

## Future thinking among medical group students

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### Abstract

The current research dealt with the future thinking of the students of the medical group. The research sample amounted to (400) male and female students. The study aims to first: to identify the future thinking among the students of the medical group at the University of Dhi Qar. Second: the significance of the differences in future thinking according to the variable of gender and college (General Medicine , dentistry, pharmacy) and the results showed that the students of the medical group have a future thinking and at a high level. As for the second goal, the results showed that it was not crowned with success. Differences between genders, as well as according to the college variable.

**Keywords:** medical students, University of Thi- Qar, future thinking.

### Chapter one:- First: the research problem

Thinking is one of the important issues that are concerned with educational sciences as well as other sciences because the task of thinking lies in finding appropriate solutions to the theoretical and practical problems that man faces in nature and society on an ongoing basis, and thinking is not limited to one individual without another, as it is required for all people in different environments and varying ages.( Razzooqi, Muhammad, and Dhamia, 2018: p. 11 - p. 12 ) and considers future thinking)Future Thinking) is one of the types of thinking that requires a set of mental operations that it has already learned (Aql and Abu Musa, 2019: pg 2).

Among the recent trends, which educational institutions and organizations have given special attention and care, is futuristic thinking (Future Thinking) due to its great impact on preparing a generation capable of adapting to the changes and events that occur in society (Al-Ghamdi, 2019: p. To adapt through planning, organization and decision-making,

which gives the individual mental and physical health (D'Argembe A. 2010 : 809).

Therefore, it is necessary to develop the future thinking of the individual, as the human being is by nature looking for security, and when he is faced with obstacles and finds that his circumstances are full of fatigue and dangers, he realizes that his life may fail, and he becomes concerned and apprehensive.aFrom the future that hides under it the harshness of life (Qoli, 2006: pg. 376).

Many studies have indicated that the weakness of future thinking allows negative perceptions to influence students' efforts and activities and make their attitudes negative, such as the study of (Al-Nawab, Al-Nasser, and Shutb, 2018), and MacLeod's study indicated (2007, Macleod) that individuals who suffer from a deficit in the ability to think forward lose control in maintaining a balance between positive and negative emotions

The medical group students are among the most important categories of university students because they are among the outstanding

students and also for their important role in the future. We must study their future thinking and what their future expectations are, especially with the continuation of conflicts, confusion and instability in the political, economic and social aspects, in a way that may distort ideas towards the future in Iraqi society, especially university students, and accordingly the problem of the current study is determined by answering the following question:

Do students of the medical group have a future thinking?

Second, the importance of research

The importance of futuristic thinking emerges in preparing students to manage their future more consciously and effectively, and in forming generations capable of facing future challenges and capable of thinking about the future (Mustafa, 2020: p. 55). What we want in our lives in addition to that it helps us to contribute to discovering the management of expected future problems before they occur (Mohammed, 2019: p. 65), and forward thinking is based (Future Thinking) by drawing a holistic map of the future by extrapolating the trends that extend across generations, the sudden events that may appear, and the dynamic forces driving the events (Razuki, Muhammad, 2018: pg. 297).

Future thinking is a key factor in developing creativity, improving the level of effectiveness of thinking, raising the level of achievement, improving self-concept, and raising the level of positive trends towards the learning and teaching process (Turkish, Khudair, 2018: p. and future events, which gives the individual an overview and awareness of the future in the sense of understanding what and how it might affect the future (2012: 105, Anna. L ).

As confirmed by a study (2016 Hsin .Tai .& Min-Yine) that future thinking has significant effects on enhancing the creativity of middle school students (2016: 180, Hsin. Tai .& Min-Yine), and a study (Zahra and Reza, Azam, Hejazi, 2011) confirmed the existence of a relationship Positive, statistically significant correlation between future thinking and high academic achievement (Qarni, 2017: p. 192).

Third: Research objectives

The current research aims to identify:

- 1 - Future thinking among students of the medical group at the University of Dhi Qar.
- 2 - Significance of differences in future thinking according to the variables of gender (males, females) and college (general medicine - dentistry - pharmacy).

