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The Relationship between Adverse Life Experiences in Childhood and Unhealthy Eating Behaviour in Adulthood: A Literature Review

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Abstract

The manuscript is simply discussing several forms of adverse childhood experiences (ACE) and their negative impact on children. ACE may contribute to the development of eating disorders (ED) that mostly appear during adolescence, and if untreated earlier, children will suffer ED chronically. Undoubtedly, we are humans that make mistakes, and such mistakes may be stressful to others. Also, life is not so easy; it involves difficulties as well as enjoyment. Thus, in this study, the author analyzed the stressful conditions that occur in childhood and their negative impact on human behaviour that can be developed into many disorders such as eating disorders, obsessive-compulsive disorders, and others. The author used the methodology of searching articles published between 1990 and till present. The authors investigated the factors that play a role in the appearance of such disorders such as culture, media, genetics, upbringing, environment, peers, school, and others. The severity of disorders depends on the intensity, harshness, and frequency of ACE. Moreover, the relative relationship between the child and the one who harmed him plays a significant role in the severity of disorders. Studies proved that treatment of disorders is not impossible, and relief can occur.

Keywords*: Adverse childhood experiences, Abnormal eating behaviours, Childhood psychological problems, Eating disorders, and treatment of eating disorders.*

Introduction

Undoubtedly, most people were exposed to different life experiences during their childhood that has a great impact on their psychological, mental, and physical health. States of mind that are formed during childhood through the interaction with attachment figures are undoubtedly affecting adults' behaviours. As a result, the adverse childhood experiences that last without tackling them and resolving the resulted impairments from such painful experiences may contribute to despair or perturbation, which leads to compensatory behaviours such as smoking, addiction, or unhealthy eating behaviours. Moreover, the consequences of such compensatory behaviours are more dangerous, for example, binge eating disorder is not confined to a disorder but can contribute to type two diabetes mellitus, which leads to heart disease. Time is not a curing process, but conversely, it buries the deep pain until it is lost and then appears in the form of compensatory behaviours. Encountering painful experiences and dealing with them are the first steps in the healing journey.

Aim and Objectives of the Study

The aim of the study is to assess the current understanding of the influences of adverse life experiences of children on their eating behaviours in adult life.

The manuscript includes three objectives; first, finding out the adverse life experiences in childhood that lead to abnormal eating behaviours in adults. Second, to find out the psychological concepts and principles that explain such behavioural influences. Third, to understand the extent to which these childhood

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experiences lead to changes in behaviour in adulthood.

Research Question and Its Significance

Mental health is one of the integral cores that affects society's progression, thus, discussion of the contributions, nature, and methods of treatment of psychiatric disorders is significant to society's development. The research question in this study is, how do adverse life experiences in childhood affect ED in adulthood? The authors answered this question through the study and reached a conclusion that could improve the well-being of people suffering from ED.

Methodology

Search Strategy

The author of this manuscript searched ScienceDirect.com, Google Scholar, and academia.edu through the use of different combinations of the following keywords: adverse childhood experiences, childhood psychological problems, and causes of abnormal eating behaviours in adults, as well as eating disorders and treatment of eating disorders. The search for literature was limited to publications in English especially the articles published between 1990 to present. Also, related articles were searched for, and the references of qualified articles were examined for further sources of information.

Discussion based on the Literature Review

Categories of Child Abuse

A study [5] was performed a study that illustrates the adverse childhood experiences (ACE) and their relation to unhealthy behaviours during adulthood. According to the study, maleficent childhood experiences are categorized as physical, psychological, or sexual abuse and household dysfunction such as parental addiction, household violence, mental illness of one parent, or incarceration of one of the parents. Other adverse childhood experiences such as trauma, neglect, bereavement, child labour, and exploitation. Such maleficent experiences have a negative impact on a child's emotions that, lead to deep frustration and depression. When such experiences are high frequency rated, high in intensity, or the exposure lasts for a long period of time, the child tries to escape emotionally from such painful emotions and tries to find an outlet in order to survive and tolerate such painful experiences.

The correlated interaction with deep pain in the form of unhealthy behaviours may be chronic, problematical, and hard to terminate, such as eating disorders, smoking, promiscuity that contributes to sexually transmitted diseases such as HIV/AIDS, substance abuse, depression, committing suicide, or lack of physical activity. Unhealthy behaviour contributes to treacherous diseases that may lead to death; for example, binge eating leads to obesity which contributes to type two diabetes mellitus (T2DM), which has many complications. These complications are divided into macrovascular and microvascular complications such as foot weakness and ulcers, amputation, cardiovascular diseases (CVD), strokes, kidney damage, eye problems such as Glaucoma that may contribute to loss of vision, neuropathy that may contribute to nerve deterioration, chronic high blood pressure, ketoacidosis that contributes to coma and may lead to death, skin complications, dental diseases and problems during pregnancy and delivery. Studies found that obesity is the main causative factor of T2DM because of insulin resistance and the very low level of plasma glucagon [16]. Studies claimed that the impact of severe experiences during childhood differs according to the rate of exposure to one or more adverse experiences. Thus, research revealed that sexual abuse is very painful to the child, particularly when it lasts for a long period of time, when it is very violent such as rape, or when the culprit is one of the parents. It is very difficult for the child to think that his criminal

parent doesn't love him but instead, he tries to empty his frustration, fear, and pain into unhealthy behaviour that lasts all over his life. Moreover, he learns that life is based on exploitation and as a result, he may cause harm to others (See Figure 4 & 7).

