Causal prediction of the relationship between post-traumatic growth and both psychological stress and self-esteem among a sample of people with physical disabilities in Dhi Qar Governorate

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Abstract

The study aimed to discover the relationship between post-traumatic growth and both psychological stress and appreciation.The self among a sample of people with physical disabilities in Dhi Qar Governorate, and the differences between these variables due to gender (males, females), in addition to identifying psychological stress and self-esteem in predicting post-traumatic growth. The study sample consisted of (140) high school students in Dhi Qar governorate, with physical disabilities (fractures, amputations, burns, paralysis). The following tools were used for this purpose: the post-traumatic growth scale, psychological stress, and the self-esteem scale, after verifying their psychometric properties (honesty, stability) on the sample of the exploratory study similar to the basic sample, using the appropriate statistical methods.

The study concluded that there is a positive relationship between post-traumatic growth and self-esteem among the sample members, and a negative relationship between post-traumatic growth and psychological stress. The study also found statistically significant differences in these variables due to gender, as male students showed higher post-traumatic growth and self-esteem compared to females, but females showed higher stress than males. The analysis of variance showed that self-esteem and gender play a positive role in predicting post-traumatic growth.

Key words: post-traumatic growth, self-esteem, psychological stress, physical disability.

Introduction:

Post-traumatic growth (PTG) has attracted an increasing amount of research interest due to its relationship to psychological resilience in relation to more traumatic events (Morrill, et al, 2008, 948–953). Although benevolence may not be intuitively associated with trauma, the idea of positive outcomes can arise from negative events and has long been discussed in Western philosophy. For example, Nietzsche's famous statement: "From the war school of life: What does not kill me makes me stronger (Nietzsche, 1998,5). Post-traumatic growth involves a transformation that ultimately increases adaptation and physical fitness as a result of traumatic experience. Post-traumatic stress is a process of positive personality development, in which individuals undergo a change in functioning beyond effective coping after experiencing a traumatic event (Tedeschi & Calhoun, 2004).

Post-traumatic growth may be associated with increases in three broad areas of positive functioning: First, appreciation of interpersonal relationships, where people feel they have improved in some way. Second, post-traumatic growth is associated

with a more positive self-view, such as feelings of personal resilience, wisdom, strength, and personal acceptance of weaknesses. Finally, PTG is associated with positive changes in life philosophy such as an increased appreciation for life and a re-evaluation of personal goals and values (Calhoun & Tedeschi, 2006, 1-18). It is also negatively associated with stress, post-traumatic stress disorder, anxiety and depression.

Disability is everything that limits an individual's mental, psychological or physical capabilities, and makes him unable to practice the normal life expected of him within the limits of his age, gender and environmental conditions (Mohammed, 2012, 23).

Here, people's reaction to their disability varies, some of them view it as helplessness and weakness, where the individual feels distress, tension and poor self-esteem, and some of them go beyond that, as his new situation and adapts to it through the radical change that he makes in his personality, as he deals positively in Various social situations, and this is what is called the term post-traumatic growth, which is a new term in positive psychology and has not been discussed much in study and research in the Arab community, especially the Iraqi environment.

The concept of post-traumatic growth is based around the most important positive changes, whether psychological or social, as positive growth relates to the individual's abilities and personal traits, which in turn affect his life path, and the extent of his acceptance of new things around him. Tideschi and Calhoun believe that difficult events such as shocks and painful experiences that a person is exposed to during his life can have a positive side away from frustration, failure and despair and closer to hope, success and high morale. It is said that what does not break you can make you stronger (Al-Saadi and Kanin, 2019, 310).

The physically disabled may suffer from many social problems such as family, friends, educational, medical and rehabilitation problems, most of which are unfair to the right of people with special needs, and make them feel that they are a burden on others in providing all the requirements of daily life, starting with their internal home movements and ending with their movement in the surrounding environment in Society, especially the school (Ghubari, 2003). These problems may cause some psychological pressure for some of them, while for others, disability may be a positive motive in developing positive personality traits during their interaction with others.

Therefore, the current study will focus on identifying the causal prediction of the relationship between post-traumatic growth as a protective factor against psychological stress, anxiety, depression and other types of multiple psychological problems to the growth of positive traits in the individual, such as hope, optimism,

courage and self-esteem among a sample of secondary school students. Persons with physical disabilities in Dhi Qar Governorate.

The study problem and its justifications

Despite the growing interest in the field of trauma studies in the positive growth and adaptation that can occur after trauma, minimal research has been discovered in young adults who have experienced an acquired physical disability (fractures, amputations, disfigurement, and burns). A quantitative study exploring post-traumatic development among physically disabled adolescents is necessary to establish the existence of post-traumatic development among this group of adolescents, to highlight the unique contribution of post-traumatic development, stress and self-esteem. Self-esteem is defined as a potential predictor of the relationship between post-traumatic stress and post-traumatic stress.