Fourth: Research Limits: The current research is determined by the students of the medical group at the University of Dhi Qar (College of General Medicine, College of Dentistry, College of Pharmacy) It is of both sexes (male– Females for the academic year 2021–2022).

Fifthly: search terms

Torrance knew him (2003) , (Torrance: It is all the intellectual processes that an individual uses to explore future experiences, through which he develops understanding and planning in order to solve a future problem. 2019: 302 ).

MacLeod (2005, Macleod) : It is the individual's ability about self and future events through the individual's imagining of himself in the future, planning and building mental representations about the future and addressing his future expectations. Macleod . 2005: 357)).

The theoretical definition adopted by the researcher for future thinking is the definition of (Macleod. 2005 357) as the author of the theory, a theoretical definition.

Procedural definition of future thinking: the total score obtained by the student when responding on the scale of future thinking that was prepared by the researcher in the current research.

## **Chapter Two: Theoretical framework and previous studies**

Our thinking about the future of expectations, aspirations, goals, dreams, predictions, hopes, fears, and different scenarios that may or may not be achieved through their possible results is the material of mental life. Aspinwall G. 2005: 203 Thinking about the future is part of human

perception and an element that distinguishes us from other creatures by building memory, where human memory is conceived as comprising two distinct systems, namely episodic and semantic, as the episodic memory system allows us to remember the events we have experienced and travel to the past in time to replay those events, and the semantic memory system, which is our knowledge of the world in relation to self-related memories (Atance M. and Oneill K. 2001 : 533), and this was confirmed by Karl K. et al. 2017.) That future thinking consists of four patterns (simulation, prediction, intention, planning), and these patterns are all linked to memory with its episodic and semantic systems. Karl K. et al. 2017: 41) .

see Torrance Future thinking is a central element and a goal that seeks to develop through the future problem-solving model that was built in 1974 AD. Therefore, there are characteristics and features of future thinking that distinguish it from other forms of thinking, as it depends mainly on the mind and is associated with emotion, intuition and imagination, and Torrance sees The future thinking creates an activity in the mind of the individual that qualifies him to make predictions about future challenges and to develop proposed solutions by relying on the experiences of the individual and using the cognitive processes that the individual carries out with awareness and knowledge to achieve the goals and make good decisions in the future (Wali, 2018: 20).

#### Explanatory theory of forward thinking:

MacLeod sees future thinking as the individual's ability to look at the far-reaching results that can be achieved in light of his behavior in the present through self-knowledge of the individual, planning his goals and anticipating various events in his life, where future thinking affects the psychological well-being of individuals as they experience well-being through their involvement in The pursuit of value goals and the adoption of these goals through the individual's ability to construct cognitive representations about the future that are interpreted as outcomes or events in their

own lives.357: Macleod K. and Conway C. 2005: ).

MacLeod believes that future thinking is linked to the past through autobiographical memory, where images of possible events in the future are generated, where judgments are made about the repetition of past events and the probability of their occurrence in the future. Description To derive indicators to search for episodes with which events are linked, where individuals build scenarios about past events and imagine future events through them. Macloed K. et al. 1996:116), which confirms that the dhikr is used to create cognitive representations towards the future and that these representations are natural for individuals (Macloed K. 2016: 13).

MacLeod also stressed the importance of anticipation in future thinking, which refers to psychological states that revolve around the degree of an individual's belief in what will happen in the future, and his ability to form a proactive perception to predict future events. Macleod K. 2017: 14 - 31), MacLeod distinguished between individuals in anticipating future events, which may be positive or negative. Through this distinction, depressed individuals and individuals who have anxiety about the future can be distinguished, as individuals who have depression expect negative expectations about the future and events will be Uncontrollable Hatred These expectations are linked to the individual's inability to adapt (Macleod K. and Byrne A. 1997: 505).

