BSc in Psychology
Department of Psychology

The impact of childhood trauma and early intervention on mental health in adulthood

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Foreword and Acknowledgements

Submitted in partial fulfillment of the requirements of the BSc Psychology degree, Reykjavik University, this thesis is presented in the style of an article for submission to a peer-reviewed journal.

This thesis was completed in the Spring of 2020 and may therefore have been significantly impacted by the COVID-19 pandemic. The thesis and its findings should be viewed in light of that.
Abstract

The aim of this study was two-folded, to examine whether people who have suffered from childhood trauma have worse mental health than people who suffered trauma later in life or have not suffered from trauma. Secondly, to examine if people who had an intervention after childhood trauma have better mental health than people who did not have an intervention after childhood trauma. Participants in this study were individuals 18 years or older who chose to participate in the study through the social media Facebook app. A total of 180 individuals participated in the study, 174 responding to The Posttraumatic Stress Disorder Checklist (PCL-5) and 171 responded to The Depression, Anxiety and Stress Scale - 21 Items (DASS-21) list. 59 individuals did meet PTSD diagnostic criteria, and 115 did not. Of these 59 individuals, 47 experienced trauma before the age of 14 and 12 experienced trauma after the age of 14. Significant differences were in the mental health of traumatized individuals and non-traumatized individuals. According to the DASS-21 list, individuals who had experienced childhood trauma had greater anxiety and stress than individuals who had not experienced childhood trauma. There was no significant difference in depression between those who experienced trauma in childhood and those who did. There was also no significant difference between individuals who experienced trauma depending on whether they received early intervention or not in depression, anxiety, stress and PTSD.

Keywords: PTSD, Trauma in childhood, Early intervention, Mental health
The impact of childhood trauma and early intervention on mental health in adulthood

In 1855, Frederick Douglass noted that “It is easier to build strong children than to repair broken men” (Rowland., 2014). According to Hornor (2015), trauma in childhood poses a serious health risk with a prolonged effect on both physical and mental health in adulthood. Children need to feel secure and supportive in their environment when they grow up (Bernstein et al., 2013). If a child experiences much stress then the body’s immune system kicks in and the child is always in a fight or flight mode, which can cause toxic stress syndrome that can have an impact on the child’s brain development (Bernstein et al., 2013). Complex trauma in childhood can have consequences such as self-blame, poor self-esteem, or a child feels worthless, if an individual does not receive proper help in inhibiting these thoughts and emotions, it can lead to worse physical and mental health (McCormack & Thomson, 2017). Studies have shown that individuals who witnessed psychological or physical violence or have experienced physical or psychological abuse by a person they know, are more likely to develop major depressive disorder (MDD) or Post-traumatic stress disorder (PTSD) (Gamache et al., 2016). Chronic depression in adulthood has also been related to childhood trauma (Brown et al., 2007). Research conducted by Wiersma et al. (2009) showed that children who had experienced trauma like emotional neglect, psychological or physical abuse, or sexual abuse were more likely to develop chronic depression in adulthood (Wiersma et al., 2009). According to DSM-5, two categories of trauma and stress were associated with child neglect and those were the reactive attachment disorder (RAM) and the disinhibited social engagement disorder (DSED) (American Psychiatric Association, 2013). RAM is a significant emotional depression in children who do not seek comfort from adults when they feel unwell or do not respond to adult care (American Psychiatric Association, 2013). It is caused by neglecting caregivers who do not meet the needs of a child, for example by not
comforting the child when they need comfort, not talking to the child and leaving it completely indifferent (American Psychiatric Association, 2013). Children who have a responsive disorder have almost all experienced much emotional neglect by caregivers (American Psychiatric Association, 2013). DSED is when children do not discriminate between caregivers and strangers and do not show caution when approaching strangers (American Psychiatric Association, 2013). These children are likely to talk to all adult people and even walk away with them without hesitation. Children diagnosed with this disorder are also more likely to be delayed in cognitive and speech development. Although these disorders are not common, we can see that the importance of a healthy relationship between a child and an adult can build good social relations with other people in adulthood (American Psychiatric Association, 2013). It is important to keep an eye on children who are suspected of having a relationship disorder to help the child coping with any negative feelings it may experience due to neglect, such as depression, anxiety and stress (Barnet, Mille-Perrin, and Perrin, 2011). Children who are neglected do not necessarily have to meet the requirements of RAM or DSED disorder. However, these children may have difficulty communicating, experience learning difficulties, and lack concentration. These symptoms could all occur without being diagnosed with neurodegenerative disorders such as ADHD or autism (Barnet, Mille-Perrin, and Perrin, 2011). Children who have experienced neglect in childhood by caregivers are more at risk of getting into substance use or looking for bad company. Also, these children are more likely to seek a violent relationship in adolescence/adulthood (Tyler et al., 2011).