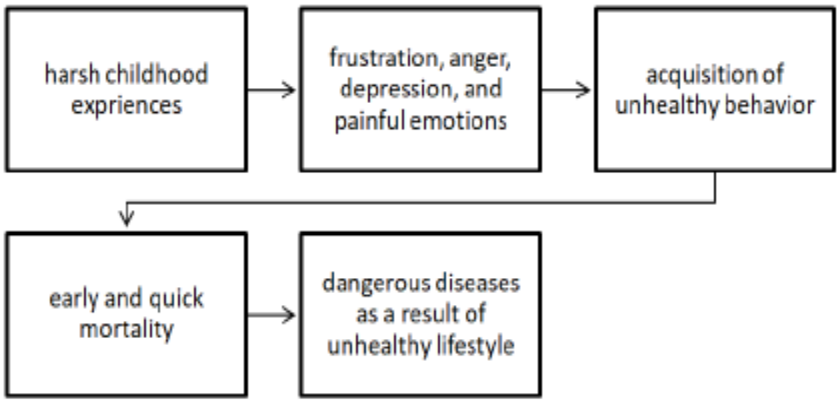

Figure 1. Consequences of Adverse Childhood Experiences

Studies have found out that parental overprotection and forcing the child to be involved in an activity or something that he doesn't like are factors that may contribute to eating disorders among children. Moreover, discussion of sexual issues at an earlier timing in which adolescents are not ready and well trained to deal with such issues may constitute stress on them, which may contribute to eating disorders. Changing the place of residency can be stressful for children and may contribute to acquiring coping behaviours. Also, eating disorders were found among children with disabilities, children whose siblings experience disability, and children who grew in institutions or orphanages [11].

Table 1. Types of Adverse Childhood Experiences

Physical abuse	**Sexual abuse**	**Emotional abuse**	**Household dysfunction**	**Traumatic events**	**Neglect**
Kicking	Sexual assault	Bullying	Domestic violence	Bereavement	Physical neglect
Pushing	Rape	Verbal abuse	Incarceration of one of parents	Accidents	Emotional neglect
Beating	Provocation	Threatening	Addiction	Natural disasters	Educational neglect
Punching	Molestation	Exploitation	Mental illness	-	Medical neglect
Grapping	-	Ignoring	Divorce	-	Moral neglect
Slapping	-	Rejection	-	-	-
Slamming	-	-	-	-	-
Burning	-	-	-	-	-
Using sharp tools	-	-	-	-	-
Threatening with sharp tools	-	-	-	-	-

Factors Contributing to Eating Disorders' Development

Eating disorders are simply a sort of mental illness caused by different factors such as genes because studies found that responsible genes develop obsessive-compulsive disorder (OCD) during infancy, eating orders, depression, and perturbation during adulthood [23]. Another factor was found to affect evolving eating disorders: personal characteristics such as perfectionism or impulsiveness. Also, other mental illnesses can be causative factors to eating disorders such as schizophrenia, OCD, or neuroticism.

Cultural notions and media can contribute to eating disorders, as studies found that the rate of people who experience eating disorders among cultures that do not accept thinness is lower than the rate of people who suffer from eating disorders in other cultures. A study [24] illustrated that there is a relationship between dysfunction of the endocrine gland and anorexia nervosa. Also, children may experience unhealthy eating behaviours if their mother suffers from an eating disorder.

Eating disorders are more common in women than men, as experiments showed that women endure starvation more than men because of their different metabolic nature and sex characteristics [23]. Studies found that eating disorders may cause death if untreated and are considered chronic as people who experience eating disorders show a high percentage of relapses [23]. They almost appear during adolescence and also may appear among children as studies found that high rates of children whose ages range from nine years old to 13 years old don't take their breakfast every day, and such behaviour has a negative impact on their health [6]. Another study had claimed that eating disorders appear more among male children than female children, but after maturation, boys develop other coping behaviours rather than ED, while during adolescence and adulthood, ED is more common among girls than boys [20].

Types of Eating Disorders

A study [6] revealed that eating disorders include various types such as Anorexia nervosa and Bulimia nervosa that are considered clinical disorders, i.e., most patients who go to clinics or hospitals experience anorexia or bulimia. Other unhealthy eating behaviours have not been specified above, such as binge eating, night eating syndrome, and others (See Table 2).

Both anorexia and bulimia are not only confined to physical problems such as hormonal disturbances, kidney failure, anemia, bone and teeth weakness, dehydration, or heart diseases but also patients suffer low self-esteem, persistent fear of weight gain, anxiety, depression, substance abuse, social problems, attempts of suicide or even committing suicide. Studies found that the rate of depression, suicide, and substance abuse among patients with anorexia, bulimia, or binge eating disorder is higher than the rate among other people [6]. In the case of anorexia, girls are often underweight, but they see themselves obese, so they stop dieting because of weight gain obsession. In case of bulimia, girls' weight maybe normal, but they experience frequent binge eating of large amounts of food in short periods of time accompanied by lack of control, and followed by unhealthy purging behaviours such as intentional vomiting, using laxatives, diet loss pills or over-exercising [6]. Studies found that a lack of zinc is prevalent among children who experience anorexia nervosa [24].