Physical disability caused by psychological and physical trauma. The results of this research can contribute to the preparation of counseling programs for individuals to increase their self-efficacy, understand themselves, accept their condition and coexist with it, and start a new vision of self and others, in addition to the benefit of workers in the field of psychotherapy, psychological counseling and special education from the proposals of this study in the rehabilitation of people with physical disabilities.

This study seeks to reveal the correlation between post-traumatic growth and both psychological stress and self-esteem among the study sample, and to identify the differences between average degrees in post-traumatic growth due to the gender variable (males, females), as well as to know the differences between the averages of post-traumatic growth. In addition to knowing the effect of the interaction between demographic and psychometric variables on post-traumatic growth, and knowing the size of the effect between these variables on post-traumatic growth.

Previous studies:

First - Arabic Studies

Baheya and Latifa (2011) conducted a study on “Psychological adjustment in an adult with acquired mobility impairment”. Where the study aimed to reveal the differences in psychological adjustment in terms of gender among the study sample, and the differences in psychological adjustment in terms of the duration of integration into the motor rehabilitation process for the study sample. The research sample consisted of (100) individuals. The psychological compatibility scale was used. The study found that there were statistically significant differences in the psychological adjustment of adults with an acquired motor disability according to the duration of integration into the motor rehabilitation process, and it also

concluded that there were statistically significant differences in the psychological adjustment of adults with an acquired motor disability due to gender.

Yamina (2019) conducted a study on "Post-Traumatic Stress Disorder in the Physically Disabled Due to Traffic Accidents". In order to identify the degree of post-traumatic stress disorder among the physically disabled as a result of the traffic accident, it also aimed to reveal the level of post-traumatic stress disorder among individuals of both sexes exposed to traffic accidents. The number of the sample was four people whose ages ranged between (20-40). An observational study, clinic interview, and post-traumatic growth scale were used. The study found that there are differences in the gender variable in post-traumatic stress disorder among traffic accident victims.

Secondly, foreign studies

Akbari et al. (2014, Akbari et al.) conducted a study on the “predictive ability of post-traumatic growth”. The aim was to identify the predictive value of post-traumatic growth through self-efficacy and social support in cancer patients. The sample was (95) cancer patients. The Post-Traumatic Growth Scale was used. The results found that post-traumatic growth can be predicted by self-efficacy and social support in cancer patients.

Dekel et al, 2011) conducted a study on post-traumatic growth and post-traumatic stress / a longitudinal study, which aimed to reveal the trend between post-traumatic stress and post-traumatic growth. The duration of their arrests for more than (17) years, and the symptoms of post-traumatic stress, depression and anxiety symptoms were measured during three time stages, and the results showed that post-traumatic stress growth was more effective after twice, and that the onset of post-traumatic stress was predicted concurrently with post-traumatic growth trauma but not vice versa, and I also found that PTSD sufferers reported a high level of PTSD during the time they had PTSD.

The study of Xiao Zhou et al. (2017), aimed to examine the mediating roles of simultaneous self-esteem and hope in the relationships between social support, PTSD, and PTSD development. The sample consisted of (397) Chinese teenagers, who were affected by the Yan earthquake. Participants completed self-report questionnaires two and a half years after the earthquake, and the Scale of Social Support, Self-Esteem and Hope for PTSD and PTSD. The results showed that direct and negative social support predicted PTSD, and predicted PTSD positively. Furthermore, social support negatively predicted PTSD with self-esteem, and PTSD positively predicted growth with hope. Additionally, anticipate social support as post-traumatic stress grows positively through multiple mediation pathways from self-esteem to hope.

The study of Tuck and Patlamazoglou (Tuck. & Patlamazoglou.. 2019)) examined the relationship between traumatic stress and both post-traumatic development and emotional intelligence. The study hypothesized that there is a relationship between emotional intelligence and post-traumatic development, and that emotional intelligence increases emotional intelligence after a traumatic event. The sample consisted of (211) people, of which (157) females, and (54) males, with an average age of (26.23). The Emotional Intelligence Scale and the Post-Traumatic Growth Scale were used for this purpose. The results showed a positive relationship between emotional intelligence and post-traumatic growth, and that males are more developed after trauma than females. The current study suggests that the use of interventions designed to improve emotional intelligence may help promote psychological resilience as well as recovery from traumatic stress reactions in the general population

The purpose of the Ogińska-Bulik & Kobylarczyk 2016 ,study was to determine the relationship between resilience and the level of positive changes, including growth after trauma, in a group of firefighters with job-related traumatic events and the mediating role of stress assessment in this relationship. The study was conducted on a group of (100) firefighters from the fire and rescue teams, 75 of them admitted that they had been exposed to a traumatic event. The firefighters studied were on average 31.51 years old (SD = 6.34). The Post-Traumatic Growth Checklist, Resilience Rating Scale, and Stress Assessment Questionnaire were used in the study. The results showed that (2.7%) of the firefighters showed low, (58.6%) average and (18.7%) high intensity positive changes caused by a traumatic event. Resilience is weakly correlated with post-traumatic growth expressed in changes in self-perception, closely correlated with stress assessment, negatively correlated with threat and harm/loss and positively correlated with challenge. The assessment of stress as a threat and a challenge appears to have been mediators of the relationship between resilience and post-traumatic growth.