Studies have highlighted the importance of social support, either from family or friends of a child who experienced stressful life events (Franke, 2014). That can have a lot to say about how the child will cope in the future. Individuals who isolate themselves socially are at higher
risk of both mental and physical disorders associated with toxic stress than individuals with secure social support networks around them (Franke, 2014). Children who have had negative experiences such as being mentally, physically, or sexually abused, being bullied, etc., can end up with a poor health in adulthood (Bucci et al., 2016). These children are at a higher risk of developing diseases later in their adulthood such as heart disease, cancer, diabetes, asthma, or early death (Bucci et al., 2016).

Adverse Childhood Experiences (ACE) study by Felitti et al. (1998) was the first study to examine the effects of childhood trauma and health in adulthood. Results of the study by Felitti et al. (1998) was that individuals experiencing one or more ACE were much more likely to get into substance abuse, smoking, drinking, and to have broken self-image during adulthood. Other health problems such as developing cardiovascular disease or developing cancer in adulthood can also be the result of a childhood trauma. Studies show that the more ACE a child experiences, the more likely it is for the child to develop mental and physical disorders. Furthermore, a child is more likely to try coping by abusing alcohol and drug leading to prolonged disorders (Shonkoff & Garner 2011). An individual with ACE’s has, by all accounts, been physically, emotionally, or sexually abused as a child and grown up in a household where there is domestic violence or the caregivers have mental illness, alcohol, drug abuse or criminal problems (Walsh, McCartney, Smith, & Armor, 2019). When these children grow up, they are more likely to be smokers, substance users, cope with alcohol, or get cancer or heart diseases (Felitti et al. 1998). The chain reaction continues when these individuals have children themselves, due to lack of care and for many ACE’s, their children are also likely to experience ACE in their youth and lack healthy brain development, thus becoming more anxious, more violent and at risk of toxic stress (Folger et al., 2018).
Early Intervention (EI) is defined as early involvement and assessment of bio-psycho-social intervention in people at risk of developing a mental illness or in the early stages of mental illness (Neale & Kinnair, 2017). The goal of EI is to minimize a person's delay in the treatment they need to maximize recovery (McGorry & Mei, 2018). Early intervention is important for children who either have a parent with attachment problem or have multiple ACEs (Pitillas, 2020). EI for children growing up with parents with ACEs or an attachment disorder can come in the form of help from authorities like doctors, nurses, teachers, and others taking care of the child. If these individuals intervene and help parents coping with their problems, children are more likely to have healthy brain development (Pitillas, 2020). Studies have also investigated the effects of early intervention in people at risk of developing post-traumatic stress disorder (PTSD) after traumatic live event (Kearns, Ressler, Zatzick, & Rothbaum, 2012; Agorastos, Marmar, & Otte, 2011; Price, Kearns, Houry, & Rothbaum, 2014). A pilot study by Rothbaum et al. (2014) shows that individuals with a so-called "risk" genotype were more at risk of developing PTSD than individuals with a "low-risk" genotype. Treatments that have been successful in EI for people who have suffered a trauma are cognitive behavioural therapy (CBT) and exposure therapy (PE) (Yule, 2011; Foa, 2011). There appears to be a snag on whether an early intervention works for people at risk for PTSD, it seems to depend on the severity of the trauma and the timing of EI whether a treatment works or not (Litz et al., 2006). A study conducted by Rothbaum and associates (2012) shows that for early intervention in the form of PE or CBT, a person must be treated very soon or within a week after the trauma to reduce the likelihood of PTSD. The study of Rothbaum et al., (2012) showed that people who had an early intervention in the form of PE a few hours after the trauma had fewer symptoms of PTSD, one and three months after the trauma. People who received PE intervention more than a week after the trauma had
more symptoms of PTSD (Rotbaum et al., 2012). The main limitation with EI is that it can be challenging to see if an individual will develop PTSD after trauma, so shortly after the incident, and what methods of early intervention might work for that individual (Bryan, 2015).

As the above text indicates, previous research has shown that early life trauma can have serious impact on health later in life. One form of early trauma is parental neglect, but studies have shown that for children who grow up with inadequate care from caregivers, that is, do not receive enough emotional value and love, witness violence or are abused, raised in poverty or with parents who are alcoholics, development can be harmed by both mentally and emotionally. Early intervention can have a positive impact on the normal development of children. The present study examined the link between early life trauma and mental health in adulthood. The study also looked at whether childhood trauma is linked with maladaptive behaviour in adulthood and to what extent childhood trauma is linked to parental neglect. Finally, the study examined the potential impact of early intervention. The study will also add to the existing literature by comparing early life trauma not only to no trauma but also to trauma that occurs later in life. Two hypotheses were tested in this study 1) individuals who had trauma in childhood have worse mental health than individuals who did not have trauma in childhood and 2) early intervention for those who have had trauma early in life has a positive effect on mental health in adulthood.

