The Patterns of Overexcitabilities and Its Relationship to Mental Motivation Among The Excellent Students At The University Of Jeddah

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ABSTRACT:

The current study dealt with Patterns of over excitabilities and its relationship to mental motivation on a sample of 209 students of the College of Education, using the descriptive approach, by applying two tools Patterns of overexcitabilities and mental motivation scale, and the results resulted in the students who excelled in a large degree of Patterns of overexcitabilities, respectively (Sensual, emotional, mental, psychomotor, Imaginational). At the level of mental motivation, the dimensions came in succession to (orientation towards learning, creative problem solving, cognitive integration, and mental focus), with a moderate direct correlation between arousal patterns (psychomotor, Imaginational, and mental) and mental motivation among students. The researcher recommended building training programs that contribute to forming patterns of super-arousal and mental motivation among university students.

Keywords:

super arousal - mental motivation - Faculty of Education.

1- Psychomotor overexcitabilities, 2- Sensual overexcitabilities, 3- Imaginational overexcitabilities, 4- Intellectual overexcitabilities, 5- emotional overexcitabilities

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1. Introduction

The emotional component of personality has taken over a wide area in the field of giftedness with the aim of identifying the intersecting meanings of the characteristics of gifted students. It was evident in the knowledge of the characteristic of excessive sensitivity in the behavior of gifted students, which is known as overexcitabilities (OES). The Polish doctor (Dabrowski) was the first to introduce the concept of overexcitabilities (1967) to highlight the intensification of mental activity beyond normal activity. This Hypothesized that overexcitabilities is a sign of an individual's ability to adapt to his or her environment of concern. That leads him to carry out the processes of positive division to find the desired adaptation based on different patterns of psychological arousal. Disintegration Theory of Positive implies five types of overexcitabilities, namely Intellectual Excitement. The aspect is closely related to intelligence and appears through the pursuit of an understanding of the unknown, love of truth and knowledge, and critical observation. Imaginational arousal (Imaginational) that appears in the ability to imagine based on daydreaming, creative thinking, remembering, Intellectual judgment, conceptualization and departing from the limits of the ordinary (Doll, 2013), and Emotional arousal and represents hyper-sensitivity, perfectionism, emotional intensity, hyperemotion, and effective memory, And a high sense of responsibility and high moral development, while the arousal (Sensual) appears in the form of sensual joy, appreciation for beautiful things and their view from different angles, and alertness to sounds and touch (Ackerman, 1997) Psychomotor is manifested with an overwhelming energy resulting from emotional tension represented by movement activity. Plus, speed of speech, high motivation to work, and the challenge of the self by performing tasks and discomfort (Banduna & Perrone-McGovern, 2016).

He also included the term mental motivation (Mental Motivation), which is one of the modern concepts dealt with in cognitive psychology, and the first to use it, Giancarlo & Facione (1999) prepared a general scalethey called it “California

Scaleof Mental Motivation". As a concept that expresses the individual's ability to possess higher-order thinking skills by stimulating his potential Intellectual capabilities to use them to their maximum extent (Marai, Nofal, 2008) Motivations appear in the form of cycles, and proceed through three repetitive sequential stages, namely the need, which appears as a response to cognitive hunger to reach To achieve a goal, and as soon as the goal is achieved, a sense of satisfaction and achievement that stems from need, and is temporary, followed, and then the cycle of motivation begins again (Kahil, 2015) .Mental motivation is related to cognitive openness, self-control, and motivation towards providing better performance, confronting Problems in a creative and unique way, and positive critical thinking (Rasheed, 2019). Mental motivation consists of four main areas, namely: Learning Orientation, which is the ability to generate motivation that contributes to In raising the cognitive outcome, by mastering educational tasks, as well as nurturing curiosity and mental passion for effective research and exploration, (Doll, 2013), Creative Problems Solving and refers to the diversity of solutions that individuals practice to the problems facing them, with creative ideas that are characterized by flexibility and originality. , And it results in the active integration in the tasks associated with the challenge, the love of distinction, and the feeling of contentment (Mari, Nofal, 2008), Cognitive Integrity)) and appears through the objective application of thinking skills and openness to ideas objectively without bias or selectivity, open mindedness, and flexibility with multiple Alternative options, accepting different points of view, leading to an optimal solution to problems, mental focus ((Mental Focus, the ability to persevere and focus the exerted effort, accomplish tasks in a clear methodology while adhering to the specified time without delay, and feeling comfortable in solving problems (Rashid, Najm, 2019).