The Blackwell study (2016) aimed to assess the relationship between meaning, resilience, and post-traumatic growth among a sample of a college student. The sample consisted of (612) participants, whose ages ranged between (18 and 26) years, who were selected in light of self-reports about the traumatic events they were exposed to, through the application of the list of life events, the post-traumatic growth scale, and the life purpose scale Manual, Flexibility Scale. The results showed a positive relationship between PTSD and the meaning of life and psychological resilience, and a negative relationship between PTSD and PTSD.

Hadar (2015) study sought to verify self-esteem as a predictor of post-traumatic growth and adjustment among maltreated adolescents, as post-traumatic growth was visualized as a positive change in social competence and cognitive performance. This study also explores the unique relationship between abuse and self-esteem

among adolescents. The sample consisted of (132) adolescents who were subjected to ill-treatment, and for this purpose a scale of self-esteem and post-traumatic growth and a scale of psychological adjustment were used. The results showed a positive relationship between post-traumatic growth and both self-esteem and psychological adaptation, and that both self-esteem and adaptation are positive factors for detecting post-traumatic growth.

Tang and Wang's study (Tang & Wang, 2020) sought to assess the level of post-traumatic growth in a large sample of adolescent Chinese earthquake survivors (n = 5195) and the relationships between self-esteem, PTSD, and post-traumatic growth. This study indicated that the prevalence of post-traumatic growth among adolescent survivors was (14.8%). Post-traumatic growth was independently associated with self-esteem, exposure severity, and aspects of PTSD avoidance. PTSD has been found to be mediated in part by self-esteem over post-traumatic development; PTSD was also a mediator between exposure to earthquakes and post-traumatic growth.

Ismaili et al. (Salimi, et al, 2021) conducted a study aimed at investigating the relationship between personality and post-traumatic growth through functional adaptation. Among a sample of (266) Iranian adolescents who suffered from the sudden death of a parent. They completed the Five Factors of Personality Scale, the Post-Traumatic Growth Checklist, and the Functional Adjustment Abilities Scale. The results showed that functional adaptability was partially mediated by the relationship between neuroticism, openness, and post-traumatic growth. In addition, the results confirmed the mediating role of functional adaptation in the relationship

Between conscience and post-traumatic growth. The results also indicated that there is a direct relationship between extraversion and post-traumatic growth, but there is no relationship between conformity and post-traumatic growth. These findings emphasized the essential role of functional adaptation in empowering traumatized adolescents.

From the above, it appears that previous studies dealt with post-traumatic growth in many diverse samples: adolescents, firefighters, cancer patients, and using many psychological and emotional variables, but there is no single study that dealt with a sample of students with physical disabilities, and all study variables, and this What distinguishes the current study from other previous studies in terms of the nature of the sample, the tools and the geographical environment in which the study was applied.

Study hypotheses:

In light of the problem of the study, theoretical literature and previous studies, the hypotheses of the current study were formulated as follows.

1- There is a correlation between the degrees of post-traumatic growth and the degrees of both self-esteem and psychological stress among the study sample members.

2- There are differences in the average degrees of post-traumatic growth, psychological stress, and self-esteem among the study sample members due to gender (males, females).

3- There are statistically significant differences between the scores of the study sample members with physical disabilities on the post-traumatic growth scale due to the variable type of injury (amputation of limbs, burns, paralysis, deformation of the body) among the study sample members.

4- There are differences in the averages of high and low degrees in post-traumatic growth and in both degrees of self-esteem and psychological stress.

5- There is an effect of the interaction between each of the study variables and the joint interaction between them on the post-traumatic growth of the sample members.

The limits of the study:

Human limits: the study sample consisted of (140) students with and without a physical disability in Dhi Qar Governorate.

- Objective limits: The post-traumatic growth scale, psychological stress scale, and self-esteem scale were used, where the descriptive analytical approach was used, and the results were extracted according to the hypotheses of the study using appropriate statistical methods.

- Spatial boundaries: The research tools were applied in many secondary schools in Dhi Qar Governorate.

Time limits: The research tools were applied in the eleventh month of 2021.

Study concepts and terminology

1- Post-traumatic growth Post-traumatic growth Tedeschi & Calhoun defines post-traumatic growth as: a state of positive psychological change and growth for individuals who have been exposed to traumatic experiences and events during their lifetime, which led to a radical change in aspects of their personality and their view of life on a personal level. As a whole.