Methods

Participants

A total of 180 individuals participated in this study, 156 women (89%), 19 males (11%), and five who did not define their gender. 2.2% were 18-20 years old, 12.8% were 21-25 years old, 7.8% were 26-30 years old, 11.7% were 31-34 years old, 17.8% were 35-39 years old,
11.1% were 40-44 years old, 10% were 45-49 years old and 26.7% were 50+ years old.

Participants in this study were recruited through the social media app Facebook. The study was approved by the National Bioethics Committee in Iceland. Participants were informed about the nature of the questionnaire and that they could withdraw their participation at any point and choose not to answer particular questions. They were also offered one interview with a clinical psychologist free of charge if they felt that answering the questionnaire brought up some difficult feelings. Participants received no credits for their participation in this study.

Measures

Demographic. Participants answered 20 questions that related to their background, traumatic experiences, alcohol consumption, and consumption of drinks including caffeine. The questions "did you experience trauma before the age of 14?" and "did you experience trauma after the age of 14" were both two-dimensional (yes or no). The rest of the questions were on a nominal scale. The question “did you get help after the trauma“ had seven response options, “yes immediately after“, “yes 1-3 months after the trauma“, “yes 4-12 months after the trauma“, “yes 1-2 years after the trauma“, “yes 2-5 years after the trauma“, “yes 5+ years after trauma “ and “no, I got no help“. The question "how is your relationship with your parents,” had seven response options, “very good“, “good“, “fair“, “not good“, “don’t talk to my parents“, “have lost another/both parents but communication was good“, “have lost another/both parents but communication was bad“. Two questions were on a nominal scale and a half-open question. That was the question, “in what form do you define the help you received after the trauma“. The answer options were eight. “got psychological assistance”, “got help from the Icelandic Red Cross”, “a GP helped me”, “got psychological support from a pastor”, “have a good support network”, “parent helped me through the trauma”, “friends helped me
through the trauma”, and the last option was “other, then what” a participant could then write what other help he received after trauma. The second question that was half-open and on a nominal scale was, “have you been diagnosed with any of the following mental illnesses” The response options were six. “depression”, “anxiety”, “PTSD”, “bipolar”, “no, i have not been diagnosed with any of the mentioned disorders”, and the last option was "other, then what” a participant could then write what other help he received after trauma (See appendix A).

The Posttraumatic Stress Disorder Checklist (PCL-5). PCL-5 is a 20-question self-report list that assesses the symptoms of Posttraumatic stress disorder (PTSD) following the DSM-5 manual. The checklist estimates how much the traumatic event that an individual encountered influenced him in the last month (Blevins, et al., 2015). The list consists of questions about,” frequent memories of the stressful experience”, “upset when something reminded a person of a stressful event”, “avoid memories of a stressful event”, “have strong negative feelings about the stressful event” and “blame themselves or someone else for the stressful experience”. The list has been translated into Icelandic and standardized by Berglind Guðmundsdóttir et al. (2015). The list is a 5-point Likert-scale where an individual assesses how much impact the event has had on their life; 0 (nothing), 1 (low) 2 (medium) 3 (considerable), 4 (very high) (Blevins, et al., 2015). Total scores are then calculated. If an individual scores more than 33 points, the individual is considered to suffer from PTSD (Blevins, et al., 2015).

Reliability analysis in this study showed high Cronbach’s alpha, $\alpha = 0.97$. All items appeared to be worthy of retention. This is in line with other studies that have used the PCL-5 list (Bovin, et al., 2016).

Life Events Checklist for DSM-5 (LEC-5) Extended Version. LEC-5 is a self-report list in two parts. The first part is 17 questions on a 6-point nominal scale on potential events that
could cause PTSD symptoms in a person (Gray et al., 2004). The questions in the first section are about natural disasters, transport accidents, physical violence, sexual violence, weapon attack, war or proximity to war, captivity, sudden death, and other stressful events (Gray et al., 2004). The response options for the first part are on a nominal scale and are “happened to me”, “witnessed it”, “learned about it”, “part of my job”, “not sure”, and “doesn't apply” (Gray et al., 2004). There is no computational formula for the LEC-5 list. It is only looking at how many traumas an individual has experienced and seeing if these traumas cause PTSD symptoms. The second part includes seven questions asking about “what had the most impact in the first part of the list”, “how long since the event occurred”, “whether the event happened more than once”, “whether the event comprised of death or sexual violence”, “whether the event happened to the person or the person has been made aware of or witnessed it” (Gray et al., 2004). The LEC-5 list was translated into Icelandic and standardized by Berglindi Guðmundsdóttir et al. (2015).

