

Building of Alexithemia Scale for Measuring the Psychological Traits of Mosul University Students

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Abstract

The endeavor of the current research was to construct Alexithemia scale for Mosul University students. The construction sample consisted of (400) male and female students at the colleges of (Arts, Pharmacology and Administration and Economics). In order to prepare the preliminary form of the scale, the researchers reviewed a great deal of previous studies and literature. After that, (38) items were formulated, which were allocated for the five dimensions. Alternatives of response were selected in accordance with Likert's scale (applies to me very greatly, applies to me to a great degree, applies to me moderately, applies to me to a less extent, applies to me to the least extent). The items were submitted to a group of experts to calculate the surface validity and the items were 80% agreed upon. Also, the construction validity was calculated using two methods through using the distinction strength. Four (4) items were omitted as their T calculated value is less than the table value. Also, the method of the item score with the total score was used and it was found that all the correlation coefficients are statistically significant. Invariability was determined using the retest and its value was (0.80) and it was also calculated using Alpha Cronbach's equation and it was found that it is (0.82). In addition to that invariability was calculated using the Code Richardson's equation (21) and it was found that it was (0.79). The final form of the scale comprised (34) items that are characterized with validity and invariability and the maximum score of the scale was (170) and the minimum was (34) and the hypothetical mean is (102). Therefore, the two researchers constructed a scale that is characterized with validity, invariability and discrimination.

Keywords: Alexithymia, university students, Psychological Traits, Agreeableness.

Introduction

The university stage is a transient stage to the subsequent stages as it decides the status of the personality in terms of being a normal personality or a personality that suffers from disorders that might affect the interaction with the self in terms of expressing the emotions and understanding the others and at the same time it might hinder the adaptation of the individual in his/her university life and might deprive him/her from the opportunity of making successful social relations with the work mates and in life in general. Recently, a vast dispute emerged and a countless questions were posed by university professors and these were directed to the relevant specialists about what is happening to the university students as their personal relationships are characterized with being cold and the poor capability of understanding the emotions or expressing them, as well as inability of talking, conversing and accepting other's points of view. What is mentioned earlier can be described as a type of disorder that is featured with being a sentimental that is affiliated to the concept of alexithemia which negatively influences the activity, behavior and social interaction of individuals in addition to influencing the communication of individuals with the people around them and accepting himself and others. So, alexithemia is related to the decrease of the cognitive and وجدانية insufficiency of processing of the information for dealing with the emotions and controlling them (Khamees, 2014). AlBehairi's study (2009) confirmed, in its results, that there is a positive correlation between the

Alexithemia from one hand and the decrease of self-control and confidence from the other hand. The emergence of Alexithemia amongst the university students represents a hinderance to the progress, production and development of the society because of the problems resulting that include psychological, physical, social and economic problems. This was confirmed by the study of Dawood (2016), which indicated that there is a correlation between the economic and social low status of the individuals and the high levels of Alexithemia they suffer from. Moreover, (Tylor, 1997) argues that Alexithemia results from shocking experiences represented by poor adaptation in life, which is usually related to the nurturing and self-discompatibility that leads to distorting the emotional sympathy. Therefore, all the individuals who suffer from this disorder are infected with Alexithemia, which results in an evident inability of individual to express their feeling verbally or physically, particularly, the feeling of love and care and this leads to suppress their feelings and expressing them in inconvenient and distorted behavior. As there is no scale for Alexithemia for university students, the problem of the research pivots on the construction of this scale. It is worth mentioning that managing the emotions is regarded as one of the psychological phenomenon that play an important role in accomplishing the psychological health of an individual and as this study is related to the concept of Alexithemia, which refers to the inability to express the feelings and discommunication between the emotions and the ideas associated with the various situations in life, the researchers consider it as a factor of fragility that lead to the emergence of several physical and psychological disorders and therefore, it is important to develop or, at least, adaptation of the psychological scales to all the societies to have a solution to deal with the variables and the psychological phenomena in general and to deal with Alexithemia in particular (Bushusha and Nite Abdulsalam, 2021:307).

Researches and scientific studies showed that the individual who are characterized with self-assertion and who express their feelings talk more and express their feeling confidently and create a positive atmosphere to them and to the others and they are able to control their emotions and thus, fulfilling an important pillar in the integrate and comprehensive process that is important to build a sound personality with their various aspects (Myers, 2004: 234).

