Research Article

Constructing a Scale of Mental Resilience among University Students

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Abstract: The research aimed to construct the scale of mental resilience among university students, the scale of mental resilience was built on a sample of (400) students of the University of Baghdad and the number of items (30) items of which was extracted discrimination in the style of the two extreme groups and Validity in the ways of apparent Validity and Validity of construction in the manner of the relationship of the degree of the item to the total degree of the scale and reliability in the ways of retesting and internal consistency using the Vacron equation. The statistical means of (Pearson's correlation coefficient and the alpha cronbach equation) were used. In light of the results of the research, the researchers presented a set of recommendations and suggestions.
Keywords: Mental, University, Student, Construction.

INTRODUCTION

In every serious work we cannot take one step without using many tools, the most important of which are tests and measurements (Kadhim, 1994, 126), so you must provide them with scale that measure all mental, social and emotional aspects, to measure a lot of personal characteristics of individuals, but as far as the researchers are aware, they did not find a scale (mental resilience of university students), and therefore the problem of current research emerges from the need for such a scale and its lack of availability, especially that It is prepared on the Iraqi environment. Also, through the availability of this scale, we can detect the level of mental resilience in individuals, which has not been researched in previous studies.

So this research came, which aims to build and apply the scale of mental resilience, which can be used by later in some educational and psychological research.

Research Objective

The current research aims to construct a scale of mental resilience among university students.

Search Limits

The current research is determined by the students of the University of Baghdad for the academic year 2020-2021, of both types (male and female) and in both scientific and humanitarian disciplines.

Terms Defining
Mental Resilience

Park & Kim (2005):

"The individual's awareness and awareness that there are many alternatives and options available within any situation an individual faces, as well as indicating his desire to be flexible and adapt to the situation, as well as the existence of self-efficacy related to being flexible" (Park & Kim, 2005).

Wahab (2011):

It is "the ability of the individual to generate many diverse and non-traditional ideas and is divided into:

- **Adaptive resilience:** The ability of the individual to adapt to the problems facing him by changing his mental orientation while doing different behavioral patterns towards that problem to reach the appropriate solution to it, and to be free from intellectual rigidity during his proposal for solutions to the problem is not constrained by a specific intellectual framework.
- **Automatic resilience:** the ability of the individual to produce many diverse ideas and quickly towards a situation or problem, where automatic resilience depends on the speed of production of ideas and their diversity more than their number. (Wahab, 2012, 25)

Wahab's definition, 2011, was adopted by the two researchers as a theoretical definition.

Procedural Definition

It is the score obtained by the respondent on the measure of mental (intellectual) resilience prepared by the researchers in this research.

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The Genesis of Mental Resilience

Personality is one of the most difficult terms to understand and interpret, and it means the construction of an individual's qualities and patterns of behavior that will determine for us his own unique way of adapting to the environment (Sahib & Khawla, 2019). Here, human behavior is governed by the expectations of the individual in the light of his past experiences, patterns of behavior and values that affect the occurrence of positive and desirable results if they are good and other patterns that produce undesirable results (Muntaha, 2015).

Many individuals try to regulate emotions positively as a way to manage their emotions, and this has a significant impact on physical and psychological health, social relations and work completion (Mutashar & Wasan, 2020).

This skill of emotion management was in line with humanity and did not receive research, classification and scientific studies continued until psychologists realized it and classified it as an essential component in the processes of creative thinking, and this was its breakthrough in 1950 before that year the studies and information available on creativity and its components were very limited and then began to increase and accumulate during the last quarter of the twentieth century and included in the skills of creative thinking as mentioned (Ali & Imam, 1985) and this breakthrough was emphasized by the space (2002) The decade of the fifties, sixties and seventies of the twentieth century marked the beginning of the emergence of epistemological theories of creativity and was first pioneered by Guildford (1950), then Torrance (1962–1965) and then Arieti (1976) (these three viewed resilience as a component of creative thinking. Gilford developed his theory and foundations to later be known as the theory of mental formation (Zayyat, 2006).

However, Rantaneen (1999) spoke about the theory of TRIZ, which was born during the period of the former Soviet Union in 1946 by the Russian scientist Althsuller, which was known as the theory of creative solution to problems. The reason for Henry's interest in this theory was his work in the circle of documenting inventions, and the study of the principles and strategies used by inventors and innovators to solve the problems they encounter emerged in his mind, and he came up with many strategies, including the strategy of resilience (Al-Amer, 2009, 70).

RESEARCH METHODOLOGY AND PROCEDURES

Research Methodology

The researchers used the descriptive and relational method, which is a type of research method by which it is possible to find out if there is a relationship between two or more variables and then know the degree of the relationship and its goal is limited to knowledge or nothingness and if it is found whether positive or negative (Hatab & Sadiq, 2020, 92).

Research Community

The research community included students of the University of Baghdad for the academic year 2020-2021 of both sexes and in scientific and humanitarian disciplines.