**Depression, Anxiety, and Stress scales (DASS-21).** DASS-21 is a self-report list where people evaluate their negative feelings last week and indicate on a four-point scale how appropriate a particular statement is for them. 0 (Never), 1 (Sometimes), 2 (Often), 3 (Almost always) (Norton, 2007). The list has been successful in identifying anxiety, depression, and stress in individuals in Iceland and around the world (Norton, 2007). To diagnose depression, anxiety, and stress, specific questions are added together and compared to specific cut-off scores. Seven questions belong to each of the factors (Norton, 2007). For depressive symptoms, the list consists of seven questions about “whether a person felt depressed “, “did not get passionate about anything”, “felt worthless”, “suicidal”, “did not look forward to anything”, and “could not start anything”. There are different scores between factors. To get a diagnosis of severe depression, you need to score higher than 14 on these seven questions (Norton, 2007). For
anxiety symptoms, the list consists of seven questions that consists „difficulty breathing“, „dry mouth“, „public fear“, „close to panic“, „feeling fear for no reason“. For diagnosis of severe anxiety, more than 10 points out of 21 possible must be scored. For stress symptoms, the list consists of seven questions that consists with „hard to wind down“, „tended to over-react“, „lots of nervous energy“, „getting agitated“, „difficult to relax“, and „rather touchy“. For diagnosis of severe stress, more than 17 points out of 21, must be reached on the seven questions that accompany this factor (Norton, 2007). The list has been standardized in Iceland and translated by Pétur Tyrfingsson (2005). Reliability analysis in this study showed high Cronbach’s alpha, $\alpha = .909$ for depression, $\alpha = .860$ for anxiety and $\alpha = .901$ for stress. All items appeared to be worthy of retention. This is in line with other studies that have used the DASS-21 list (Musa et al., 2007; Henry & Crawford, 2005).

**Research design**

Participants who answered the demographic variable questions and took the PCL-5 and DASS 21 list were divided into three groups (those who received trauma before 14 years, those who received trauma after 14 years and those who had no trauma). One-way ANOVA was used to check whether there was a significant difference between groups on PTSD, stress, anxiety and depression. A Bonferroni post-hoc test was used to compare individual groups. A one-way ANOVA was also used to compare trauma individuals who received early intervention vs. those who did not and to compare the three groups on various demographics and maladaptive behaviours. The statistical significance level was set at $\alpha = .05$.

**Procedure**

Participants were requested through the social media Facebook app, where the list was shared on several public and private groups. Individuals older than 18 years were able to
participate. In the informed consent form, it was stated that this study was anonymous, and it was not possible to trace the participants' responses along with other important information (see appendix B). Participants began responding to questions referring to background information and information on trauma, intoxicants, and caffeine consumption. The participant then answered the LEC-5 list, then the PCL-5 list, and finally, the DASS-21 list. The LEC-5 list was not included in the analysis of the data in the present study.

**Results**

The aim of this study was to examine the mental health of people who have been traumatized early in life and later compared with people who have not been traumatized. This study also examined whether people who have had a trauma before 14 years of age and got intervention, had better mental health than people who had no intervention. Measurements for mental health included the PCL-5 list for PTSD, and the DASS-21 list for depression, anxiety, and stress. One-way ANOVA was used to compare the three groups, trauma before 14, after 14 and not trauma. Follow up analysis (Bonferroni) were used to compare the groups to each other. The statistical significance was set for alpha = .05.

**Various demographics**

A one-way ANOVA was run to compare the three groups on the various demographics and maladaptive behaviour; age, education, parental interaction, substance use (illegal drugs, vape, smoking and drinking alcohol) and caffeine consumption. The results showed that there was no significant difference between the three groups on any of the tested variables. Of the 19 men who answered the questionnaire, 7 had not experience trauma, 5 were traumatized before the age of 14, and 7 after the age of 14. Of 156 women who answered the questionnaire, 27 had not experienced trauma, 94 were traumatized before the age of 14, and 42 after 14 years of age.
Of the 180 people who answered the question about age, most of the individuals were in the age group 50+ years old. Of the 180 people who answered the question "what is your highest level of education", most were with a B.Sc. degree \( (n=47) \), and the next was a master’s degree \( (n=39) \).