MacLeod also believes that planning is a means to achieve life goals and to develop steps to solve the problems facing individuals (359 Macleod K. and Conway C. 2005: Planning represents the path through the achievement of objectives and must be (a) future-oriented, i.e. actions that have not yet been taken, (b) imply an intent to act, (c) relate to steps or strategies Which aims to reach a specific end point or goal (Macleod K. 2017: 13-278).

MacLeod and his colleagues emphasized that forward thinking includes two important aspects, namely the perceived probability of the

outcome of events and their value or importance to individuals, as they are considered essential elements in making decisions, whether for their personal life or work and other goals (496: Macleod K. et al. 2005), MacLeod also believes that the function of future thinking is the ability of individuals to think about themselves and others according to the results of their anticipation of events in the future. The other type is the individual's thinking about others, which means the individual's experiences in anticipating the positive and negative events of others (family, friends) in the future (2007: 1118 Macleod and Conway C.), MacLeod and his colleagues have developed the Forward Thinking Task (FTT), a new method for assessing people's ability to generate negative and positive thoughts about the future and asking them to form reactions to questions (What are you looking forward to next week, next month, and the next 5 to 10 years? Negative thoughts are evaluated by asking them what you are not looking forward to? Where the numbers of negative and positive thoughts are collected and compared, and they often describe the concepts of the future orientation of individuals who suffer from stress and psychological disorders who have a negative view of the future (Edward C. et al 2019: 20).

Previous studies :

Study ( crossed out, 2018 )

"Future thinking and the perceived environment and their relationship to what is beyond emotion among university students"

Target :Getting to know the future thinking of university students

the sample :The study sample consisted of (400) male and female students

Tools :One-sample t-test, three-way analysis of variance, chi-square, Scheffe test, multiple regression analysis, and Pearson correlation coefficient.

Results :The presence of high future thinking for both sexes .

### **The third chapter: Research methodology and procedures**

First: Research Methodology:

The researcher used the descriptive correlative approach to achieve the objectives of the research, because it is considered an appropriate approach to the nature of the research and its objectives, as it seeks to determine the current status of the studied phenomenon, and works to describe it. The qualitative describes the phenomenon and clarifies its characteristics, while the quantitative expression gives us numbers and shows the extent of this phenomenon (Melhem, 2007: p. 369).

Second: the research community:

The current research community is determined by the medical group students of the morning study at the University of Dhi Qar for the academic year 2021–2022), totaling (2509) male and female students, and (717) males and (1792) females.

Fourthly :The research sample:The sample of the current research was chosen randomly from the original population to be researched, so that the number of the sample members was (400) male and female students.(208) male and female students from the Faculty of General Medicine with a percentage of (52%), (65) male and female students from the Faculty of Dentistry with a percentage of (16%), and (127) male and female students from the Faculty of Pharmacy with a percentage of (32%), while As for the distribution of males and females by gender variable, it is distributed as (59) males and (149) females from the Faculty of General Medicine, and (16) males and (49) females from the Faculty of Dentistry, and (39) males and (88) females from faculty of Pharmacy.

Fifth: The research tool: a measure of future thinking:

Scale description:The first image of the scale consists of (45) distributed items on three fields Which :

1- Planning for the future: It is the individual's ability to define his goals and choose the best solutions through the plans he sets to achieve his goals (359: Macleod K. and Conway C. 2005: ).

2 - future expectations: The ability of an individual to produce mental images by thinking outside the framework of the present time and transcending it to the future time to achieve future predictions and predictions (Macleod K. and Byrne A. 1997: 505).

3- Building mental representations about the future: Constructing mental representations about the future: the way in which the individual sees and perceives himself and the events that show his ability to think about scenes that do not currently exist in the outside world, and also show his ability to direct his behavior towards achieving his goals (Macleod K. et al. 1996: 116).