The results of scientific research also confirm the importance of activating Patterns of overexcitabilities, and as a result, Daniels & Piechowski (2010) emphasized the association of hyper-patterns with modernity and diversity, curiosity and love of knowledge, theoretical and analytical thinking, and exploratory questioning. Several studies have also sought to know the type of relationship between Patterns of overexcitabilities and other variables in undergraduate students in order to present a clearer and more comprehensive picture of the characteristics of these individuals and the nature of their growth, including the study of Alias, Rahman, Abd Majid, & Yassin, 2013). Al-Shayab, Al-Khatib, 2015; Al-Rubaie, Al-Baaj, 2015; Bedun & Perrone, 2016; Martowska, Matczak, 2016; Tantawi, 2017; Zoubi, 2019; Rashid Najm, 2019; Abu Qurah, 2019), which showed a clear contrast between Patterns of overexcitabilities among gifted students compared to ordinary students, with a positive correlation between arousal and creative thinking patterns, cognitive and social emotional trait, self-efficacy, and perfectionism among outstanding students.

At the level of mental motivation, it expresses the individual's tendency to indulge and enjoy building knowledge, seeking information, acquiring it, thinking and contemplating it (Caciopo & Petty, 1982). It is a condition that qualifies its owner to accomplish innovations in Jamieson Avenue, 2007 (Gross,). Scientific studies have also varied that dealt with levels of mental motivation and their relationship to different variables, including the study of Mentzer, 2008). Cokluk, Bokeoglu, 2008; Kahil, 2010; Hammak, 2012, Al-Dhiabi, 2013; Al-Qudah, Al-Asiri, 2015; Rasheed, 2019), which showed students' enjoyment of a high level of mental motivation on the dimensions of mastery and open-mindedness towards identifying and discovering new things, enjoying the spirit of perseverance, orientation towards learning, participation in the educational process and academic compatibility. In view of the importance

of patterns of overexcitabilities and mental motivation in the personality of the university student as the core of the university's vision, mission and goals, the current study aims to validate the availability of levels of these patterns and dimensions through solid scientific tools, and this is a prelude to taking preventive and remedial measures later. With the aim of investing the potential of outstanding students and transforming the innate talent into distinguished performance, and based on the above, the following study questions were asked:

• What are the most common patterns of overexcitabilities among outstanding students in the College of Education?

• What are the most common dimensions of mental motivation among outstanding students in the College of Education?

• Is there a statistically significant correlation between Patterns of overexcitabilities and mental motivation among the outstanding students in the College of Education?

2.1The study Method:

The descriptive approach was used to suit its relevance and objectives of the study by designing two measures to collect data in order to measure Patterns of overexcitabilities and its relationship to cognitive motivation among the outstanding students of the College of Education.

2.2 Participants

The study population consisted of all the outstanding students in the Department of Special Education of the College of Education of both sexes for the academic year (1442 AH), and their number according to official statistics and records is (652) male and female students, and the application was carried out on a simple random sample from the total community, the number of which reached (209) students And a student.

2.3 Instrument

Patterns of overexcitabilities (Over excitability Questionnaire-Two, OEQII) prepared by (Falk, Lind, Miller, Piechowski, & Silverman, 1999) and expressed by Al-Mutairi (2009), the scale consisted of (50) items distributed into five From Patterns of overexcitabilities and from the type of quadruple Likert scale, with a quadruple estimation scale (applies much (4), applies somewhat (3), does not apply much (2), does not apply at all (1), with determining the response to each of the statements s. The scale statement s are divided into five areas:

Table (1) Distribution of expressions on the dimensions of the scale of overexcitabilities (OEQII)