The three groups had similar distribution in how they answered the question on relationship with their parents. Of the 179 people who answered the question about communication with parents, most were in very good or good relationship with parents \( (n = 99) \), followed by decent communication \( (n = 23) \) and those who did not speak to their parents or had poor interaction with them \( (n = 9) \). Of 180 individuals who answered whether they drank coffee or other caffeine drinks, the majority were coffee drinkers \( (n = 118) \), and second, most were high caffeine drinks \( (n = 46) \). Of the 180 people who answered the question, "Do you consume any of these intoxicants," most were alcoholic drinkers \( (n = 112) \) and followed by smokers \( (n = 31) \).

**Trauma and mental health**

One hundred eighty people answered the questionnaire. Of these 180, 174 responded to the PCL-5 list. Out of 174, 115 who did not reach the PTSD diagnostic criterion, and 59 reached the PTSD diagnostic criterion, scored 33 or higher on the list. A total of 102 individuals responded that they had been traumatized before the age of 14. Of those 102 individuals, 53\% \( (n=54) \) did not have PTSD symptoms, and 46\% \( (n=47) \) had PTSD symptoms, one was missing (see Figure 1).
Figure 1. Score on PCL-5 list from individuals who have been traumatized before the age of 14. Forty-three people answered yes to the question of having been traumatized after the age of 14. Of the 43 individuals who responded to the PCL-5 list, 71% (n=31) did not reach the PTSD diagnostic criterion, and 28% (n=12) met the PTSD diagnostic criterion (see Figure 2).

Figure 2. Score on PCL-5 list from individuals who have been traumatized after the age 14

171 individuals responded to the depression scale on the DASS-21 list, 30 had no trauma, 41 had trauma after 14 years, and 100 had trauma before 14 years. 172 individuals responded to anxiety
and stress scales on the DASS-21 list, 30 had no trauma, 42 trauma after 14 years, and 100 trauma before 14 years (see Table 1).

Table 1

The three groups, trauma before 14 years, trauma after 14 years, and no trauma and number of individual, mean and std. deviations from DASS-21 list and PCL-5 list

<table>
<thead>
<tr>
<th></th>
<th>Trauma before 14</th>
<th>Trauma after 14</th>
<th>No trauma</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>100</td>
<td>7.29 5.30</td>
<td>42 6.16 4.96</td>
</tr>
<tr>
<td>Depression</td>
<td>100</td>
<td>6.50 5.56</td>
<td>41 6.48 5.46</td>
</tr>
<tr>
<td>Stress</td>
<td>100</td>
<td>8.56 5.68</td>
<td>42 7.24 5.37</td>
</tr>
<tr>
<td>PTSD</td>
<td>101</td>
<td>30.05 18.91</td>
<td>43 23.44 17.69</td>
</tr>
</tbody>
</table>

The results from the one-way ANOVA showed a significant difference between groups for anxiety $F(1, 170) = 10.16 p = .002$. And stress $F(1, 170) = 7.95 p = .005$. But not significant difference in depression $F(1, 169) = 2.01 p = .158$. Follow up analysis shows that the trauma before 14 years old are significantly different from no trauma group for anxiety ($p = .001$) and stress ($p = .001$), but not for depression ($p = .100$). There was no significant difference between the groups, trauma before 14 years old and after for anxiety ($p = .607$), stress ($p = .686$) and depression ($p = 1.00$). As can be seen in table 1, those who suffered trauma in childhood are both more anxious and with more stress than individuals who did not suffer a trauma. However, there is no significant difference in depression depending on whether you suffered trauma in childhood or not. There were significant differences in mean PTSD symptoms between the three groups.
CHILDHOOD TRAUMA AND MENTAL HEALTH

\[ F (2, 171) = 20.060, p < .001. \] A Bonferroni post hoc test confirmed that those who did not experience trauma had significantly fewer PTSD symptoms (\( M = 7.36, SD = 8.46 \)) than those who experienced trauma before the age of 14 (\( M = 30.04, SD = 18.91, p < .001 \)) and after the age of 14 (\( M = 23.44, SD = 17.69, p < .001 \)). The group that experienced childhood trauma had the highest mean score on the PCL-5 list but the difference between the two trauma groups was not significant (\( p = .111 \)).

**Childhood trauma and intervention**

One hundred two people answered the question; “did you get help after the trauma”. Of these 102 individuals, 7 received help immediately or up to three months after the trauma, five responded that they received help four months to 2 years after the trauma, 19 responded that they received help 2 to 5+ years after the trauma and 71 people received no help after childhood trauma. Of these 102 individuals, 100 responded to the DASS-21 list and 101 individuals responded to the PCL-5. (see table 2)
Table 2

The number of individuals and the percentage of those who received intervention vs. no intervention after trauma and how many individuals are experiencing normal or severe anxiety, depression, and stress and whether they reach PTSD diagnostic criteria.