Purging behaviour can contribute to hypokalemia because of excessive loss of water and minerals through the overuse of laxatives and also because of the excessive loss of acids through vomiting. As a result, they may suffer renal damage, nephropathy, and other cardiovascular diseases that may lead to death [13]. Binge eating is considered as frequent overeating of a large amount of food in short

periods of time regardless of satiety, accompanied by lack of control, secrecy, guilt, and depression, but it is not accompanied by purging behaviours. It may contribute to severe obesity and, subsequently type two diabetes mellitus. It is common among people that suffer from binge eating disorder BED that they have a phobia of gaining weight and over concern about their body weight and shape. This is the trigger that pushes them to start binging episodes, after which they become more depressed and feel shame, guilt, and despair [19].

Past researchers revealed that higher mortality rates are shown among patients who suffer anorexia nervosa, but a current study showed that higher suicide mortality rates were observed among patients who suffer bulimia nervosa and non-specified eating disorders. Women aged between 30 to 40 years old showed the highest rates of suicide. Moreover, the study claimed that suicide mortality rates among people who suffer from eating disorders are higher than mortality rates that are resulted from other problems such as substance abuse, health problems, or traumatic problems [3].

Studies claim that it is common among adolescents who suffer from eating disorders (ED) that they don't understand nor accept their negative emotions. Thus, they cannot express their feelings nor deal with them, so they perform an alternative behaviour in order to relieve pain and regulate their painful emotions but in a deleterious way. Emotional disturbance is normal during adolescence because simply it is the phase of emotional development, but if the parents and adolescents cannot deal with it in the right way, it will be problematic and may contribute to a lack of emotional regulation [25]. Emotional eating is characterized by eating anything at any time and difficulty in choosing the type of food that is desired to be eaten by the adult who suffers from BED. Studies found that levels of cortisol among women who suffer from BED are higher than that of other women when they are put under stressful conditions. It is known that the cortisol hormone is highly secreted during stressful conditions, and it is responsible for appetite control [22]. That's why patients who are emotionally driven to binge eating episodes have a great problem with feelings of satiety and hunger. Studies revealed that women who are confident of their physical needs, such as the feeling of hunger, satiety, thirst, exhaustion, sadness, depression, or other feelings, are less susceptible to developing ED [22].

Furthermore, children experience other types of disorders as pervasive refusal syndrome, in which they refuse to eat, drink, do activities, or have social participation. Continuous exposure to violence, sexual abuse, or harsh trauma may contribute to this pervasive refusal syndrome.

Selective eating is another type of eating disorder in which children select one category of food and refuse other types of food, such as eating carbohydrates only. This type does not continue to adulthood. Food avoidance eating disorder (FAED) is similar to anorexia nervosa but with less severe symptoms [24].

Diagnosis

Eating disorders (ED) can be diagnosed through body max index (BMI), presence of negative thoughts, low self-esteem, low self-confidence, depression, anxiety, presence of harsh childhood experiences, presence of unordinary behaviours such as purging, and social isolation. Studies found that it is undesirable to diagnose anorexia nervosa among children on the basis of low body mass index (BMI) because children aged between eight to 13 years old almost have low BMI. Thus, it is practical to diagnose anorexia nervosa among children through the other symptoms. Moreover, ED can be diagnosed through lab investigations as patients who suffer from BED have high levels of blood insulin and leptin because their body became reluctant to normal levels of insulin and leptin secretions. It is known as insulin resistance and leptin resistance [12]. That's why most diabetic

type two patients are insulin resistant. Also, AN can be diagnosed through a complete blood count (CBC) that shows a number of red blood cells and haemoglobin in the blood. Severe BN can be diagnosed through levels of potassium and kidney functions. ED can be diagnosed in children through their eating avoidance, eating during a prolonged period of time, keeping food and eating it in a secret place, and phobia of weight gain because studies found that it is so difficult for the child to express his fear of becoming fat, that's why it is more precise for the therapist to diagnose ED through such behaviours not according to what expressed by the child [20]. Moreover, recent studies have revealed that ED has a negative impact on the development of secondary sex characteristics, menstrual cycle, and bone development [20].

Relationship between ACE and ED

A study [5] found that there is a significant relationship between harsh childhood experiences and evolving of eating disorders. A case study was performed about a patient who was suffering from chronic anorexia nervosa that lasted 19 years before starting treatment and the patient experienced separation of her parents when she was a child, and then she realized that she was not capable of forming healthy close relationships when she grew up. After she suffered the bereavement of her grandmother, she was so depressed, and her journey with an ED began to appear as a coping behaviour as well as smoking and alcohol abuse (see Figure 6). Moreover, she had more than one attempt to commit suicide. The patient showed anorexia nervosa symptoms such as the denial of her body underweight, refusal to eat to reach a normal weight, an obsession with food, over-exercising, and continuous fear of gaining weight. After her long-suffering with ED, she was diagnosed with hypokalemic nephropathy, which may lead to severe renal damage [13].

The research found that there is a significant relationship between the effect of puberty on mood fluctuation and personality formation among girls experiencing eating disorders [17]. When adolescents struggle with domestic violence, traumatic incidents, or any type of abuse besides their struggle with their difficult development stage, it may contribute to suffering from eating disorders or any other unhealthy coping behaviour.