Post-traumatic growth is defined procedurally: it is the sum of the high scores obtained by the examinee through his answers on the post-traumatic growth scale used in the current study, where a high score indicates post-traumatic growth, while a low score indicates a decrease in post-traumatic growth. of the sample members.

2- Psychological stress, which means distress, oppression and compulsion, as well as distress and argument between two people (Ibrahim et al., 1985, 541). Al-Anazi (2004) defines it as the condition that occurs to a living organism when there are demands that exceed or exceed the person's ability to bear and face them.

3- Self-Esteem: The concept of self-esteem psychologically, according to the definition of Cherry, 2017, 10-29) refers to that characteristic or personal quality that a person possesses, which in turn is related to his self-respect and skills, as many special beliefs fall under this concept. It is worth noting that this achieves a state of permanent stability for its owner, and it is worth noting that among the signs of self-confidence and self-esteem is the ability to reject, identify strengths and weaknesses, adapt to them, and coexist with experiences. The bad, and finally the ability to express oneself and one's personal needs.

While Cooper Smith defines it (Cooper smith, 1967,2) as evaluative attitudes toward post-traumatic growth—"the positive psychological change that occurred as a result of struggle with extremely difficult life circumstances."

Self-esteem is defined procedurally as the degree to which the examinee obtains from the application of the scale used in the study, where a high degree indicates a high level of self-esteem for the sample of people with physical disabilities, while a low level indicates a decrease in the level of self-esteem.

4- Persons with physical disabilities

It is defined as the cases of individuals who suffer from a defect in their motor and physical abilities, as this defect affects the manifestations of their mental, social and emotional development and calls for the need for education, care and psychological and social attention (Baheya and Latifa, 2011, 27).

Theoretical framework

Post-Traumatic Growth Concept (PTG), as defined by Tedeschi and Calhoun, 1995.19, describes the positive personality and performance-enhancing life changes that result from

Emotional and cognitive processing of trauma exposure. The authors emphasize that it is not the event itself that is thought to trigger PTG but rather the struggle in the aftermath of the trauma. PTG has so far been extensively studied in adults and these studies have repeatedly shown that post-traumatic symptoms in affected individuals can be accompanied by post-traumatic growth,

Regarding the developmental process, Tedeschi and colleagues suggested that traumatic events may act as "seismic challenges" to individuals' pre-traumatic schema regarding themselves, others, their relationships, and the world, by shattering their assumptions about the world and forcing a reconfiguration of one's

goals, beliefs, and holistic view of life. Meyerson et al, 2011, 949)). PTG differs from other strength-based concepts such as resilience by emphasizing the process of transformation as a result of conflict with trauma. Furthermore, it was emphasized that the word 'growth' might be the most appropriate word to define this particular phenomenon. The affected individual is supposed to reach a stage in personal development beyond the previous functional level. Finally, the use of the term "post-traumatic stress" indicates that this growth occurs after an extreme event and is therefore not caused by any minor stressors, nor is it part of a normal process of personality development (Cryder, et al, 2006, 65).

Several studies (248-253 Kilmer, et al, 2009,) indicate that PTSD does not rule out the development or presence of PTSD. Rather, it emphasizes that some degree of distress may be necessary to initiate the process of change, and perhaps sustain growth. Levine, et al, 2008, 492-496 found an inverted U-shaped curved relationship between PTSD and growth, and hypothesized that PTSD may be maximal at levels of moderate PTSD. In contrast, Zhou & Wu (2016, 242-248) recently emphasized the developmental independence of PTSD and PTSD after investigating the role of impulse regulation. PTSD has been divided into five major areas or categories: 1) new possibilities, 2) relationship to others, 3) personal strength, 4) spiritual change and 5) appreciation of life. In more detail, notable changes include for example a greater sense of personal power or a feeling of being better able to meet the challenges of the future. Changes in personal relationships include a better sense of "true friends" and an increased need to share and express one's feelings. Changes in life philosophy relate to e. g. Greater appreciation of available resources and an individual's ability to distinguish more effectively between important and irrelevant. Although these positive effects may be somewhat similar to the idea of resilience, several authors have emphasized that both (while sharing some conceptual aspects) are still somewhat distinct constructs (Calhoun&, Tedeschi RG, 2006).