Dimensions	Numbers of statements
1- Psychomotor overexcitabilities	.(50 ،42 ،39 ،29 ،21 ،18 ،15 ،10 ،7 ،2)
2- Sensual overexcitabilities	.(48 ،46 ،45 ،38 ،37 ،32 ،27 ،13 ،8 ،3)
3- Imaginational overexcitabilities	.(47 ،34 ،33 ،28 ،24 ،22 ،20 ،14 ،4 ،1)
4- Intellectual overexcitabilities	.(43 ،40 ،36 ،30 ،25 ،23 ،19 ،16 ،12 ،5)
5- emotional overexcitabilities	.(49 ،44 ،41 ،35 ،31 ،26 ،17 ،11 ،9 ،6)

* Note:

The two statements (38, 44) take inverse scores according to the Likert quadruple scale.

Falk and his colleagues also extracted the indications of the global validity of the scale by using the orthogonal rotation method according to the Varimax equation to examine the saturation of the statement s around the factors, where five factors were obtained from (124) items that branched out the statement s around them, with the clarity of the five factors in terms of concept and from The theoretical side, as the first (10) statement s were adopted in every factor that exceeds the value of their saturation (5), and therefore each dimension was addressed and falls under each dimension (10) statement s to represent the behavioral manifestations of overexcitabilities.

Falk and colleagues extracted the coefficients of reliability and internal consistency using the Cronbach alpha coefficient, and were as

follows: Psychomotor overexcitabilities ((0,86), Sensual overexcitabilities (0,89), overexcitabilities Imaginational (0,85), Intellectual overexcitabilities (0,89), and Emotional overexcitabilities (0.84)).

The validity of the scale was verified to ensure that it measures what was set to measure it, by presenting it in its initial form to a number (7) of the arbitrators specialized in the field, and they were asked to evaluate the quality of the scale, in terms of its suitability for the objectives of the study, the clarity of each statement, its relevance to its axis, and its importance. In addition to expressing their opinion in the event of any amendment to the terms of the scale, and after retrieving the scales, the scale was approved as it is.

To verify the validity of the internal consistency of the tool, a survey sample of (30) students from the College of Education was selected, and according to the data, Pearson's Correlation Coefficient was calculated. In order to identify the degree to which each of the statements s is related to the overall degree. It was found that the values of the correlation coefficient for each statement with the overall score are positive, and statistically significant at the significance level (0.01) or less. This indicates the validity of the internal consistency between the statements, and its relevance to measuring what was prepared to measure.

The reliability of the overexcitabilities scale has also been confirmed by using Cronbach's Alpha (α) reliability coefficient (Cronbach's Alpha (α). Table No (3) shows the values of the reliability coefficients of Cronbach's alpha for the overall degree of the scale.

Table No (2) the Cronbach alpha coefficient for measuring the reliability of the scale of overexcitabilities

Dimension	Number of statements	Reliability coefficient
1- Psychomotor overexcitabilities	10	0.759
2- Sensual overexcitabilities	10	0.921
3- Imaginational overexcitabilities	10	0.907
4- Intellectual overexcitabilities	10	0.859
5- emotional overexcitabilities	10	0.893
General Reliability	50	0.866

It is evident from Table No. (2) that the general reliability coefficient of Cronbach's alpha is high, reaching (0.866), and this indicates that the scale has a high degree of reliability that can be relied upon in field application.

The scale statement s were divided into two parts (the odd-numbered statement s, and the even-numbered statement s), then the correlation coefficient was corrected with Getman's equation due to the lack of equality of the statement s according to the following law: (Afana and Nashwan, 2016)

$$Guttman = 2\left[\frac{S_1^2 + S_2^2}{S_T^2}\right]$$

Whereas:

The variance of scores for the first half of the scale

The variation of scores for the second half of the scale

The overall test score variance.

In case the two parts of the statement s are equal, the correlation coefficient is corrected by the equation of the Spearman Brown equation = the modified correlation coefficient according to

the following equation: (Afaneh and Winschwan, 2016, p.592).

$$R = \frac{2R}{1+R}$$

Where R is the correlation coefficient between individual scores and even scores as shown in Table (3)

Table No (3) illustrates the results of the half-segmentation method for measuring overexcitabilities

Dimension	Number of statements	Reliability coefficient
1- Psychomotor overexcitabilities	10	0.894
2- Sensual overexcitabilities	10	0.829
3- Imaginational overexcitabilities	10	0.805
4- Intellectual overexcitabilities	10	0.733
5- emotional overexcitabilities	10	0.878
General Reliability	50	0.824

It is evident from Table No (3) that the general reliability coefficient is high, reaching (0.824), and this indicates that the scale has a high degree of reliability that can be relied upon in the field application of the study.