Research asserted that the lack of unconditional love and acceptance given by parents to their children is one of the significant factors that lead to eating disorders [14]. Stress is one of the most important causative factors of eating disorders as when the child is put under highly stressful conditions, and he may discharge stress in the form of eating too much food that exceeds his stomach capacity if such behaviour continues for a long period of time, the child will be obese (see Figure 2). Many societies adopt discrimination and bullying behaviours against obese people, including obese children. Moreover, the media promotes thinness and measures the beauty of people, especially girls, according to their body shape. Such notions increase stress over obese children, that contribute to deep low self-esteem to the extent that the child may suffer self-hatred, depression, and anxiety. Such deep painful feelings contribute to more and more overeating, then more and more weight gain, then more binging, and so on. It is a closed circuit that is so hard for a child or even an adult to get away from it, particularly if there is a lack of support or exhibiting dislike behaviours by parents against their children's body shape. The self-image of the child is considered more important than his actual body weight because internal beliefs help in diagnosing the real problem in order to attain effective treatment [21]. Furthermore, the child's mental state, his behaviours such as impulsiveness, seeking self-perfection, aggression, depression, anxiety, low self-esteem, low self-confidence, and binge eating are regarded as an alarm to the development of eating disorders and other disorders psychological disorders [21].

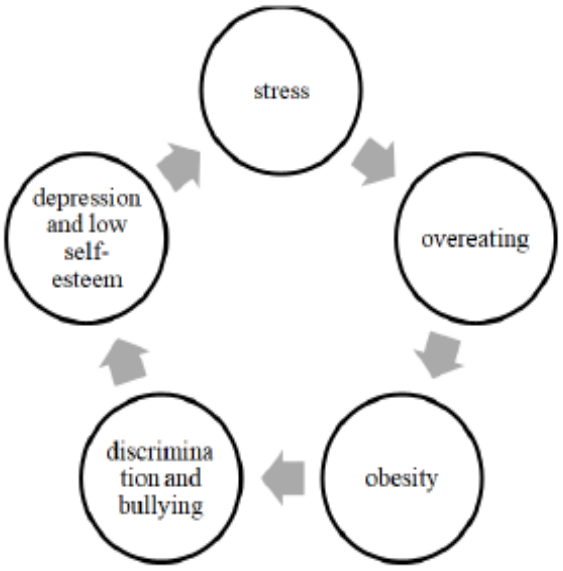

Figure 2. The Closed Circuit between Stress and Obesity

Studies claimed that there is a significant relationship between child sexual abuse (CSA) and the development of eating disorders because the acts of binge eating, purging, or food deprivation are found to relieve stress temporarily and help the patient to get away from the suffered deep pain, sorrow, depression, and all hurting emotions that are resulted from exposure to sexual abuse. Such compensatory behaviours do not relieve the stress of the sexual abuse itself but also help the child to escape from family stress that resulted from their childhood exposure to sexual abuse, to avoid remembering the details of what had happened, and to get away from his continuous fear of such harsh experience's recurrence. Furthermore, binging, purging, and food deprivation help the child to avoid experiencing physiological arousal again after his exposure to sexual abuse. CSA results in plenty of psychological disorders from which eating disorder is considered as post-traumatic compensatory behaviour. Also, social isolation and avoiding participation in activities are found to be adopted by children who are exposed to sexual abuse.

The severity of eating disorders has a positive relationship with the repetition, frequency, and harshness of sexual abuse experience (See Figures 3 & 4). Most adolescents develop bulimia nervosa as coping behaviour after exposure to sexual abuse than the development of other eating disorders as binge eating and anorexia nervosa. Family and social support are critical to helping the child emotionally after his exposure to that accident. That's why studies revealed that the less the support of child's attachment figure, the deeper the negative impact on the child after exposure to sexual abuse [26].

Research revealed that there is a significant relationship between physical and emotional abuse and the development of ED. During performing a survey questionnaire, it was found those children who are exposed to physical abuse such as pushing, hitting, or any type of violence are developing disorders, including ED, more than children who are didn't experience physical abuse. Also, children who suffer emotional abuse such as insulting, bullying, or self-image refusal from their family members and friends are more susceptible to the development of eating disorders than their peers [10]. All types of abuse contribute to low self-esteem, low self-body image, and depression and may contribute to self-

destructive behaviours (See Table 2). The severity of psychological disorders, including ED, differs according to the degree of closure of the person who performed the abuse against the child. Emotional and physical neglect are also considered child abuse. When parents always tell their children statements like 'you should not cry because you are strong', 'don't show your feelings in front of your peers because they will think that you are weak' and 'don't say that you are sexually abused, forget about it, you will be stigmatized'; etc. such statements teach children to conceal their feelings because it is not allowed for them to express their emotions. Such repression pushes children to find out other deleterious outlets in order to get rid of their pain and distress. That's why parents have to create a safe atmosphere for their children in order to help them expressing their feelings freely so as not to seek unhealthy behaviours to be able to cope with their pain.

The research claimed there is a positive relationship between the development of ED and substance abuse, particularly alcohol drinking, as patients who suffered from ACE were found to develop both ED and alcohol use as compensatory behaviours [1] (See Figure 6).