Conceive positive growth and adaptation in the aftermath of a shock as achieving "a level of performance above that which existed prior to the event" (Linley, & Joseph, 2004, 11-21). It represents an improvement in pre-disease functioning, in

The contrasting distinction with resilience, a related term, describes a return to one's level of functioning prior to the trauma. Several terms are used to describe this positive adaptation process. Post-traumatic growth (Tedeschi & Calhoun, 1995) is quite prevalent in the literature as are the concepts of stress-related growth (Park, et al, 1996)). While these concepts focus on slightly different aspects of post-traumatic growth, they all agree that positive psychological development can result from conflict with adversity. When discussing post-traumatic development, researchers and theorists remain cognizant of the harmful effects of trauma. To illustrate this point, research studies have indicated that PTSD, although not necessarily other

psychological symptoms, and PTSD are not mutually exclusive (Alisic, et al, 2008). In a study of children who had experienced traffic accidents, Salter and Stallard (2004,335-340) found that 37% of those who had experienced PTSD (42% of the total sample of 158) also showed growth after Shock. The experience of successfully using one's psychological resources and dealing with what seemed to be insurmountable pain may generate feelings of self-confidence, self-esteem, self-efficacy, and strength and may stimulate later growth (Tedeschi & Calhoun, 1996).

Considering the large numbers of children, adolescents, and adults with mental disorders in the context of trauma internationally, the negative impact and implications of recovery from trauma have long dominated research in trauma science. The emerging concept of PTG has already broadened the clinical perspective and raised various questions about the diversity of cognitive, emotional, and behavioral response to trauma in children and adolescents.

As for self-esteem, it is determined by innate genetics and environmental influences and develops along with cognitive and emotional maturity (Harter, 2006). In particular, unshared environmental factors, including parent-child relationship quality, trauma experiences, attachment style, and social environment, account for the majority of the variance in self-esteem. Although there is no single unshared environmental factor that is very important, the detrimental effect of self-esteem is theoretically different from domain-specific self-esteem which is the assessment of specific abilities, including academic aptitude and athletic ability. Self-esteem is a subjective evaluation and is therefore closely related to any objective fact about ability or value.

Since psychological stress is an inevitable phenomenon in human life in general, especially in the current times, and among adolescents, especially as they are one of the segments of society who face daily many pressures represented in academic, family, social, and personal pressures, in addition to the demands imposed by the nature of the age stage. And challenges on them, make them more vulnerable to psychological pressure, so it can be said: Psychological stress is generated as a result of the failure of the individual to adapt to the demands imposed on him in most cases, and this makes him more vulnerable to psychological, physical and cognitive problems, noting that it is not necessary for all

The potential effects of stress are negative, and can even be positive, as it pushes the individual to achieve himself, and to speed in achievement and performance, and this increase in the subject of psychological stress has prompted researchers to increase interest in studying it, and trying to know the sources of predicting it, and strategies for dealing with it, based on a number of The personality traits, which the individual possesses, which can contribute to determining the ways he

communicates with the surrounding environment to a large extent (Obaida, 2008, 43).

Hans Selye is one of those who consider stress as a response to environmental conditions, as stress in this field is seen as the individual's reaction to a stressful stimulus in the environment, and then psychological stress can be defined according to this field as the physiological and psychological response that the individual performs in the face of an event or External Case (Davison & Neal, 1994, p.191))

From the above, it appears that there is a positive relationship between the development of post-traumatic stress traits such as, self-esteem, self-efficacy and other positive strengths, while it is inversely related to post-traumatic stress disorder, anxiety and depression, and negative ruminative thoughts. Therefore, it can be said that post-traumatic growth plays a protective role for traumatic life events, in addition to developing positive personality traits.

Study procedures

1- Methodology: To verify the hypotheses of the study, the appropriate descriptive analytical approach was used for such a study, which is to show the relationship between post-traumatic growth and post-traumatic stress and self-esteem among a sample of students who were exposed to physical disabilities, fractures, amputations, and motor disabilities. , traffic accidents, burns, and the detection of the differences between the study variables according to gender, and the impact of the interaction between these changes on the post-traumatic growth of the study sample.

2- Study sample: The research sample amounted to (140) male and female students, and by (90) male and (50) female students, they were deliberately selected from some secondary schools in Dhi governorate, which are: Al-Kharj' Secondary School for Girls, Al-Firdaws Secondary School for Girls, Al-Khansa Secondary School for Girls, and Secondary Al-Samoud males, Tal Al-Za`tar High School for Boys, Damascus High School, Tal Al-Za`tar High School, and Al-Jumhuriya High School. Those whose ages ranged between (16-18) years, who suffer from traumatic events as a result of various accidents, such as fractures in the foot or hand, burns, permanent motor disability in the hand or leg...etc.

3- **Study tools: In order to answer the questions and hypotheses of the study, the following tools were used:**

First: Posttraumatic Growth Inventory

The scale was prepared by Tedeschi and Calhoun (Tedeschi, & Calhoun, 1996), which consists of (21) distributed over five dimensions, which are the following: connection with others, new possibilities, personal strength, spiritual change,

appreciation of life. The scale was translated into Arabic and applied in more than one Arabic study. The researcher adapted it to an exploratory sample of secondary school students with physical disabilities, which is outside the limits of the basic study sample, which numbered (75). Male and female, the examinee is asked to answer the scale according to Likert method with five weights or answers, and the examinee must choose one answer for each question from (1 disagree to 5 agree very much).