Thus, the scale consists in its final form of (50) items distributed into five domains, with (10) items for each field. The following table illustrates it:

Table (4) Distribution of expressions on the dimensions of the scale of overexcitabilities (OEQII))

Dimensions	Numbers of statements
1- Psychomotor overexcitabilities	.(50 ،42 ،39 ،29 ،21 ،18 ،15 ،10 ،7 ،2)
2- Sensual overexcitabilities	.(48 ،46 ،45 ،38 ،37 ،32 ،27 ،13 ،8 ،3)
3- Imaginational overexcitabilities	.(47 ،34 ،33 ،28 ،24 ،22 ،20 ،14 ،4 ،1)
4- Intellectual overexcitabilities	.(43 ،40 ،36 ،30 ،25 ،23 ،19 ،16 ،12 ،5)
5- emotional overexcitabilities	.(49 ،44 ،41 ،35 ،31 ،26 ،17 ،11 ،9 ،6)

Note that each statement has its own independent options that are corrected based on the Likert scale, and the scale also includes personal data for students of the College of Education, namely: Gender.

In order to achieve the objectives of the study, the mental motivation scale, prepared in its original form, was adopted by Giencarlo and Facione, 1999, and the scale in its original form consisted of (64) statement s divided into four areas (orientation towards learning, creative problem solving, cognitive integration, mental focus) In the current study, the four areas mentioned previously were approved, corresponding to (40) statement s, and some of the statement s were deleted, and some of them were amended, and the students' responses to each statement were measured according to a response scale consisting of a four-way verbal scale, with a four-way scale of appreciation (very agree (4), somewhat agreeing (3), disagreeing to some extent (2), completely disagreeing (1), and the statement s are divided into four areas for each area (10) statement s. With the response specified for each statement.

The validity of the questionnaire was verified by presenting the scale in its initial form to a number (6) of the arbitrators specialized in the field, and they were asked to evaluate the quality of the scale in terms of its ability to measure what

was prepared to measure it, judging its suitability for the objectives of the study, the clarity of each statement, and its relevance axis and importance, with expressing their opinion in case of any modification. After retrieving the scales, the statement s that (80%) or more of the arbitrators agreed on their suitability and came out in the final form.

To verify the validity of the tool's internal consistency, a survey sample of (30) students from the College of Education was selected, and according to the data, the Pearson's Correlation Coefficient was calculated, in order to identify the degree of correlation of each of the statements s with the overall degree of the scale.

Table No. (5) Correlation coefficients of Pearson for the cognitive motivation scale statements with the total score of the scale

معامل الارتباط	رقم العبارة	معامل الارتباط	رقم العبارة	معامل الارتباط	رقم العبارة	معامل الارتباط	رقم العبارة
**0.770	31	**0.872	21	**0.804	11	**0.648	1
**0.638	32	**0.768	22	**0.598	12	**0.581	2
**0.505	33	**0.901	23	**0.513	13	**0.726	3
**0.878	34	**0.738	24	**0.505	14	**0.605	4
**0.739	35	**0.789	25	**0.768	15	**0.850	5
**0.887	36	**0.847	26	**0.541	16	**0.768	6
**0.833	37	**0.707	27	**0.875	17	**0.844	7
**0.897	38	**0.870	28	**0.687	18	**0.716	8
**0.733	39	**0.878	29	**0.726	19	**0.534	9
**0.803	40	**0.884	30	**0.852	20	**0.633	10