The first who used the term "Alexisthymia" is (Sifneos, 1973), which means "there are no words that can express the feelings". The origin of the word is Greek as (a) means "no", "lexis" means there are words and "thymia" means feelings. Also, he considers it as a disorder in the emotional and cognitive performance and inability to describe the feelings with words. The most important aspects of Alexisthymia is that an individual can't discriminate his feelings from the associated physical senses with inability to express his feelings to others in addition to the absence of imagination and internal thoughts (Tahir, et al, 2012). Alexisthymia was interpreted by the neurobiological theory that was developed by Sifneos & Nehemiah (Sifneos & Nehemiah 1983), who indicated that the right part of the brain is the part, which is responsible for the feelings, describing them, recognizing and expressing them non-verbally. After that, in 1988, Sifneos explained that the reason behind Alexisthymia is the disconnection of the brain fibers that connect the right and the left hemispheres of the brain and this disconnection leads to the flow of information between the two hemispheres of the brain. In addition to that, Alexisthymia incidence might be due to the infection of the anterior brain cortex and this is reflected by the emotional behavior (AlSayouf, 2020: 270). Geis (Geis, 1978), argues that individuals who suffer from Alexisthymia are characterized with a lack of emotional warmth and socialization with others (Colin, 2003: 733). Also, (Pekindam, 1977 and Shafrey 1993) indicated that Alexisthymia is negatively related to the linguistic and verbal intelligence and positively relate with the non-verbal linguistic intelligence (body language), i.e. what an individual is incapable of expressing is translated to psychological gestures (body language) and they might be misinterpreted by the persons around him (Taylor, 2000: 134). The theoretical importance is crystallized by shedding the light on a relatively new phenomenon, which is Alexisthymia and it deals with the psychological construction for the university students who suffer from Alexisthymia as this will enrich the psychological aspect in this respect as the university students represent the pillar of the education system and the university is the stage from which these student will move to select the field of their work and then having families and therefore it is hoped them to be psychologically healthy in addition to the scarcity of the studies that tackle the construction of Alexisthymia scale and the way in which this scale is applied

for other psychological disorders. From the other hand the applied importance refers to the benefit from the scale and relating the psychological concepts with other personal concepts that deals with this phenomenon from different corners that assist the specialized persons to identify the causes and the behavioral results of one phenomenon from various points of view and also making efforts to regulate the emotions to decrease Alexisthymia students suffer from by means of training the students to regulate their emotions. Additionally, the current research aims at constructing Alexisthymia scale for Mosul University students. The limits of the research included the following:

- 1- Human limits, which were represented by Mosul University students in various morning study colleges.
- 2- Temporal limits, which were represented by the academic year (2022-2023).
- 3- Spatial limits that are represented by Mosul University.

Alexisthymia term was defined by many scholars and researchers, as it is defined by:

- 1- Sifneos (1973): A disorder in some of the individual's cognitive and sentimental functions that show a decline in his ability to use the words and the verbal expressions to describe and specifying his/her feeling towards the others and the difficulty in discrimination between these feelings and the associated body feeling, lack of imagination and the externally-oriented thinking (257:1973)
- 2- Luminet et al, 2013: They defined it as the inability to discriminate and describe the emotions verbally, limited *هوامية* life, a practical cognitive pattern, which is oriented, in the first place, to the body symptoms and the actual external elements (Luminet et al, 2013: 714).
- 3- Dawood (2016): It is a personal trait with sentimental and cognitive characteristics that is featured by the difficulty of identifying and describing the feelings and emotions by the person with a cognitive pattern that is characterized with outwardly orientation (Dawood, 2016: 419).
- 4- (Tukaiev et al, 2020): A personal trait that represents the problem of identifying the feeling of the person and the persons around him and the difficulty of expressing these feelings verbally and a difficulty of discriminating the physiological passions and feelings and a way of thinking that is continuously oriented outwardly on the expense of the internal experience with decline in the ability of imagination and inability of communication with others (Tukaiev et al, 2020).
- 5- Yousif and AlFadhli (2022): It is a personal trait that involves sentimental and cognitive characteristics and it means losing the words that express the person's feelings. It is characterized with inability of describing the feelings and emotions that associate the cognitive pattern directed externally in addition to difficulties a person suffers in regulating his emotions (Yousif and AlFadhli, 2022: 16).

The theoritical definition: The researchers adopted the definition of (Sifneos, 1973).