Determining the weights of the alternatives and the method of correction: The researcher identified the answer alternatives on the scale as follows: (it applies to me completely, applies to me often, applies to me sometimes, applies to me rarely, does not apply to me at all) bCorrection degree (1, 2, 3, 4, 5) Where the strength of the alternatives ranged from (5), which represents the highest response to the paragraph of the respondent, and to a degree of (1), which is the least responsive to the paragraph of the respondent.

The validity of the paragraphs of the future thinking scale:

Sincerity of the arbitrators: The future thinking scale was presented in its initial form to a number of specialists in educational and psychological sciences to express their opinion on the validity of the test items and its vocabulary. Some modifications have been reviewed with regard to the way the items are presented based on their opinions.

Clarity experience of paragraphs and scale instructions: To ensure the research sample's understanding of the scale's instructions and their clarity, their understanding of the

paragraphs and their accuracy, and the method of its formulation, and the detection of unclear paragraphs in terms of their language and content, and testing the appropriateness of the alternatives to respond in front of the paragraphs, and calculating the appropriate time to answer the scale, as the time taken to answer the scale was recorded. Ranging between (10-15) minutes, and the Forward Thinking Scale was applied to a sample of (50) male and female students who were selected by the stratified random method from the medical group students.

Statistical analysis of the paragraphs of the future thinking scale: In order to show the statistical characteristics of the paragraphs of the scale and its ability to measure what is prepared for the future and extract its discriminatory power and the consistency of its paragraphs, the researchers did the following:

Determining the statistical analysis sample: The statistical analysis sample amounted to (400) male and female students from the medical group at Dhi Qar University, and they were chosen by the stratified random method in order to calculate the psychometric properties of the paragraphs of the future thinking scale.

The discriminatory power of the paragraphs of the Forward Thinking Scale:

The main objective of the item analysis is to keep the distinct items in the scale and to exclude the undistinguished items, that is, the items that do not distinguish between the examinees are excluded, either that distinguishes between them or through which individuals are distinguished in the measured trait are kept (Al-Imam et al., 1990: p. 114).

(a) The method of the two extreme groups:

Use Finner: In order to perform the statistical analysis, the method of the two extreme groups, where the researcher that By applying the future thinking scale to a sample of (400) male and female students from the research community, and after distributing and collecting forms from the research sample, the researcher that With the following:

1 - The researcher that By giving a score for each answer for each item according to the method of correcting the scale of future thinking, as the total score for each respondent was calculated through the algebraic combination of all the items of the scale.

2 - The total scores of the sample members were arranged in descending order from the highest score to the lowest.

3 - The percentage of (27%) of the forms with the highest scores were selected and called the upper group, and the percentage of (27%) of the forms with the lowest scores were called the lowest group, where the total of the forms reached (108) forms, and to extract the discriminatory power the researcher used that The t-test for two independent samples in order to test the significance of the differences between the two groups, and the arithmetic mean and standard deviation were calculated for each of the paragraphs of the upper and lower groups.

(b) Correlation coefficients (internal consistency):

The researcher did that By finding the internal correlation coefficient for the scale of future thinking using the method of the paragraph degree relationship to the total degree of the scale, as well as using the method of the relationship of the field to the field and the field to the total degree as the researcher used that The method of the paragraph degree relationship with the degree of the field to which it belongs, and using the Pearson correlation coefficient to find the correlation coefficient, as follows:

1 - The relationship of the paragraph's score with the total score of the scale:

The use of the method of linking the degree of the paragraph to the total degree is one of the methods used in calculating the internal consistency of the scale, as it is concerned with knowing whether each paragraph of the scale is moving in the direction in which the whole scale is moving or not; So the researcher used that Pearson's correlation coefficient to extract the correlation between the scores of

each item for the total scores of the scale, and the results showed that all items are consistent and statistically significant when compared with the tabular value (0.098) at the significance level of 0.05) and the degree of freedom (398), as it ranged between (0.61 - 0.16).

2- The relationship of the degree of the field to the field and the field to the total degree:

use researcher that Pearson's correlation coefficient to find The value of the correlation coefficient between the domains of the scale at the level of significance (0.05), and the results showed that all items were statistically significant.