A study [15] found that there is a significant relationship between times spent watching television and the development of ED. The more time spent in front of the media, the higher development of ED as the media always exports the notions of the ugliness of fat people and the extreme beauty of thin girls and muscular boys (SeeFigure5). Such notions press stress on children and adolescents and push them to seek perfectionism that is related to body weight and shape. Moreover, they increase the degree of depression if the adolescent fails to reach the level of beauty according to the presented notions in media. Unfortunately, media distorted the meaning of the real value of humans and diminished the human value in body shape and weight. A study [2] illustrated the relationship between stress and overeating as studies showed that most of the people tend to eat snacks between meals preferring snacks that are high in calories and contain refined carbohydrates such as sweets, juices, hotdogs, burgers, pizzas, cold cuts, sandwiches, alcohols, chocolate bars, large amounts of nuts, and bakery products. Studies found that most people tend to eat such types of snacks when they are under stress more than in normal conditions in order to get rid of stress. Eating such products continuously for long periods of time contributes to resistance of leptin and insulin, which causes dysregulation of feelings of satiety and hunger. Moreover, such products are considered addictive products as a lack of control was exhibited among people when they kept on consuming them, which may contribute to the development of ED.

Treatment

Studies recognized three steps in dealing with unhealthy behaviours that are results of ACE. The first step is avoiding the occurrence of ACE, which is very hard to achieve, but increasing the awareness of families through awareness programs and increasing the activity of responsible institutions to keep in contact with families through calls or visits in order to help them with their children's rearing is integral. Continuity and propagation of such services will help to improve adulthood physical and psychological health.

The second step is avoiding the acquisition of unhealthy behaviours as a response to painful experiences. This will occur through identifying the problem, realizing the roots of the problem, realizing the motives that lead to such acquisition, comprehending the action of contemporary relief or anger discharge through unhealthy behaviours, and giving healthy alternatives to such behaviours.

The third step is the relief from the adopted unhealthy behaviour that had been practiced for a long time. It will occur through changing the bad habit, replacing it with a healthy alternative habit, and treating the deep pain that had lasted

for long periods of time [5]. Counseling, group therapy, family therapy, individual therapy, and increasing awareness between families, children, and schools are significant approaches to achieve treatment [24]. Organizing programs at schools that work on self-esteem, self-confidence, self-respect, and acceptance of the child to himself despite exposure to bullying will contribute to the prevention of eating disorders.

Cognitive-behavioural treatment (CBT) is so effective in dealing with people who suffer from eating disorders. It can be stratified through different steps; psycho-education is integral as increasing both parents' and children's awareness about the nature of eating disorders and their causes will assist in achieving treatment. Moreover, promoting self-determination among children, helping them to put an accomplishable goal, and helping them to be inspectors of their diet and exercise are considered outstanding approaches. Parents' support to the child, counselor support, and rewarding the child when he starts to work in order to achieve his goal are significant [21]. Also, it is important to avoid stimulants such as usual watching of junk food and sweets advertisements as such advertisements increase concern about food. Avoiding spending much time outside the home is important to avoid eating junk food. Also, they have to avoid spending much time watching media as it presents distorted concepts. It is significant to teach children healthy methods to deal with their problems, solve them, and express their negative feelings through writing them and correcting the negative thought with a positive real one. In addition, it is integral to increase the awareness of parents about changing their unhealthy habits that may contribute to their children's relapse. Treatment of psychological disorders and dealing with painful emotions will result in getting rid of eating disorders because ED is simply symptoms that refer to the presence of a deeper problem which is necessary to deal within a healthy way in order to attain successful outcomes.

Treatment of Anorexia Nervosa and Bulimia Nervosa among Children

A study [20] mentioned several ways of treatment. First of them is hospitalization which is necessary for patients who exhibit extremely low body mass index, which may lead to death in case of AN, and the normal weight with extremely excessive purging behaviours that had contributed to physical disturbances in case of BN. Hospitalization is integral for patients who adopt suicidal over-thinking, self-destructive behaviours, deep depression, and deep obsessive-compulsive disorder. Inadequacy of outpatient treatment and the presence of physical problems such as hypotension, cardiac problems, dehydration, severe anemia, or electrolyte disturbance require hospitalization. Inpatient treatment includes supporting the child with three whole, healthy meals per day in which the child has to finish eating his food for 30 minutes and have rest immediately after eating in order to avoid purging behaviours. If the child succeeds in committing such requirements, he would be awarded. It is better for the child to be under the supervision of a nurse to encourage and observe him in order to avoid purging behaviours. After approaching a normal weight in case of AN, stopping purging behaviours, and replacing them with healthy behaviours in case of BN, the child can leave the hospital and start outpatients' treatment under the supervision of his parents. Also, in the case of BN, the adolescent has to stop other coping behaviours like alcohol use or addiction before leaving the hospital. The second treatment approach is partial hospitalization, through which patients attend daily sessions that support them psychologically and support them with healthy dieting, then they go back home and continue their treatment under their parents' supervision. Follow-up is necessary twice or thrice a week, and prolonged follow-up is necessary that lasts for months.

The third treatment approach is an individual psychodynamic treatment that focuses on ego-strength, self-identification, self-esteem, coping skills, the real value of a human regardless of his shape or weight, and the relationship between such beliefs and his eating behaviours. The approach supports the self-determination of the patient and allows him to find solutions by himself instead of receiving solutions by his therapist. It is known as ego-oriented Individual Therapy (EOIT), which is more effective among older adolescents than younger children.