The procedural definition: The score a student gets through his answer to the scale of Alexisthymia that was prepared by the researchers.

The concept of Alexisthymia was tackled by many studies including (Parker,Tayol &Bagby,2001), which investigated the relationship between the emotional intelligence and Alexisthymia. This study aimed at identifying the empirical correlation between the two concepts and identifying the analysis of potential variable in a samples that involved (734) individuals of the adults population who responded to Torento scale of Alexisthymia and emotional intelligence as two independent structures, though they are interrelated and strongly correlated positively and negatively (Parker,Tayol &Bagby,2001: 112). The study of Hammoid Bakkar, Shendi &ALRujaibi, 2019) indicated the relationship between Alexisthymia and the subjective effectiveness in terms of making the decision for tenth and eleventh grade students in Masqat. The sample included (556) students in the tenth and eleventh grade, (278) male student and () female students *هنا يوجد خطأ في عدد الطلاب*. The Torento Alexisthymia scale was used in addition to the brief version of the subjective effectiveness scale in decision making (CDMSE). The results of the study showed the the level of Alexisthymia was less than the medium, whereas the level of the subjective effectiveness in the decision making was above the medium. Moreover, there was no statistically significant relationship between Alexisthymia and subjective effectiveness in the decision making. Also, results demonstrated

that there were significant differences in Alexisthymia between the two sexes in favor of the females, while there were no significant differences in the subjective effectiveness in making decisions between the two sexes (Jarwan and Tashtooosh, 2020: 126).

From the other hand, Abdulghani's study (2020) indicated

The psychometric characteristics of Toronto scale for Alexisthymia (-TAS-20) of the students of college of Education at Asyut University

The research aimed at verifying the psychometric characteristics of Toronto scale for Alexisthymia (-TAS-20) of the students of college of Education at Asyut University. To accomplish the objective of the research the researcher translated the scale which was prepared by Parker & Bagby, Taylor, (1994) and then applied it to the sample of the exploratory study (160) male and female students at the college of Education in Asyut University with ages (19-22) years old and with an average age of (254.17) months, a standard deviation of. The number of the scale items is (20) items and they follow Likert five gradation of responses: (I strongly refuse, I refuse, neutral, I agree, I strongly agree). The researcher used the confirmative factorial analysis after applying the scale using (IBM SPSS Amos v20) software to verify the potential construction validity or the Toronto Alexisthymia Scale for by means of selecting the model of the potential factors. The results showed that the model of the potential factors had good compatibility indicators as the invariability coefficient value of the scale as a whole was (0.82) and the branch dimensions were (0.65, 0.76 and 0.75) respectively and this indicates that the scale is characterized with high validity and invariability (Abdulghani, 2020: 31-32).

Study of (AlHazzazi, 2022): The relationship between Alexisthymia and the aggressive behavior for of the visitors of Eradah compound and Psychological health in Jedda.

The study endeavored to investigate the relationship between Alexisthymia and the aggressive behavior for of the visitors of Eradah compound and Psychological health in Jedda city. The researcher used the correlational descriptive method as the population of the research consisted of the visitors of Eradah compound and Psychological health in Jedda city. The sample was selected randomly and it was (65) visitors. The torento Alexisthymia scale (TAS-20) prepared by Bagby and his colleagues (Bagby et al, 1994), which was translated by (AlEdan, 2019) was distributed, and the scale of the aggressive behavior designed by (Buss & Perry, 2019), translated and adapted to the Saudi environment by (Abdullah and Abu Abaat, 1995). Results showed that the scores of the variables of Alexisthymia and the aggressive behavior of the visitors are medium. The study also demonstrated that there was a correlation between Alexisthymia and the aggressive behavior and the study recommended to expand researching concerning the level of Alxisthymia and its relationship with the multiple personal disorders as there are few researches about this subject in addition to the necessity of preparing the guidance programmes to decrease the level of Alexisthymia for the adults (AlHazzazi, 2022: 123)

The study of (Aleisa et al ,2022)

Association between Alexithymia and Depression among King Khalid University Medical Students: An Analytical Cross-Sectional Study