1- Honesty: a- The internal consistency between each item and the overall score of the scale:

It turns out that the correlation coefficients of each item with the total score of the scale ranged between (0.423-0.832) degrees, and they are statistically significant correlation coefficients at the level (0.01), which indicates the validity of the scale that has the internal validity of its statements with the total score of the members of the exploratory sample.

B - The internal consistency between the dimensions of the scale and its expressions and the total score: The correlation between the total score for each dimension and the total score for the scale was calculated.

It is clear that there is a statistically significant relationship at the level of significance (0.05-0.01) between the degree of each individual item and the total degree of the dimension, which indicates that the scale has a good degree of internal consistency.

2- Scale stability:

To calculate the scale's stability, the reliability coefficient was extracted using the split-half method and Cronbach's alpha, using the Spearman-Brown coefficient, where the value of the reliability coefficient was (0.83). While the value of the stability coefficient by Cronbach's alpha method was (0.81).

It is clear from the results that the scale has acceptable psychometric properties of validity and stability, and this justifies the researcher to use it in the basic study sample of students with physical disabilities.

Second: Adolescent Psychological Stress Scale:

This scale was prepared by Sun and others (sun, et al, 2011)), and it consists of (16) phrases, distributed over a set of dimensions, namely school stress, schoolwork, exam anxiety, self-expectation, and despair. Where it was applied to more than (2000) Chinese teenagers to examine the psychometric properties. The variance results explain a value of (64%) of the total dimensional variance. The degrees of the internal consistency scale also showed a value of (0.78), while the stability of

the scale reached (0.85) through repetition in a time of two weeks between the first and second application.

Psychometric properties of the scale in the current study:

To verify the psychometric characteristics of the scale (veracity and stability) it was applied to the aforementioned exploratory sample of people with physical disabilities, and the following are the psychometric characteristics of the scale.

Honesty: the correlation of each degree of each dimension with the total degree:

** The correlation coefficient is statistically significant at the significance level (0.01).

It is evident from the results that the correlation coefficients for each dimension with the total score of the scale, which are statistically significant correlation coefficients at the level (0,01), which indicates that the scale has appropriate internal validity.

Discriminatory honesty:

The scale was applied to a sample of (75) male and female students, which is outside the sample of the basic study, to verify the scale's ability to distinguish between the peripheral categories (lower quartile and upper quartile).

It is clear from the results that the difference between the highest quartile and the lowest quartile was statistically significant at a significance level of (0,01); This means that the scale has the ability to distinguish between the peripheral categories of the study sample.

2- Scale stability:

The stability of the scale was calculated by applying it to the exploratory sample of (75) male and female students with acquired physical disabilities, using Cronbach's Alpha equation and half-segmentation, It is clear that the psychological stress scale in adolescents has good psychometric properties among the members of the exploratory sample, and this justifies the researcher to use it on the members of the main study sample.

3- Self-esteem scale:

This scale was prepared by Amour (2018), which was applied to a sample of (500) adolescents in the Algerian environment, which consists of (28) phrases, distributed over the following dimensions: self-confidence (8) phrases, self-esteem (6) phrases, and competence Scholasticism (6) phrases, personal competence (4) phrases, and social competence (4) phrases. Where this scale is answered through five alternatives indicating the extent of the individual's self-esteem, with a gradation ranging from (1 → 5) degrees, where the individual is asked to put a mark (X) in the

appropriate box, which expresses the extent of his self-esteem. Accordingly, high scores on the five-dimensional scale indicate a high level of self-esteem, and a low score indicates a low level of self-esteem.

Study results and their interpretation

Results of the first question: What is the level of post-traumatic growth among the sample members?

To answer this question, the scores of the study sample members were calculated to verify the spread of post-traumatic growth, as the following table shows the level of post-traumatic growth and the number of individuals at each level (low, medium, high) using the law of quadrants.

It is clear that the sample members with physical disabilities who got low scores on the scale between (33-55) degrees, their number reached (35) individuals, while those who got an average level, their number reached (35) individuals, as their bikes on the scale ranged between (56- 76). As for those who got high scores on the scale, their number reached (70) students only, and their scores on the scale range between (77-91) degrees. This means that those who got high scores in the post-traumatic growth scale among the sample members of the adolescents were the vast majority of the sample members.

This finding is consistent with many studies that dealt with post-traumatic development in adolescents and young adults, as it was found that young people often have positive traits, resilience, and psychological toughness in dealing with traumatic life events. This can be attributed to the positive personality traits that they enjoy despite the traumatic experience they suffer from, and despite the physical and motor disability or disability that negatively affected their body image and motor coordination. However, this did not make them live in a state of helplessness, but rather a state of challenge and harmony with themselves and others. The study of Wanjie et al, 2020) indicated that the prevalence of post-traumatic growth among adolescent survivors was (14.8%). The results of Ogińska-Bulik & Kobylarczyk, 2016 (k), also indicated that there are (18.7%) of the respondents who have a high severity of positive changes resulting from the traumatic event.