Research Sample

The sample consisted of (400) students from the University of Baghdad Baghdad who were selected by random method with equal distribution and table (1) showing the details of the sample:

Table 1. Research Sample Distributed By Type and Specialization

Variables		Number	Percentage
Genre	Males	200	50%
	Female	200	50%
Specialization	Scientific	200	50%
	Humanitarian	200	50%

Research Tool
Mental Resilience Scale

To achieve the objectives of the research, a scale of mental resilience was required, and after reviewing previous studies and theoretical literature, the scale of mental resilience (intellectual) was prepared, which consists of two dimensions, namely (adaptive resilience and automatic resilience) and consists of (30) items distributed over the two dimensions of adaptive resilience from (1-15 items) and automatic resilience from (16-30) items, pentathlon response (strongly agree - agree - unsure - disagree - not very agree) as it is given strongly agree (5 degrees), OK (4 degrees), Unsure (3 degrees), disagree, (two degrees), Very disagree (one degree), the highest score of the scale reached 150 degrees and the lowest score 30 with a hypothetical average (90 degrees).

The researchers followed the following steps to ensure the distinction, truthfulness and reliability of the scale:

Extract the Discriminating Power of the Items

To achieve this, the researchers adopted the method of the two extreme groups, in which two extreme groups of individuals are selected based on the overall scores obtained on the scale, and each item of the scale is analyzed using the T-test of two independent samples to test the significance of the difference between the upper and lower groups (Edwards, 1957, p.153).

To achieve this, the researchers followed the following steps:

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- For the purpose of obtaining data according to which the items are analyzed, the researchers applied the scale to the sample of (400) individuals.
- Correct each form and determine the overall score of each.
- Rank the scores obtained by respondents descending (from the highest score to the lowest score).
- The percentage of identification of the two extreme groups varies, and the ratios adopted as a criterion for determining those two groups vary, as Kelly (killy) indicates (27%) for each group, and in light of this the percentage was determined (27%) and the number of forms per group (108) forms, that is, the number of forms analyzed amounted to (216) forms.) for two independent samples to test the significance of the difference between the upper and lower groups on each item, and the item is distinct if the T value calculated between them is higher than the tabular T value. The results indicated that all items were distinct at the level of significance (0.05) and the degree of freedom (214).

Validity of the Scale

Validity was verified in two ways:

- **Virtual Validity:** To verify the truthfulness of the item and its validity in measuring what it was designed for outwardly, the items were presented to a group of arbitrators specialized in psychology and their number was (16) experts and there was agreement by (80%) and retention of all items.
- **Validity of Construction:** It was verified by finding Pearson's correlation coefficients between the degree of the item and the overall degree of each dimension of mental (intellectual) resilience. The values of the coefficients of correlation of the degree of the item with the total degree of the scale were a statistical function after comparing them with the tabular value of (0.098), the degree of freedom (398) and at the level of significance (0.05), and (Lindquist) indicated that the scale whose items indicate this indicator is constructively honest (Lindquist, 1951) and table (2) shows this.

Table 2. Items Correlation Coefficients with the Overall Score

Adaptive resilience	Pronounced like t	Correlation coefficient	Pronounced like t		Pronounced like t	Correlation Coefficient
	1	0,355	6	0,566	11	0,543
	2	0,456	7	0,655	12	0,324
	3	0,333	8	0,432	13	0,567
	4	0,765	9	0,547	14	0,347
	5	0,432	10	0,345	15	0,776
Resilience Automatic	Pronounced like t	Coefficient Link	Pronounced like t	Correlation coefficient	Pronounced like t	Coefficient Link
	16	0,657	21	0.356	26	0.432
	17	0,546	22	0.754	27	0.334
	18	0,338	23	0.442	28	0.532
	19	0,456	24	0.430	29	0.657
	20	0,783	25	0.432	30	0.774

Reliability of the Scale

It is the marks of individuals during the different times of the test procedure, i.e., the reliability of the results of the individuals each time the test is applied to them (Al-Zahir, 2002: 140). Reliability is one of the important psychometric characteristics that must be available in psychological and educational measures in order to measure what I prepared to measure with the least possible errors (Aiken, 1988, p.58). To calculate the reliability of the scale, the researchers took (100) forms from the statistical analysis sample to which the scale was applied.

The reliability of the test has been verified in two ways:

Test -Retest Method

This is one of the common methods in calculating the reliability of educational and psychological measures that depend on the reapplication of the scale to the same sample and with a time difference

(Al-Gharib, 1977, 651).Therefore, the researchers applied the fast-slow thinking scale to a sample of (100) individuals selected randomly from the research sample and reapplied the scale to this same sample after about (15) days and the two applications were corrected for each of the sample members and according to the Pearson correlation coefficient between the degrees of the two applications and the coefficient of association was reliability (0.86) is a good coefficient because the coefficient of coefficient of co-interpretation (square of the coefficient of reliability) is greater than (50%) (Foran, 1961: p.385).

Cronbach Alpha Equation

This equation is commonly used and is characterized by its consistency, and is intended to calculate the correlations between the scores of all the items of the scale, and this indicates the consistency of the performance of the individual, i.e., the homogeneity between the items of the scale (Odeh & Hebron, 2000: 354). The researchers extracted the values of the coefficient of reliability of the scale using the alpha

chronch equation and the value of reliability in this way was (0.93).

SEARCH RESULTS

The researchers concluded the following:

- There is an effect of the sex factor on mental resilience.
- University curricula may have a role in developing mental resilience.
- The nature of parenting, gender interaction and their differences between males and females may contribute to the disparity of mental resilience between the sexes.

In light of the findings of the two researchers, they recommendmaking use of the scale prepared in this research in the various educational and psychological fields. The researchers suggest building the mental resilience scale on samples other than students.

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