**

[35], found that emotional self-regulation skills are very important for children's mental health as they help them overcome and resolve the psychological trauma they have suffered as a result of abuse. One of the problems created in the quality of life of abused - neglected children and adolescents with low emotional self-regulation is the lack of psychosocial functionality that can lead the child to school failure. [39] studied 92 physically abused children aged 4-7 years to investigate the effect of parents' emotional expressiveness on their children's ability to emotionally self-regulate in their school environment in North Carolina, USA. The psychosocial functioning of abused children in their school environment was measured by observations of aggressive behavior during play and during the lesson to other children or to the teachers in their class. The expression of positive and negative emotions of the parents of the abused children contributed to the degree of development of their emotional self-regulation. In particular, parents who expressed more negative feelings towards their children failed to help them adapt to the school environment. There is little support for the mediating role of children's emotional self-regulation in the links between parental emotional expressiveness and children's behavior. Low emotional self-regulation of children was also associated with a higher incidence of abusive behavior by abused children towards others in their school environment. In contrast, good emotional self-regulation of abused children was achieved when their parents were more willing to openly express their positive feelings towards their children. The effects of abused children with low emotional self-regulation on their school performance are low scores on exams, low scores on four-month courses, higher dropout rates, break-in isolation, or aggressive behavior toward others that prevents entering into friendly relations. Finally, self-regulatory processes are associated with taking the initiative in the classroom and completing educational activities-tasks, which are important characteristics for early academic success [39].

Low emotional self-regulation among abused adolescents may represent one of the neurodevelopmental mechanisms that link child abuse to the risk of developing psychopathology. It is observed, in the research of [41], that increased activity in the amygdala area in abused adolescents is associated with the onset of symptoms of post-traumatic stress disorder. [42] examined the relationship between exposure to traumatic events in quality of life and psychosocial health in 170 children aged three to five years attending the Head Start program in the United States. 72% of children have been recorded by their caregivers as having experienced at least one type of traumatic event (22% domestic violence, 18% community violence, 18% serious illness). Overall, children exposed to at least one type of traumatic event have a lower overall score on the quality of life questionnaire

than children who have not been exposed to a traumatic event. Children who have experienced a traumatic event have more difficulty in self-regulating emotion and require more time from their caregivers to respond to their personal needs. The reason is that a child experiences very intense anxiety and fear, as a result of which it is difficult to trust his caregiver in a short period of time. The protective environment formed by the child's caregivers contributes significantly to the development of his mental resilience, as a result of which he can acquire skills of recognizing, managing, regulating emotion in an effective way. Multiple exposures to traumatic events in combination with the increase in the age of the child with low emotional self-regulation function as risk factors for the occurrence of pathological conditions that disrupt physical and mental health. Traumatic experiences have a strong effect on morbidity throughout the life and development of the child until adulthood. That is, the child with low emotional self-regulation may more often experience sleep disorders, eating disorders, organic disorders and psycho-emotional disorders [42].

Four of the eleven studies concluded that post-traumatic stress disorder is a consequence of children and adolescents with low emotional self-regulation regardless of the type of traumatic event. It is observed that sexual, physical abuse and war-refugee situations during childhood are more related to the occurrence of post-traumatic stress disorder, emotional disorders and difficulties in self-regulation of emotions. [43] studied 90 adolescent girls aged 14 to 17 with a history of sexual abuse from Philadelphia, USA. Their low ability to self-regulate was positively associated with the onset of symptoms of post-traumatic stress disorder and depression. The more severe and frequent the depressive symptoms on a daily basis, the greater the difficulty for the girls in managing to regulate their emotional charge at the time of reliving the traumatic experience. Difficulties in emotional self-regulation were an important predictor of the severity of depressive symptoms. And then, the severity of depressive symptoms was an important prognostic factor for the severity of the symptoms of post-traumatic stress disorder. Girls with low emotional self-regulation seem to have a lower degree of self-perceived ability to regulate their emotion. They focused more and more times on the imaginary revival of the traumatic event in an obsessive way without being able to make any positive thoughts. The vicious cycle of the revival of the event created a vicious cycle of negative thoughts - feelings - behaviors that in the case of girls with low emotional self-regulation this was expressed with greater intensity of depressive symptoms. [36] studied the prevalence, prognostic factors of post-traumatic stress disorder in relation to the ability of emotional self-regulation of a thousand children and adolescents, refugees from Syria, aged 7 to 18, who settled permanently in Lebanon and Jordan. The results of the research showed that 45.6% of children with low emotional self-regulation have a high risk of developing symptoms of post-traumatic stress disorder. Low emotional self-regulation is more related to social withdrawal, self-criticism and giving up any attempt at daily activities [36].

[41] conclude that the perceived threat to adolescents with low emotional self-regulation from the resuscitation of psychological trauma is expressed by inappropriate behaviors such as self-injury, suicidal ideation. The same result emerges from the research of [44], who studied the degree of emotional self-regulation of 108 adolescent psychiatric patients aged 14 to 19 years with traumatic experiences. In particular, they reported that the element of childhood traumatic experience in the cases of adolescents with low emotional self-regulation is a prognostic factor for the occurrence of self-injury situations and emotional disorders. Self-harm can serve as a compensatory strategy in regulating negative emotions for adolescents surveyed. It is considered as one of the most adaptive tactics of regulating emotions that in some cases can be fatal for the life of the teenager. For adolescents, self-harm is associated with the need for self-punishment, to regain a sense of control when the emotional load from the memory of the traumatic event increases. Of course, most adolescents with a high incidence of self-harm also had a greater intensity of depressive symptoms. Finally, as in the study of [35], as well as in the research of [43] It

seems that protective factors such as mental resilience, the ability to adapt to the implementation of emotional self-regulation strategies protect sexually abused children and adolescents with a reduced risk of post-traumatic stress disorder and major depressive disorder.