This result explains that the sample members of the students, despite the suffering they experience as a result of the physical injury and its consequences, but most of them were more compatible on the health, psychological and emotional level, which made them feel like others, and lead their lives normally in and outside school, and if it appeared that Post-traumatic growth has enhanced their abilities and positive traits to deal with their disability, and if it indicates anything, it indicates the moral

and religious values they enjoy, that this disability is a predestination from God, and God's destiny cannot be returned.

Study hypotheses:

Presenting the results of the first hypothesis, which reads: "There is a statistically significant correlation between the degrees of post-traumatic growth and their scores on the scale of self-esteem and psychological stress."

To verify the validity of this hypothesis, the Pearson correlation coefficient was used to measure the relationship with the post-traumatic growth scale scores with the scores of both the self-esteem scale and psychological stress.

It is clear from the results that there is a direct (positive) relationship between the degrees of the dimensions of the post-traumatic growth scale and the degrees of self-esteem, while the results of the table revealed a negative relationship between the degrees of post-traumatic growth and the degrees of psychological stress among the members of the basic study sample of adolescents with physical disabilities, at the level of Statistical significance with a value of (0.01).

This result appears to be somewhat logical as demonstrated by the results of theoretical research and empirical studies, which confirmed that post-traumatic growth is positively associated with self-esteem and negatively with post-traumatic stress disorder, and this is evidence of the validity of this finding in the current study. The study of Xiao Zhou, et al, 2017) indicated that social support was expected to be negatively associated with PTSD and positively with self-esteem. Additionally, anticipate social support with positive post-traumatic growth through multiple mediated pathways to self-esteem. The Hadar study (2015) also indicated that there is a positive relationship between post-traumatic development and self-esteem. The results of the study (Ha. & Sim, 2016) also found that the dimensions of post-traumatic growth are: improvement of self-esteem, stress management, healing and recovery from trauma, and improvement of interpersonal relationships (Younes, 2020). While the results of the Blackwell study showed,. 2016)) There is a positive relationship between post-traumatic development and both meaning of life and psychological resilience, and a negative relationship between post-traumatic development and post-traumatic stress disorder.

This result means that the members of the sample who enjoy post-traumatic development have a high self-esteem, due to their positive traits such as resilience, toughness, courage and life satisfaction compared to those who do not have such ability, they feel depression, hopelessness and low morale in dealing with Life situations as a result of their disability or distorted body image.

Presenting the results of the second hypothesis, which states: "There are statistically significant differences in post-traumatic growth, psychological stress and self-esteem due to the gender variable (males and females).

To verify this hypothesis, two independent samples were used to determine the nature of the differences between males and females in the study variables, post-traumatic growth, self-esteem, and psychological stress, using Student's Law of Differences between Means "T"

It is clear from the results that there are statistically significant differences at the level of significance (0.01) in the average degrees of post-traumatic growth and self-esteem among the sample members (males and females), where the results were in favor of males, while females were more exposed to psychological stress as a result of the traumatic event. The results of this study are in agreement with many previous studies, where the results of the study of Vishnevsky, et al, 2010 (2010) indicated that a meta-analysis examining the direction and magnitude of gender differences in self-reported post-traumatic growth, as the results of a meta-analysis of (70) revealed A study of a small to moderate gender difference in posttraumatic development. The results of the study (Marcin, et al, 2016)) also showed that females have difficulty in post-traumatic development compared to males. The results of the studies generally indicate that there are modest differences between males and females in the variables of this hypothesis, and this needs accurate diagnostic studies to identify the gender differences in post-traumatic growth, stress caused by trauma, and self-esteem in dealing with the traumatic event, and this is related to the nature and severity of the trauma, And the impact it has on the individual, but looking at the nature of the current sample, we find that physical disabilities are often more painful for adolescent girls than for males, based on the nature of the societal culture to which the girl belongs. Much remains unknown about how women and men deal with trauma, and how traumatic experiences can facilitate growth rather than distress and stress. Given that post-traumatic growth is a burgeoning area of research, it is critical to better understand the mechanisms that lead to women and men seeing growth differently. A first step in this direction is to continue to investigate variables that may be involved in posttraumatic development, and to consider gender as the primary variable of interest in such research.

Presenting the results of the third hypothesis, which states: “There are statistically significant differences between the scores of the study sample members with physical disabilities on the post-traumatic growth scale according to the type of injury variable (amputation of limbs, burns, paralysis, deformation in the body) among adolescents in the study sample. ".

To verify the validity of this hypothesis, the arithmetic means and standard deviations of the responses of the study sample members on the post-traumatic growth scale were calculated according to the type of injury variable.