No	R	No	R	No	R	No	R
1	**0.648	11	**0.804	21	**0.872	31	**0.770
2	**0.581	12	**0.598	22	**0.768	32	**0.638
3	**0.726	13	**0.513	23	**0.901	33	**0.505
4	**0.605	14	**0.505	24	**0.738	34	**0.878
5	**0.850	15	**0.768	25	**0.789	35	**0.739
6	**0.768	16	**0.541	26	**0.847	36	**0.887
7	**0.844	17	**0.875	27	**0.707	37	**0.833
8	**0.716	18	**0.687	28	**0.870	38	**0.897
9	**0.534	19	**0.726	29	**0.878	39	**0.733
10	**0.633	20	**0.852	30	**0.884	40	**0.803

*** Significant at the significance level 0.01 or less*

It is evident from Table (5) that the values of the correlation coefficient of each of the statements with the total score are positive, and a statistically significant function at the level of significance (0.01) or less. This indicates the validity of the internal consistency between the scale statements, and their relevance to measuring what they were intended to measure.

The reliability of the cognitive motivation scale was confirmed by using the reliability coefficient of (Cronbach's Alpha (α)), and Table No (6) shows the values of the reliability

coefficients of Cronbach's Alpha for the overall degree of the scale.

Table No. (6) Cronbach's alpha coefficient to measure the reliability of the cognitive motivation scale

Dimension	**Numbers overstatements**	Reliability coefficient
Orientation towards learning	10	0.865
Creative problem solving	10	0.779
Cognitive integration	10	0.819
Mental focus	10	0.820
General Reliability	10	0.865

It is evident from Table No (6) that the general coefficient of reliability of the Cronbach alpha is high, reaching (0.825), and it indicates that the scale has a high degree of reliability that is reliable in field application.

The scale statements were divided into two parts (the odd-numbered paragraphs, and the even-numbered paragraphs), and the work to calculate the correlation coefficient between them, and then correct the correlation coefficient with the Spearman Brown equation = the modified correlation coefficient according to the following equation: (Afaneh Wenschwan, 2016).

$$R = \frac{2R}{1+R}$$

Where R is the correlation coefficient between scores of individual statements and scores of even paragraphs, and the results shown in Table (7) were obtained.

Table No (7) shows the results of the half-segmentation method for measuring the reliability of the cognitive motivation scale

Dimension	**Numbers overstatements**	Reliability coefficient
Orientation towards learning	10	0.733
Creative problem solving	10	0.884
Cognitive integration	10	0.848
Mental focus	10	0.874
General Reliability	10	0.861

It is evident from Table No (7) that the general reliability coefficient is high, reaching (0.861), and this indicates that the scale has a high degree of reliability that can be relied upon in field application.

In its final form, the scale consists of (40) items distributed into four areas, with (10) items for each area, which are: “Learning orientation, creative problem solving, cognitive integration, mental focus.” Note that each statement has its own independent options and they are corrected based on Quadruple Likert scale, the scale also includes personal data related to gender.

To determine the length of each category of the Likert quadruple scale, the range was calculated by subtracting the upper bound from the lower bound (4-1 = 3), then dividing it by the largest value in the scale (3 ÷ 4 = 0.75), and then adding this value to the lowest value At scale (1); To determine the upper limit for this category, and thus the length of the categories are as shown in the table below: Frequently applied / somewhat applicable / Not applicable very much / Not applicable at all.

Table No (8) dividing the categories of the four-way Likert scale (the limits of the means responses)

No	Category	Category limits

No	Category	Category limits	
		From	To
1	Apply Too much / Very Agree (Too Much)	3.26	4
2	Apply somewhat / somewhat OK (to a large extent)	2.51	3.25
3	Does not apply much / Somewhat disagree (moderate)	1.76	2.50
4	Never apply / Never agree (to a small degree)	1	1.75

It should be noted that the length of the term is used to reach an objective judgment on the averages of the responses of the study sample, after having been statistically treated.

The Study results and discussion

After confirming the suitability of the tool for the goal set for it to measure the level of Patterns of overexcitabilities and its relationship to cognitive motivation, and applying it to the study sample, we present a detailed presentation of the results and what was reached by answering the questions of the study and verifying its hypothesis.

The first question states: What are the most common patterns of overexcitabilities among students of outstanding students in the College of Education?

To determine the patterns of overexcitabilities, the arithmetic mean of these patterns was calculated to determine the degree of Patterns of overexcitabilities for the study sample, and Table (9) shows the general results of this question.