The fourth treatment approach is cognitive-behavioural treatment (CBT) which depends on improving the cognition of the patient, and discussing distorted thoughts, for example, 'one chocolate will contribute to extreme weight gain'. In addition, it is important to discuss and correct the distorted conceptualization that had shortened the real value of a person in his body weight and shape. Such an approach is more effective among older adolescents, but it is found to be less effective among youngsters. CBT is found to be more effective with patients who are deeply depressed because it works mainly on solving problems, anxiety, and behaviours that are related to painful emotions. CBT focuses on teaching patients to deal with their painful emotions in a healthy way. That's why it is significant that social workers should build a trusted and non-judgmental relationship with their patients. Sessions of CBT are supposed to range between eight to 16 weeks, each session is about 45 minutes, and follow-up is necessary [21].

The fifth approach is family therapy, through which the therapist works on increasing the awareness of the family about the nature of ED, relapse, the significance of the immediate calling of the therapist if the patient relapses. Family therapy helps the family to work as one team with their child to achieve better outcomes. The approach works on increasing family awareness of unconditional acceptance and the conceptualization that a human is precious for his own value regardless of his shape or body weight. This approach is known as Behavioural Family Systems Therapy (BFST).

The sixth approach is parents' counselling that supports parents with healthy ways in order to be able to understand their adolescent's emotions and the ways that children express their feelings with even if it was anger. Moreover, the approach helps parents to solve their marital problems that may cause distress to children.

The seventh approach is interpersonal psychotherapy which focuses on difficulties that the patient encounters through his close relationships, such as the relationship between the adolescent and his family or peers. That's why the role of the social worker is to support the patient with healthy ways to deal with his upcoming problems after the elimination of therapy sessions [20].

CBT and IPT are so Effective with Adults and Adolescents

Psychopharmacology is another approach that can be used in ED treatment, particularly when patients suffer deep depression. Antidepressants are found to be effective when used in a parallel way to individual and family therapy. Antidepressants should be used under the physician's supervision as they should be avoided in cases of addiction, severe purging, or severe hypokalemia [20]. Selective serotonin reuptake inhibitors (SSRI) can be prescribed to patients who suffer BN but not described to patients who suffer AN or BED [9]. Medications are not prevalent to be prescribed to adolescents and children. (SeeTable 2).

Treatment of Binge Eating Disorder

Studies claimed that CBT is highly effective in patients who suffer from BED. One of the significant issues that people who experience BED have great concern about is losing weight. That's why dieting programs that assist people in cooking and eating healthy food have a positive impact on both people who are obese

and people who experience obesity with BED. Also, the research found that IPT demonstrates efficacy with some people who suffer from BED. Successful treatment results in decreasing the frequency rate of binge eating behaviour. Medications are not prescribed yet in the case of BED, even if it is accompanied by deep depression [9].

Results & Conclusions

The study claimed that there is a great relationship between adverse childhood experiences and the development of eating disorders during adulthood. ACE can be summarized in terms of physical abuse, emotional abuse, sexual abuse, exploitation, neglect, household dysfunction, and traumatic events. Human adopts compensatory behaviours if he doesn't deal correctly with his stressful conditions and their negative impacts on his emotions. Coping behaviours can be smoking, substance abuse, promiscuity, eating disorders, or others. Eating disorders such as anorexia nervosa, bulimia nervosa, and binge eating disorders may lead to death if untreated. There are different types of treatment that are necessary to achieve relief, such as cognitive behavioural therapy, family therapy, ego-oriented individual therapy, group therapy, interpersonal psychotherapy, and hospitalization in severe cases. It is better to start treatment earlier in order to enjoy relief as human deserves to live happily.