#### 4. Discussion

In conclusion, the psychological trauma simple or complex that occurs in the early life of the child makes it more difficult to develop emotional self-regulation skills. Regarding the answer to the first research question on the relationship between the type of traumatic experience and the ability of emotional self-regulation and child well-being, it is concluded that the type of trauma is not related to the incidence of low emotional self-regulation that complicates daily mental functioning child. However, there is a relationship with the way they react to the negative cognitive stimulus of the experience as sexually abused children had much higher scores of mood swings and negativity than non-abused children. For refugee children and adolescents who have experienced war situations, factors such as the intense daily suffering of children during migration and intense stress have been associated with the onset of feelings of sadness and anger in children. Both children and adolescents with low emotional self-regulation, with chronic serious life-threatening illnesses, experience intense stress that is difficult to regulate. The style of emotional repression did not help children to externalize what they were feeling, resulting in a greater correlation between their children's reduced capacity for emotional self-regulation.

With respect to gender and age factors, almost all studies found differences between the ability to regulate emotion in boys and girls as well as between young children and adolescents. Specifically, three studies have shown the effect of gender on the emotional self-regulation ability of children and adolescents with traumatic experiences. What stands out is that traumatic experiences of sexual abuse and physical abuse have a greater impact on reducing boys' emotional self-regulation towards girls. In contrast, girls who have experienced war and refugee situations show higher emotional self-regulation because they find it difficult to regulate feelings of anger and sadness towards boys. However, a study was found in which no difference was found in the degree of emotional self-regulation between abused girls and boys. Regarding the age parameter, younger children who have been abused have difficulties in social and behavioral adjustment to the school environment and these difficulties are closely related to low emotional self-regulation. In contrast, two studies have shown that older refugee children exhibit lower emotional self-regulation than younger children because they have a greater ability to remember and relive mentally unfavorable experiences during migration.

Regarding the third research question on how traumatic experiences in children negatively affect their self-regulation and thus reduce it, it appeared that traumatic events such as child abuse or neglect can cause bodily harm to the child, with long-term consequences. In the development of cognitive skills, motor skills or even life-threatening deaths such as head or spine injuries [21]. Chronically injured children therefore have difficulty recognizing and communicating their emotions and do not have a sense of freedom about their own inner experience and ability to influence the world [45]. Two of the eleven studies highlight the relationship between childhood psychological trauma and the neurological and biochemical function of the brain, resulting in hyperactivity mainly in the amygdala area, which implies difficulty in proper self-regulation of emotional stimuli associated with revitalization trauma or other similar conditions.

Concerning the fourth research question on the ways in which traumatic events affect the quality of life of children and adolescents, it is observed that low emotional self-regulation plays a decisive role in the development or non-psychopathological state. Young people exposed to terrorism, violence, and war are at higher risk of developing symptoms of post-traumatic stress disorder, depression, aggression, and suicidal ideation [41,46]

conclude that the perceived threat to adolescents with low emotional self-regulation from the resuscitation of psychological trauma is expressed by inappropriate behaviors such as self-injury, suicidal ideation. [30] add that refugees with low emotional self-regulation are more likely to develop post-traumatic stress disorder than refugees with better emotional self-regulation.

In many cases when the trauma is complex and lasting, new fears, sadness, loss of interest in activities, decreased concentration, decreased school performance, anger, physical discomfort, mood swings, self-injury, suicidal tendencies and substance use develop [14]. Four of the eleven studies concluded that post-traumatic stress disorder is a consequence of children and adolescents with low emotional self-regulation regardless of the type of traumatic event. Difficulties in emotional self-regulation were an important predictor of the severity of depressive symptoms. Another problem that arises and affects the daily life of the child and adolescent with low emotional self-regulation is the lack of psychosocial functionality that can lead the child to school failure.

#### **4.1. Recommendation for enhancing emotional self-regulation skills in children and adolescents with low emotional self-regulation**

Some suggestions for enhancing emotional self-regulation skills, especially in children and adolescents with low emotional self-regulation, come from [43], who argued that mental resilience and the ability to adapt to the implementation of emotional self-regulation strategies can work positively in enhancing emotional self-regulation skills. Appropriate psychological support and intervention in both children - adolescents and their parents can lead to learning new effective ways of recognizing, understanding and expressing their feelings. Raising public awareness of support for abused children, refugees and children with chronic illnesses could create an informal support network in which children and adolescents feel safe to express their feelings. Suggestions for further investigation of this issue could be to conduct quantitative research to highlight the degree of relationships or differences between the type of traumatic event, the complex or simple trauma regarding the levels of emotional self-regulation of children and adolescents.

#### **4.2. Limitations**

This systematic review focuses on answering specific questions based on evidence from secondary research. It wasn't able to provide primary descriptive data on the degree of low emotional self-regulation in children and adolescents with traumatic experiences.

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