Table No. (9): responses of the study sample individuals on the scale of overexcitabilities

No	Axis of the scale	Mean		S.D	Rank
		Mean value	Degree of Agreement		
1	Psychomotor overexcitabilities	2.941	Large	.5491	4
2	Sensual overexcitabilities	3.176	Large	.4202	1
3	Imaginational overexcitabilities	2.815	Large	.5223	5
4	Intellectual overexcitabilities	3.115	Large	.4492	3
5	emotional overexcitabilities	3.161	Large	.4176	2
Patterns of overexcitabilities among a sample of students of the College of Education		0415	Large	31395	

It is evident through the results that the level of Patterns of overexcitabilities of the study sample was an average (3.0415), that is, to a large extent according to the standard adopted by the study according to Likert four-dimensional scale. The results showed that the pattern of (sensory overexcitabilities) reached an arithmetic mean of (3.176), which is in the first order of Among the styles, to a large extent, followed by the pattern of (emotional overexcitabilities), which reached an average of (3.161), which is also very much, and in the third order came the (mental overexcitabilities) pattern, which reached an average of (3.115), which is also very much, and in the fourth order came The pattern of (overexcitabilities) averaged (2.941), which is also to a large degree. It was found that the pattern of (Imaginational overexcitabilities) was at an average of (2.815), which is also very much in the last place among the patterns.

The results showed that undergraduates enjoyed a high degree of Patterns of overexcitabilities at all levels, and overexcitabilities Sensual ranked first, which

mainly depends on the material physical objects as a strong response to sensory stimuli, and the ability to address them, and look at them from different angles, and the result may be due to genetic abilities as a response to stimuli. , Which was expressed in an increased intensity, awareness and sensitivity, and also indicates that these people have a wide experience of sensory input, and they have an advanced and increasing appreciation for aesthetic pleasures (such as art, nature and languages) and they derive an endless feeling of touching things, scenes and nature around them. The present result is consistent with the results of the study (Al-Shayab, Al-Khatib, 2015; Rashid, Najm, 2019; Abu Qura, 2019; Al-Rubaie, Al-Baaj, 2015). It also differs with the results of the study (Alias, Rahman, Abd Majid, & Yassin, 2013) that Of the students showed elevated levels of at least one type of overexcitabilities.

At the same time, the "imaginative overexcitabilities" style ranked last and to a large extent compared to other types. This is due to the fact that undergraduates have the ability to form and develop imaginative visualizations to create their own world that expresses the repeated use of images, metaphors and daydreams that help them escape from feelings of boredom. The result is consistent with the study (Alias, Rahman, Abd Majid, & Yassin, 2013), and contradicts the study (Doll, 2013).

The second question states: What are the most common mental motivation dimensions for outstanding students in the College of Education?

To determine the level of cognitive motivation, the arithmetic average of these dimensions was calculated to determine the degree of cognitive motivation in the study sample, and Table (10) shows the general results.

Table No (10) responses of the study sample individuals on the cognitive motivation scale

No	Axis of the scale	Mean		S.D	Rank
		Mean value	Degree of Agreement		
1	Orientation towards learning	3.2856	Large	.5491	4
2	Creative problem solving	3.1732	Large	.4202	1
3	Cognitive integration	2.8579	Large	.5223	5
4	Mental focus	2.8368	Large	.4492	3
3.0384		3.2856	Large	31395	

It is evident through the results that the level of cognitive motivation of the study sample was an average (3.0384), that is, to a large extent according to the standard adopted according to the Likert four-dimensional scale, and it was found that the field (orientation towards learning) reached an arithmetic mean (3.2856), which is in the first order among the domains, To a large extent, it was followed by the field of (creative problem solving) with an average of (3.1732), which is also to a large degree, and in the third rank came the field of (cognitive integration), with an average of (2.8579), which is also very much, and in the last place came the field of (mental focus) With an average (2.8368), which is also very much.