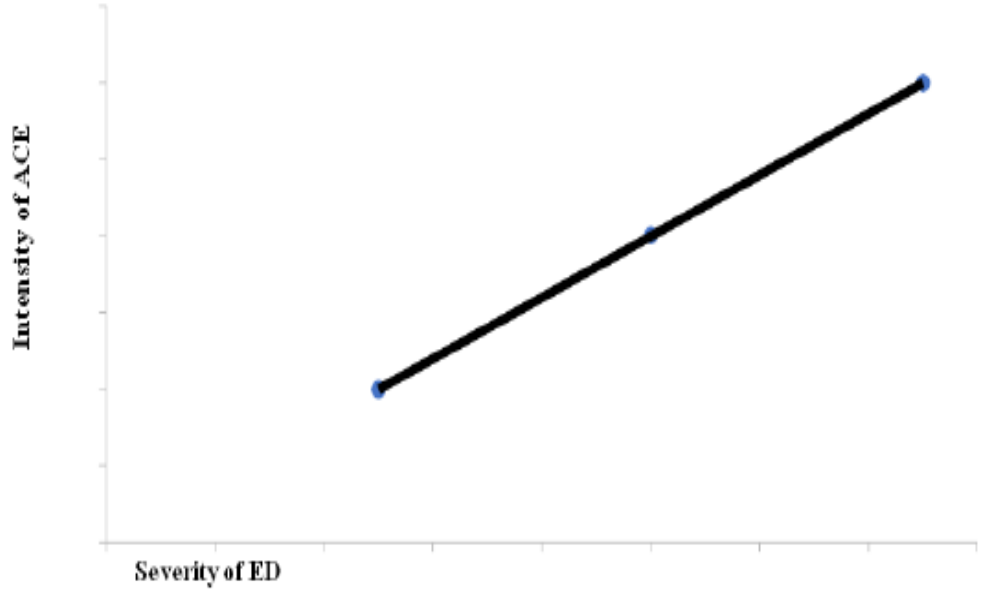

Figure 3. The Relationship between Intensity of ACE and Severity of ED

Table 2. Illustration Figure

	Anorexia nervosa	**Bulimia nervosa**	**Binge eating disorder**
Causes	Adverse childhood experiences (ACE)	-	-
	Genetics		
	Culture		
	Media		
	Stress and depression		
	Personal characteristics		
	Mental illness of parents or children		
	Stress		
	Parents' rejection of their child's body image		
Symptoms	Bodyweight is below BMI	Normal body weight	Overweight
	Avoiding eating and food dislike	Binge eating episodes	Binge eating episodes accompanied by secrecy, shame, and guilt.
		Purging behaviours such as intended vomiting, overuse of laxatives, weight loss pills, and overexercising	
Complications	Anemia	Kidney failure	leptin & insulin resistance
	Very low body weight	Hypokalemia	high cortisol level ➢ Diabetes type two and its complications
	Osteoporosis	Weakness	
	Teeth and bone weakness		
Psychological and physical diagnosis	Depression	-	-
	Anxiety		
	Fear of weight gain		
	Over-concern with weight and body shape		
	Low self-esteem 24		
	Social problems		
	Other coping behaviours as smoking or substance abuse		

	Suicide attempts or thinking		
Treatment	Hospitalization (in case of dangerous complications)	-	cognitive behavioural therapy (CBT)
	Partial hospitalization		interpersonal psychotherapy (IPT)
	Ego oriented individual therapy (EOIT)		Ego oriented individual therapy (EIOT)
	Cognitive behavioural therapy (CBT)		Group therapy
	Behavioural family systems therapy (BFST) and parents' counselling		Behavioural family systems therapy (BFST) and parents' counselling
	Group therapy		
	Interpersonal psychotherapy (IPT)		
	psychopharmacology		

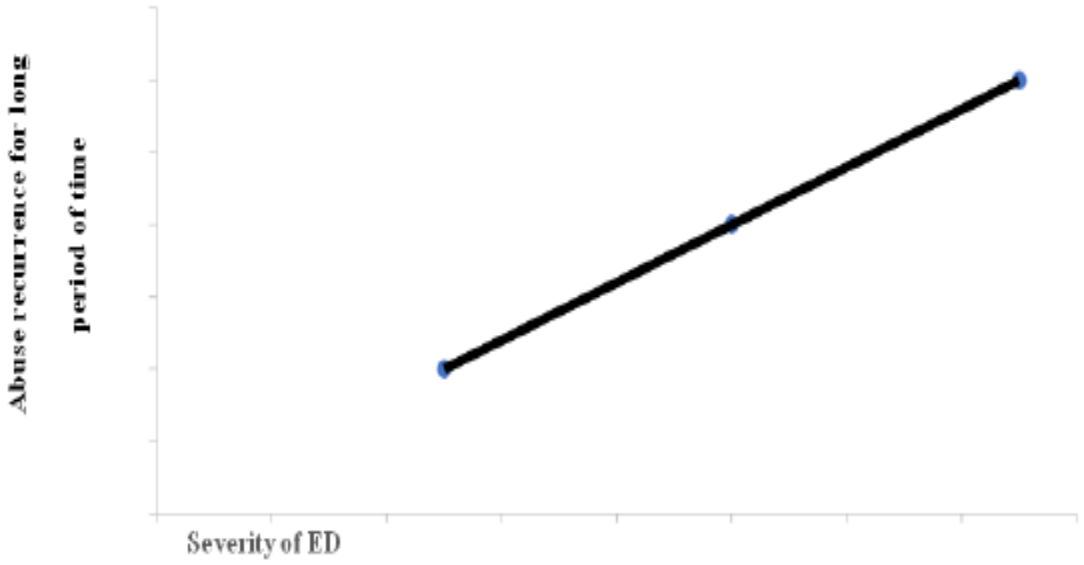

Figure 4. The Relationship between Abuse Recurrence for Long Period of Time and Severity of ED