<table>
<thead>
<tr>
<th></th>
<th>received help immediately to 3 months after trauma</th>
<th>received help 4 months to 2 years after the trauma</th>
<th>received help 2 to 5+ years after the trauma</th>
<th>no help after childhood trauma</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>normal anxiety</td>
<td>4</td>
<td>57.2</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>normal depression</td>
<td>6</td>
<td>85.7</td>
<td>4</td>
<td>80</td>
</tr>
<tr>
<td>normal stress</td>
<td>4</td>
<td>57.1</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>severe anxiety</td>
<td>3</td>
<td>42.8</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>severe depression</td>
<td>1</td>
<td>14.3</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>severe stress</td>
<td>3</td>
<td>42.9</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>reach PTSD diagnose</td>
<td>3</td>
<td>42.9</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>not reach PTSD diagnose</td>
<td>4</td>
<td>57.1</td>
<td>3</td>
<td>60</td>
</tr>
</tbody>
</table>

There was no significant difference between those who did not get intervention ($M = 2.41 \ SD = 1.49$) and those who did get intervention on depression ($M = 2.35 \ SD = 1.51$, $p = .834$), anxiety ($M = 3.35$, $SD = 1.74$ vs. $M = 3.01 \ SD = 1.62$, $p = .706$), stress ($M = 2.27$, $SD = 1.44$ vs. $M = 2.35$, $SD = 1.47$, $p = .620$) and PTSD ($M = 28.95$, $SD = 19.66$ vs. $M = 30.04$, $SD = 18.91$, $p = .519$).
Discussion

This study aimed at examining the mental health of adult individuals who had childhood trauma compared to individuals who had not experienced trauma or experienced trauma after the age of 14. The PCL-5 list was submitted to check for PTSD symptoms and the DASS-21 list to check anxiety, depression, and stress. It was also examined whether individuals who had been traumatized before the age of 14 and had received intervention had better mental health than those who did not have an intervention after trauma. And if individuals who had experienced trauma were in worse contact with their parents and whether they are likely to be substance users or consume more of drinks including caffeine. The hypotheses were two; 1) individuals who had trauma in childhood have worse mental health than individuals who did not have trauma in childhood and 2) early intervention for those who have had trauma early in life has a positive effect on mental health in adulthood. Results of this study showed that individual that had trauma in childhood had more symptoms of stress and anxiety \((p < .05)\) but there were no significant differences in depression \((p = .158)\) compared to individuals who had not been traumatized in childhood. There was no significant difference between the three groups (no trauma, trauma before 14 years and trauma after 14 years) on parental interaction, substance use (illegal drugs, vape, smoking and drinking alcohol) and consumption of drinks including caffeine. However, two groups (trauma before and after 14 years) showed a higher mean score than the no trauma group on factors above. Individuals who were traumatized before the age of 14 had a higher mean score and scored more often 33 or higher on the PCL-5 list. However, there was no significant difference between those two trauma groups (trauma before 14 year and trauma after 14 year). These results were consistent with previous studies that has shown that people who have had childhood trauma had more symptoms of stress, anxiety, and also more suicidal thoughts than those who have not experienced childhood trauma, these children were also more
likely to develop PTSD (Gamache et al., 2016; Folger et al., 2018). Individuals who had not experienced childhood trauma, had according to the DASS-21 list, better mental health in terms of anxiety and stress. Although there were no significant differences in depression between individuals who experienced childhood trauma.

There was no significant difference in the mental health of individuals that had been traumatized in childhood depending on whether they got intervention or not \((p = 1.00)\). These findings were not in line with previous research (Pitillas, 2020; McGorry & Mei, 2018). But previous research showed that people who have an intervention immediately or about a month after a trauma had better mental health than those who get an intervention too late or no intervention at all (Kearns, Ressler, Zatzick, & Rothbaum, 2012; Agorastos, Marmar, & Otte, 2011; Price, Kearns, Houry, & Rothbaum, 2014). The reason why there was no significant difference in this study could be that very few received intervention after trauma in childhood. Out of 102 individuals who suffered trauma before the age of 14, 17.2% \((n=31)\) received intervention after the trauma and 39.4% \((n=71)\) did not receive intervention after the trauma. Also, very few who received help immediately after a trauma or only 3.9% received help immediately or up to three months after the trauma. However, 10.6% received help after two to five years after the trauma. Although the results of this study have not shown that early intervention has a significant effect, we can see that previous research shows the importance of intervening quickly after childhood trauma. Coping with anxiety and stress has a substantial impact on the entire immune system (Bernstein et al., 2013). As previous research has shown, endless activity in the fight or flight system can have a very detrimental effect on the immune system (Bucci et al., 2016; Felitti et al. 1998). By helping the child immediately after a trauma, it could be possible to reduce the chances of chronic heart and vascular diseases in the future.
There were some limitations to this study. To get the best overall picture of the mental health of people who have been traumatized during childhood the study would have needed more participants and a greater distribution in gender. Covid-19 may have affected the results of the study since there were not many participating in online surveys at the time when this study was submitted. It would also be interesting for future researches to focus on children who have experienced trauma and set a particular intervention plan for these children. With a long-term study, a child's mental health in adulthood could be compared with previous studies in children who had not received the intervention after trauma.
References