The results showed that the outstanding students enjoyed a high level in the fields of motivation, and the field of (orientation towards learning) ranked first, and it may be due to the students' cognitive curiosity and mental passion for learning, which is closely related to academic achievement, in addition to university educational experiences, which pushed the outstanding students to research and explore And the effective pursuit of integration in the learning process and problem-solving, while the field of (mental focus) ranked last and to a large degree due to the

intensity of focus and effort exerted by the outstanding students to complete the required tasks of activities and study costs as fully as possible while adhering to the specified time without procrastination. Or postponement, and the result is consistent with the results of the study (Hamouk, 2013; Al-Qudah, Al-Asiri, 2015; Rasheed, 2019), and the result differs with the results of a study (Al-Dhiabi, 2013), which indicated a low level of mental motivation among university students.

The third question: Is there a statistically significant correlation relationship at the level of significance (α≤ 0.05) between Patterns of overexcitabilities and mental motivation among a sample of outstanding students in the College of Education?

To test this hypothesis, the researcher used the Pearson Correlation test to calculate the relationship between Patterns of overexcitabilities and cognitive motivation in the study sample, and the results were as shown in the following table:

Table (11): The Pearson Correlation Test to calculate the relationship between overexcitabilities and cognitive motivation in the study sample

Significance	**Cognitive motivation**		
Significant	.401**	Pearson Correlation	Psychomotor overexcitabilities
	.000	(.Sig)	
Significant	.267**	Pearson Correlation	Sensual overexcitabilities
	.000	(.Sig)	
Significant	.302**	Pearson Correlation	Imaginational overexcitabilities
	.000	(.Sig)	
Significant	.496**	Pearson Correlation	Intellectual overexcitabilities
	.000	(.Sig)	
Significant	.190**	Pearson Correlation	Emotional overexcitabilities
	.006	(.Sig)	
Significant	.505**	Pearson Correlation	Total patterns of overexcitabilities
	.000	(.Sig)	

It is clear from the results shown in Table (14) that:

It was found that the value of (Sig) for the relationship between the total degree of Patterns of overexcitabilities and cognitive motivation in the study sample is equal to 0.000 and it is less than the level of significance (α = 0.01) and that the correlation coefficient is equal to 0.505 ** which is a positive correlation coefficient with a moderate degree, which indicates the existence of a positive correlation A statistically significant mean at the level of significance (α = 0.01) between Patterns of overexcitabilities and cognitive motivation in the study sample.

It was also found that the value of (Sig) for the relationship between all patterns of overexcitabilities and cognitive motivation is equal to 0.000 and it is less than the level of significance (α = 0.01), and the following is a breakdown of the relationship between mental motivation and each of Patterns of overexcitabilities according to the direction and strength of the relationship:

• The presence of a statistically significant mean direct correlation relationship at the level of significance (α = 0.01) between the patterns of (psychomotor, imaginary, mental) overexcitabilities and cognitive motivation in the study sample.

• The presence of a weak statistically significant positive correlation at the level of significance (α = 0.01) between the two types (sensory overexcitabilities, emotional overexcitabilities) and cognitive motivation in the study sample.

The results showed a positive correlation between Patterns of overexcitabilities and mental motivation among the outstanding students in the College of Education, and the result seems logical, because they adopt a common theoretical basis in terms of function, as there is a great similarity in the characteristics of these two variables in terms of origin. Although these variables are independent of each other, but there is complementarity and mutual influence between them, as these patterns are inferred through mental motivation and vice versa, they appear together as one integrated unit, although the current study is the only study that deals with Patterns of overexcitabilities and their relationship In mental motivation, studies have proven the correlational relationships between Patterns of overexcitabilities with other variables such as emotional creativity, creative thinking, creative self-efficacy, and perfectionism, as shown by the study of (Al-Shayab, Al-Khatib, 2015; Al-Rabei, and Al-Baaj, 2015; Bani Yunus, Al-Shammari, Al-Zaayer, 2016; Al-Tantawi, 2017; Al-Zoubi, 2019; Abu Qurah, 2019).

Recommendations

• The orientation towards building training programs that contribute to forming patterns of overexcitabilities and building motivation and mentalation among university students.

• Developing academic curricula and education strategies in line with students ’needs and the requirements of scientific progress by focusing on the student’s focus of the educational process, enabling him to actively participate in knowledge production and the formation of the ability to solve problems.

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