Alexisthymia is a case in which the person is unable to explain his/her sentiments and body sensations or discussing his feelings. The study aims at identifying the extent to which this disease is spread and its relation with the population structure and social aspects and depression amongst the students. A cross sectional survey was conducted to the students of college of medicine at the King Khalid University (KKU) in Saudi Arabia. The technique of taking random class samples was used to gather the data using Toronto Alexisthymia Scale (TAS-20) and the patient health questionnaire form (PAQ-9). The logistic multi regression model was used to identify the factors related to Alexisthymia. A total of (333) students participated in this study; (64.4%) males and (51.4) females. The average of Alexisthymia spread and depression was 47.4% and 88.9% respectively. The regression analysis showed that females were characterized with a double risk (liklihood = 2.09) and the male students (with

high incomes) showed less likelihood of suffering from Alexisthymia (likelihood = 0.39), while the individuals who suffer from chronic health problems showed double risks of infection with this disease (likelihood = 2.04). in addition to that depression was correlated with Alexisthymia (OR = 1.91). the study revealed that the spread of ALExisthymia was high along with depression amongst the samples in question. This is motivating to find scales to limit in in order to make the performance of the students better and to make this avoid the psychological problems in the future (AlEisa et al, 2022: 1).

The extent of benefit from the previous studies:

In spite of the scarcity of the previous studies that tackled the current research concepts, but they helped the researchers in:

- 1- They provided the researchers with a basic and important database.
- 2- It enabled identifying the scientific methodology of the research.
- 3- It helped the two researchers in chosing the theorrtical framework of the study.
- 4- It enabled the researchers to get acquainted with the way to identify the objectives of the current research and selecting the convenient statistical tools to obtain the results.
- 5- It aided in identifying the challenges the researchers encountered in those studies.
- 6- Getting acquainted with the titles of the references used in the current research.

Procedures of the research

- Population of the research

The population of the research is limited by all the colleges of Mosul University (morning studies), which are (24) colleges. The sample of the research included (44028) male and female students for the academic year (2022-2023).

- The scale construcion sample

The scale of the construction sample, which consisted (400) male and female students according to table (1).

Table (1): The number of the selected random sample individuals

No.	College	First grade	second grade	third grade	fourth grade	Total
1	College of Arts	30	31	17	33	111
2	College of pharmacology	24	11	18	16	69
4	College of Administration and Economy	57	51	62	50	220
	Total	111	93	97	99	400

- Preparing the preliminary form of the scale

In order to construct the scale, the scales presented by researchers and the previous researches and literatures were reviewed. The dimensions involved by the scale were identified in light of the theoretical frameworks. These dimensions are:

- 1- Difficulty of identifying and describing the feelings (DIF).
- 2- Difficulty of identifying the feelings and body sensations (DIF).
- 3- Externally-oriented thinking (EOT).

4- Deficiency of imagination or imagining unworthiness (DF).

5- Inability to experience the sentiments (weak empathy).

The researcher formulated (38) items distributed to the five dimensions. Alternatives of responses were chosen according to Likert's scale (apply to me greatly, apply to me very much, apply to me to a very little extent and apply to me to a little extent). The scores were allocated to the alternative as follows: (1-2-3-4-5) and the validity of the items was verified by submitting them to a group of experts. The percentage of the experts' agreement was (80%) and a preliminary pilot experiment was conducted by applying the scale to (50) male and female students to identify the extent of items clarity and to measure the time of responding as it was (24) minutes. Also, the validity of construction was measured using two methods:

1- The discrimination strength of the items was used where the scale was applied to (400) male and female students and a percentage of (27%) of the high scores (108) for male and female students and (27%) of the low scores (108) male and female students. The discrimination of the items was measured through the T test of two independent samples.

Four (4) items were deleted from the scale as their T value is less than the table value as shown in table (2):

Table (2): Shows the T calculated value as an indicator of discrimination of the ALEXISTHYMIA scale

Item	High group		Low group		T calculated value
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation	
1	3.960	1.21460	3.1019	1.33913	4.95
2	4.1296	1.19260	2.8241	1.9835	8.025
3	2.98156	1.46601	2.7370	1.10162	1.385
4	40.1481	1.01221	3.2685	1.24260	5.704
5	4.0093	1.2262	2.7037	1.38253	7.341
6	4.6944	0.7204	3.9537	1.40350	4.849
7	4.2407	1.14280	3.2778	1.43932	5.445
8	3.0741	1.35828	2.00	1.05901	6.481
9	4.5648	0.98847	3.9722	1.23393	3.895
10	4.4815	0.98095	3.1019	1.39384	8.412
11	3.4167	1.55957	2.3519	1.44245	5.209
12	3.0185	1.26033	1.9907	1.09796	6.390