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Appendix A

Trauma in Childhood Questionnaire

Áföll í æsku.
Vinsamlegast svaraðu eftirfarandi spurningum eftir þinni bestu vitund. Í sumum spurningum getur verið fleira en eitt rétt svar, vinsamlegast merktu þá við alla valmöguleika sem eiga við þig (þegar slíkt er tekið fram). Ef þér finnst enginn af svarmöguleikanum eiga við þig merktu þá við það sem þér finnst vera næst því. Þér er frjálst að svara ekki einstökum spurningum eða hætta við að svara spurningalista hvenær sem er á meðan fyrirlögn stendur.

1. Kyn
   a. Karl
   b. Kona
   c. Annað

2. Aldur
   a. 18-20
   b. 21-25
   c. 26-30
   d. 31-35
   e. 36-40
   f. 41-45
   g. 46+

3. Hvert er hæsta menntunarstig þitt
   a. Grunnskólapróf
   b. Stúdentspróf
   c. Iðnpróf
   d. Bakklársgráða
   e. Meistarasgráða
   f. Doktorsgráða
4. Varðst þú fyrir áfalli fyrir 14 ára aldur
   a. Já
   b. Nei

5. *Ef þú svaraðir neitandi spurningu nr 4 máttu svara næst spurningu 9.* Ef þú svaraðir játandi spurningu nr 4 þá; Fékkst þú hjálp til að vinna úr áfallinu eftir að það gerðist?
   a. Já, strax á eftir
   b. Já, 1-3 mánuðum eftir áfall
   c. Já, 4-12 mánuðum eftir áfall
   d. Já, 1-5 árum eftir áfall
   e. 5+ árum eftir áfall
   f. Nei fékk enga hjálp

6. Í hvaða formi skilgreinir þú hjálpina sem þú fékkst eftir áfallið?
   a. Fékk sálfræðiaðstoð
   b. Fékk hjálp frá Rauða Krossinum
   c. Heimilislæknir hjálpði í gegnum áfallið
   d. Fékk sálràðn sunuðning hjá prest
   e. Hef gott stuðningsnet
   f. Foreldri/ar hjálpduðu mér í gegnum áfallið
   g. Vinir hjálpduðu mér í gegnum áfallið
   h. Annað, þá hvað __________________________

7. Á hvaða aldi varstu þegar áfallið átti sér stað?

Hér getur verið fleiri en einn svarmöguleiki. Ef þú varðst fyrir fleiri en einu áfalli merkta þá við aldursbilið sem þú varst á þegar aföllin áttu sér stað. Ef þú varðst fyrir fleira en einu áfalli innan sama aldursbila merkta þá við aldursbilið og einnig e lið.
   a. 0-3 ára
   b. 4-7 ára
   c. 8-11 ára
   d. 12-14 ára
   e. Ég varð fyrir fleira en einu áfalli en það er innan sama aldursbila
8. Fékkstu einhver lyf til að hjálpa þér í gegnum áfallið t.d kvíða eða þunglyndis lyf?
   a. Já, og tek þau enn
   b. Já, en tek þau ekki lengur
   c. Nei, fékk engin lyf

   a. Áfengi
   b. Sigarettur
   c. Rafrettur/Vape
   d. Fíkniefni
   e. Drakk áfengi en er hætt/ur
   f. Reykti/notaði Rafrettur en er hætt/ur
   g. Neyti fíkniefna en er hætt/ur
   h. Nei nota ekkert af þessu

10. Ef þú svaraðir a-d lið í spurningu 7 þá; hversu oft á viku neytir þú þessara vímugjafa?
    a. 1-2 í viku
    b. 3-4 í viku
    c. 5-7 í viku
    d. neyti þá sjaldan eða um 1-3 í mánuði
    e. neyti þá sjaldan eða um 1-5 sinnum á ári