In order to find out whether there are statistically significant differences in post-traumatic growth due to the type of injury in the total study sample of (140) male and female students from the secondary stage, it appears from the results of Table (12) that

The students developed the most post-traumatic amputation in limb amputations, with an average of (79.9), followed by the paralyzed group, with an average of (69.5), and the general physical deformity category with an average of (65.3) came in third place, and finally, the injured group burns with an average of (61.2).

To verify the direction of the differences, a one-way analysis of variance was used among the sample members in post-traumatic growth according to the type of injury

The results show that the amputation of the limbs was more developed after the trauma, followed by paralysis, then burns, and finally physical deformities. In the sense that the person who suffers from burns and physical deformities is the least group in post-traumatic development compared to cases of amputation and paralysis, but because amputation or paralysis of the limb is a permanent condition where the individual adapts to it in a natural way, while cases of burns and physical deformities suffer from psychological and social pressures, and has Always negative ruminant thoughts about his deformed body position. Despite this conclusion of the current study, it needs an in-depth analytical study to know the factors and motives that make some of these individuals have strength and positive growth in dealing with physical injury and among those who have a feeling of helplessness, despair and dissatisfaction with their personal lives.

- Presenting the results of the fourth hypothesis, which states: "There are differences between high and low post-traumatic growth on both psychological stress and self-esteem among adolescents in the study sample."

To verify the results of this hypothesis, the law of differences was used between two non-independent groups of respondents who got high scores, and those who got low scores on the post-traumatic growth scale, and their scores on both the self-esteem and psychological stress scale, in order to find out those differences between them, Where this was calculated through the law of quartiles to identify the first and third quartiles

It is evident from the results that there are statistically significant differences at the level (0.01) between the average scores of low and high post-traumatic growth on self-esteem, and these results came in favor of high post-traumatic growth with a value of (6,17). The results of the same table also showed that there were statistically significant differences at the level of significance (0.01) between high and low post-traumatic growth in psychological stress, and the results were in favor of low post-traumatic growth, with a value of (12,10).

Presenting the results of the fifth hypothesis, which states: "There is an effect of the interaction between the following variables: gender, self-esteem, psychological stress, and their joint interaction on the post-traumatic growth of the study sample."

To verify this hypothesis, a one-way analysis of variance was calculated for the study variables on the average degrees of post-traumatic growth, and the predictive ability of these variables among the study sample members in self-esteem and psychological stress was shown.

It is clear that there are significant differences in the variables of the demographic study on the scale of self-esteem, as it appears from the results of the table that the following variables: Gender, self-esteem plays a major role in the post-traumatic growth process among the sample members

The study, while psychological stress has a weak effect on post-traumatic growth compared to other variables. It was shown through the previous table (15) that it was possible to predict high and low post-traumatic growth according to a variable of jinxedness and self-esteem in the study sample, according to the model shown above, where there is an effect of the interaction between these mentioned variables and post-traumatic growth.

Discussion:

The study was subject to the following limitations. First, the relatively small sample size may limit the statistical power compared to global studies, so it is necessary to increase the sample size to validate the results of this study. Second, the proposed model was based on data collected from students with physical disabilities who were subjected to emotional and psychological trauma, as a result of amputation, burns, fracture, paralysis, and physical deformities resulting from traffic accidents and others. The study also found a relationship between post-traumatic growth and self-esteem and an inverse relationship. With the psychological stresses resulting from the trauma that caused them physical deformities, in addition to the differences between males and females in the study variables, the results showed that males are more positively developed for trauma, and that gender and self-esteem play a positive role in post-traumatic growth, while psychological stress works on Towards

impeding post-traumatic growth among the sample members. In other words, it is gender and estimation that predicts post-traumatic growth in contrast to psychological stress, which leads to a lower level of post-traumatic growth among the sample members. Generalizing the results to the sample members with physical disabilities requires caution because there are individual differences between individuals in post-traumatic growth based on self-efficacy and positive personality traits, and other factors that may not be related to post-traumatic growth. Therefore, these results can only provide an overview of the conditions of adolescent students with physical disabilities.

Suggestions:

This study suggests that future research and clinical practice should test whether enhanced self-esteem can enhance treatment of PTSD.

- Conducting prospective and longitudinal studies in these fields to verify the validity of the results of this study and to clarify the factors affecting the post-traumatic development of cases suffering from physical disabilities resulting from traumatic events that led to their physical deformities.

- Conducting an in-depth clinical study on the various psychological and emotional factors that contribute to post-traumatic development in different age groups of males and females.

- Designing counseling and training programs for the development of post-traumatic development in students who have been exposed to trauma that led to post-traumatic stress disorder.

Orienting school supervisors to develop the capabilities and positive strengths of students who have been exposed to various traumas (aggressive behavior, academic failure, self-harm) to develop personal aspects that help tolerance, compassion, and empathy with self and others.

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