5.106	1.05014	1.6667	1.56502	2.5926	13
1.677	1.11672	1.6204	1.38441	1.9074	14
3.655	1.27995	3.6852	1.13608	4.2870	15
5.662	1.28441	3.2963	1.00604	4.1852	16
6.400	1.22651	3.4815	0.96995	4.4444	17
6.208	1.43689	2.3056	1.54238	3.5645	18
6.412	1.51932	2.4907	1.49428	3.8056	19
4.435	0.98320	1.6204	1.43037	2.3611	20
7.256	1.46999	2.7315	1.39338	3.7593	21
7.671	1.35378	2.2870	1.34274	3.6944	22
7.256	1.46999	2.7315	1.39338	3.7593	23
7.671	1.35378	2.2870	1.34274	3.6944	24
8.622	1.05245	1.7037	1.45627	03.1944	25
0.920	1.13184	2.6074	1.42479	2.7685	26
5.036	1.34715	2.1296	1.51215	3.111	27
4.452	1.31171	2.7130	1.37710	3.5278	28
0.406	1.21972	3.1704	1.32461	3.2407	29
5.317	1.22651	2.4815	1.2813	3.3889	30
3.159	1.40481	2.3704	1.52242	3.000	

					31
5.704	1.24260	3.2685	1.01221	4.1481	32
7.341	1.38253	2.7037	1.22662	4.0093	33
4.950	1.33913	3.1019	1.2146	3.9630	34
1.385	1.10162	2.7370	1.46601	2.9815	35
8.025	1.19835	2.8241	1.19260	4.1296	36
7.671	1.35378	2.2870	1.3427	43.6944	37
8.412	1.39384	3.1019	0.98095	4.4815	38

So, the number of the items of the scale becomes (34) items.

Also, the construction validity of the scale was calculated using the technique of the relation of the item score with the total score as (100) questionnaire forms of the scale were selected and the correlation coefficient between the score of each item and the total score as shown in table (3).

Table (3): Shows the correlation coefficients between each score and the total score of Alxisthymia scale

No	Dimension	Item	Correlation coefficient with the total score	T test
1- 2-	Difficulty of expressing and describing the feelings.	1	0.383	4.104
		2	0.517	5.979
		3	0.291	3.011
		4	0.342	3.609
		5	0.208	2.105
		6	0.485	5.49
		7	0.245	2.502
	Difficulty of discriminating between the feelings and body sensations	8	0.36	3.82
		9	0.406	4.398
		10	0.405	4.385

		11	0.261	2.677
		12	0.345	3.639
		13	0.36	3.82
		14	0.303	3.148
3- 4-	Externally-oriented thinking	15	0.323	3.379
		16	0.355	3.759
		17	0.433	4.755
		18	0.316	3.297
		19	0.311	3.239
		20	0.256	2.622
		21	0.337	3.543
	Deficiency of imagination or inability of imagining	22	0.346	3.651
		23	0.441	4.864
		24	0.27	2.776
		25	0.686	9.333
		26	0.246	2.512
5-	Inability to experience the sentiments (weakness of empathy).	27	0.453	5.03
		28	0.511	5.885
		29	0.441	4.864
		30	0.333	3.381
		31	0.36	3.82

		32	0.408	4.399
		33	0.303	3.148
		34	0.316	3.297

T value of the correlation coefficients was calculated and it was (1.96) at a significance value of (0.05) and a freedom degree of (98). So, the number of the items remained as it is (34) items. Also, the researchers calculated Pearson correlation coefficient between the score of each item and the score of the dimension it belongs to as shown in table (4).

Table (4): The relationship of the item score with the dimension it belongs to, Pearson coefficient and T value

No.	Dimensions	item	Correlation coefficient with the dimension score	T value of
1-	Difficulty of identifying and describing the feelings	1	0.305	3.17
		2	0.343	3.615
		3	0.475	5.344
		4	0.489	5.55
		5	0.584	7.122
		6	0.631	8.052
		7	0.453	5.03
2-	Difficulty of discriminating between the feelings and body sensations	8	0.492	5.595
		9	0.237	4.415
		10	0.479	5.402
		11	0.227	2.307
		12	0.351	3.711
		13	0.305	3.17
		14	0.348	3.675
3-	Externally-oriented thinking	15	0.465	5.2
		16	0.532	6.22
		17	0.634	8.116
		18	0.453	5.03