11. Ef þú svaraðir f-h lið í spurningu 7 þá; hversu lang er síðan þú hættir að nota þessa vímugjafa?
    a. 1-4 vikur
    b. 2-6 mánuðir
    c. 1-2 ár
    d. 2-4 ár
    e. 5+ ár

12. Hvernig eru samskipti þín við foreldra þína?
    a. Mjög góð
    b. Góð
CHILDHOOD TRAUMA AND MENTAL HEALTH

   a. ADHD/ADD
   b. Einhverfu eða á Einhverfurófi
   c. Tourett
   d. Annað
   e. Nei hef ekki verið greind/ur

   a. Þunglyndi
   b. Kvíða
   c. Áfallastreituröskun (PTSD)
   d. Geðhvarfasýki (Bipolar)
   e. Annað
   f. Nei hef ekki verið greind/ur

15. Tekur þú lyf vegna greiningar eða veikinda að staðaldri?
   a. Já
   b. Nei

16. Drekkur þú kaffi eða aðra koffíndrykki?
   a. Já drekk kaffi
   b. Já drekk koffíndrykki með háu koffíninnihaldi t.d Nocco, Monster, Amino o.fl
   c. Já drekk koffíndrykki t.d Coca-Cola, Pepsi o.fl
   c. Nei drekk hvorugt
17. Ef já við spurningu 14 þá; hversu mikið af kaffi/koffíndrykkjum neytir þú?
   a. Drekk meira en 10 á dag
   b. 5-10 á dag
   c. 1-4 á dag
   d. 6+ í viku
   e. 3-5 í viku
   f. 1-2 í viku
   g. Drekk 1-12 á ári

18. Hefur þú upplifað ofbeldi eða áfall eftir 14 ára aldur?
   a. Já
   b. Nei

19. Ef þú svaraðir já við spurningu 18 þá; Á hvaða aldri varstu þegar áfallið átti sér stað?
Hér getur verið fleiri en einn svar möguleiki. Ef þú varðst fyrir fleiri en einu áfalli merktu þá við aldursbilið sem þú varst á þegar áföllin áttu sér stað. Ef þú varðst fyrir fleiri en einu áfalli innan sama aldursbila merktu þá við aldursbilið og einnig flið.
   a. 15-18 ára
   b. 19-22 ára
   c. 23-26 ára
   d. 27-30 ára
   e. 31+ ára
   f. Ég varð fyrir fleiri en einu áfalli en það er innan sama aldursbila.

20. Fékkstu einhver lyf til að hjálpa þér í gegnum áfallið t.d kvíða eða þunglyndislyf
   a. Já, og er enn að taka þau
   b. Já, en tek þau ekki lengur
   c. Nei fékk engin lyf
Kæri þátttakandi

Þessi spurningalisti er hluti af Bs.c verkefni Tinnu Sifjar Bergþórsdóttur í sálfræði við Háskólan í Reykjavík, unnið undir leiðsögn Kamillu Rún Jóhannsdóttur, dósent.


Þær upplýsingar sem þú lætur af hendi verða aðeins notaðar í rannsóknarnskyni. Svörin þín eru ekki persónugreinanleg og því ekki hægt að rekja svör til einstakra þátttakenda. Óllum gögnum verður eytt að rannsókn lokinni. Þú hefur fullan rétt á að hætta þátttöku í þessari rannsókn hvenær sem er á meðan fyrirlögn stendur.

Engin áhætta fylgir þátttöku í rannsókninni en einstaka spurningar gætu valdið þér vanlíðan. Minnt er á að þú getur sleupt að svara einstaka spurningum eða hafnað þátttöku í rannsókninni á hvaða stíg sem er án þess að það hafi nokkur aðrir. Vakni upp vanlíðan tengt því að svara spurningum í þessari rannsókn er þér bent á að þér stendur til boða eitt gjaldfrjálst viðtal við klínískan sálfræðing, Valgerði Eiríksdóttur. Hægt er að hafa samband beint við Valgerði í gegnum tölvupóst (valgerdure@ru.is).

Rannsóknin er unnin með samþykkri Vísindasíðanefndar, tilkynning hefur verið send til Persónuverndar og rannsóknin hefur hlotið leyfi rektors Háskólan í Reykjavík.

Ábyrgðaraðili rannsóknarinnar er Kamilla Rún Jóhannsdóttir, kamilla@ru.is. Allar ábendingar varðandi spurningalistann skulu berast til hennar.

Þökkum kærlega fyrir þátttöku!

Ég hef lesið ofantalda lýsingu á rannsókninni. Ég geri mér grein fyrir skilyrðum þátttöku minnar. Með því að haka í þennan reit samþykki ég þessi skilyrði og mun svara eftir minni bestu vitund.