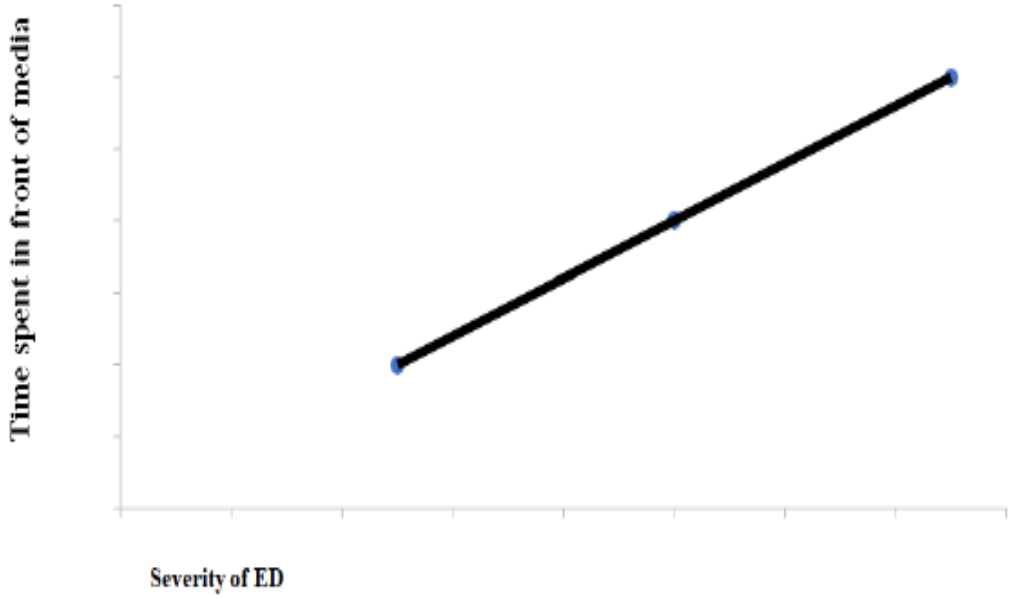

Figure 5. The Relationship between the Time Spent in Front of the Media and Severity of ED

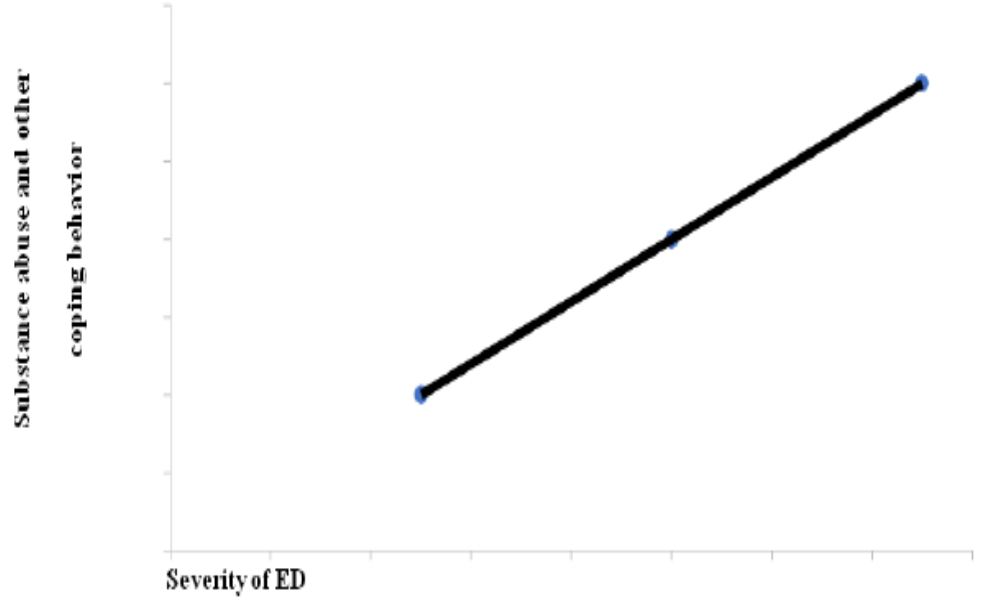

Figure 6. The Relationship between Substance Abuse and Severity of ED

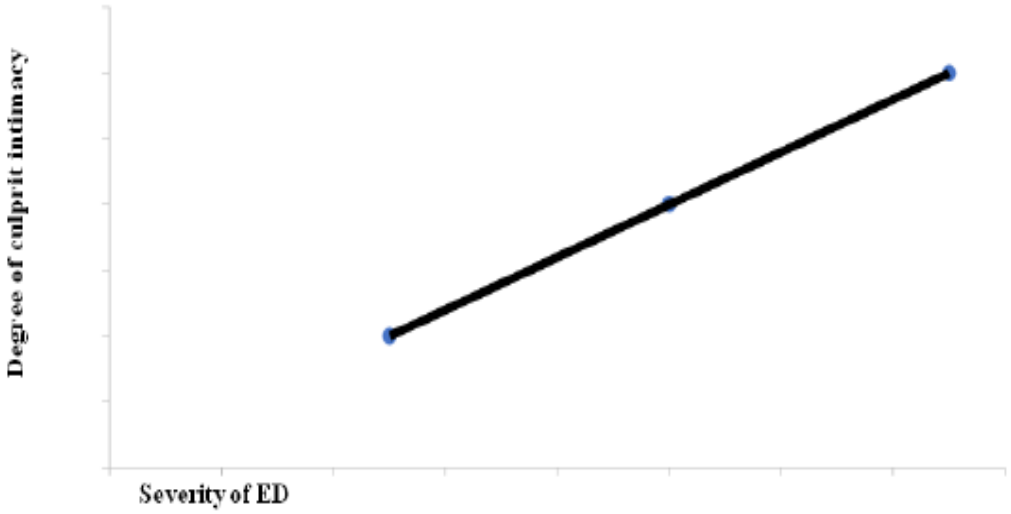

Figure 7. The Relationship between Degree of Culprit Intimacy and Severity of ED

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Author Contributions

MNSS drafted the manuscript. MNSS critically revised the manuscript for intellectual content. The author read and approved the final manuscript. The author is a guarantor of the paper.

Conflicts of interest

None declared.

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