		19	0.543	6.401
		20	0.479	5.402
		21	0.317	3.309
4-	Deficiency of imagination or inability of imagining	22	0.245	2.502
		23	0.559	6.674
		24	0.543	6.401
		25	0.343	3.615
		26	0.566	6.797
		27	0.475	5.344
5-	Inability to experience the sentiments (weakness of empathy).	28	0.304	3.159
		29	0.388	4.167
		30	0.545	6.435
		31	0.764	11.722
		32	0.681	9.206
		33	0.454	5.044
		34	0.69	9.437

From the table, it is clear that all the values of the correlation are positive and when calculating T value of the correlation coefficient, it was found that all the T calculated values are higher than the table value which is (1.96) at a significance level of (0.05) and a freedom degree of (98) and therefore all the items were kept the same.

Invariability of the scale

Several methods were used to measure the invariability, which are:

1- Invariability measurement by using the retest:

The researchers applied the retest method to the invariability sample (100 male and female students) and the test was applied in 2/1/2023 and the retest was conducted on Monday 16/1/2023 and then the Pearson correlation coefficient was found between the first and the second applications and it was (0.80) and this refers to a high invariability of the scale. In order to make sure of the significance of the correlation coefficient the T value of the

correlation coefficient was calculated and it was (13.12), which is higher than the table value (1.98) at a freedom degree of (98) and a significance of (0.05).

2- Invariability measurement by using Alpha Cronbach Coefficient

This method was suggested and developed by Cronbach to estimate the homogeneity of the individual tool as it gives the minimum limit of the estimated value of the scale invariability coefficient and if it is high, that refers to the invariability of the test (Omer et al, 2010: 227). After the researcher applied this method to the score of the scale, the invariability obtained was (0.82).

1- Invariability measurement using Kuder-Richardson21 Coefficient

This equation is used in the scales with graded responses (1,3,2,5,4) and when it was used it was found that the value of the invariability coefficient was (0.79).

The final form of Alexisthymia scale

The final form of Alexisthymia scale involved (34) items with alternative responses: (applies to me very greatly, applies to me to a great degree, applies to me moderately, applies to me to a less extent, applies to me to the least extent). The scores on the alternatives range was (1,3,2,5,4), given that all the items are negative.

Correction of the scale

As the scale is of five alternatives and consists of (34) items, therefore, the high score on the scale is (170), the medium score is (102) and the low score is (34) and levels for the scale scores were calculated.

- High level and its scores range is (136-170).
- Medium level and its scores range is (68-136).
- Low level with scores (34-68).

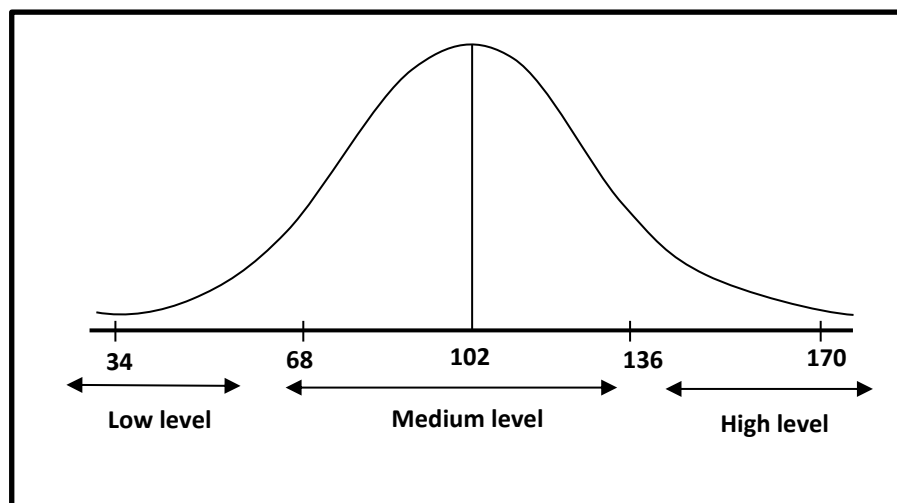


Figure (1): Shows Alexisthymia levels according to the scores of the scale

Results

The researchers constructed a scale that is characterized with validity, invariability and discrimination which consists of (34) items.

Recommendations

The two researchers recommend using the scale to measure the level of ALEXISTHYMIA for Mosul University students and suggest to conduct a study entitled: **“Measuring the level of ALEXISTHYMIA for the university students in light of the variables of sex and grade”**.

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