3 - Relationship of the degree of the paragraph with the total degree of the field to which it belongs:

To find the value of the correlation coefficient of the paragraph degree with the total degree of the domain to which it belongs, as well as to find the value of the correlation for each paragraph, the researcher used that Pearson's correlation coefficient and its comparison with the tabular value of (0.0098), and the results showed that the correlation of the paragraph degree with the total degree is statistically significant as it is higher than the tabular link value and at the level of significance (0.05) and the degree of freedom (398).

Psychometric properties of the scale: In order for the scale to be valid, it must have acceptable validity and stability, since the scale's validity and stability are the most important aspects of each scale. The researchers verified the scale's validity and stability through the following:

honesty:

The concept of honesty is one of the main concepts in psychological measurement, as the honest test is the one who is able to measure the phenomenon or characteristic that is intended to be measured, and the honest test is able to distinguish between it and the phenomena or features that may interfere with it (Abd al-Rahman, 1998: p. 183 ), and it is one of the important characteristics among the

characteristics of the test, and the user of the test or the one who put it should verify it (Fakhro, Omar, Al-Subaie, and Turki, 2010: p. 89), and the researcher has adopted that On two indicators to verify the validity of the scale, namely:

### 1- Apparent honesty:

In order to achieve the apparent validity of the scale items, the researchers presented the scale in its initial form On a group of arbitrators with experience in educational and psychological sciences in order to assess the validity and appropriateness of the paragraphs and alternatives to the scale.

### 2- The validity of the construction:

Building validity is the most representative type of honesty for the concept of honesty, as it is also called concept honesty or hypothetical formation validity. 2014 : p118 Structure validity is the most acceptable type of honesty for many specialists, where the discriminatory strength of the clauses is one of the indicators of construction validity for psychological tests and measures. : p. 313), and the researcher extracted that The discriminatory power of the paragraphs, as well as the homogeneity of the paragraphs in relation to the total score, And Relationship of the degree of the field to the field and the field to the total degree, And The relationship of the degree of the paragraph with the total degree of the field to which it belongs.

### 3- Stability:

Stability is defined as the accuracy of the test in the measurement, its non-contradiction with itself, and its consistency in what it provides us with information about the behavior of the subjects (Ismail, 2004: p. It represents a correct representation of the amount of the trait that he has, and that this degree of the trait is not the result of other factors or variables, and in this case the scale is fixed (Ghoneim, 2004: p. 61).

To find the stability of the scale, the researcher used that Two methods are the retest method, which shows the external homogeneity, as well as the Alpha Cronbach method, which indicates

the internal homogeneity of the scale. The following shows the two methods:

### 1- Retest method:

It is one of the most important methods of calculating stability and is considered one of the simplest and easiest methods used to determine the reliability coefficient, as the test is applied to a group of individuals, and then it is re-applied to the same individuals again in similar conditions for the first test, and then the correlation coefficient is calculated between two applications (Ismail, 2004: p. 72-73), where the importance of this type of calculating stability emerges in that it measures the level of stability enjoyed by the examinees in the measured characteristic during the period in which the test is applied twice (Al-Tariri, 2014: 195-196).

So the researcher applied that The future thinking scale was applied to a sample of (50) male and female students, and after two weeks the application was re-applied to the same sample. ) or more indicates a definite relationship between the two tests or variables, where the correlation coefficient is equal with the alienation coefficient, as the correlation coefficient that is less than (0.70) does not confirm this relationship (Fakhro, Omar, Al-Subai'i, and Turki, 2010: p. 232). .

### 2 - The method of internal consistency using the alpha-Cronbach equation:

The researcher verified the stability of the future-thinking scale using the Alpha Cronbach method, depending on the data of the total sample, where the reliability coefficient in this way was (0.88).

Statistical indicators of the future thinking scale:

Extracting the statistical indicators of the scale works to clarify the extent to which the distribution of scores for the sample members is close to the normal distribution, which is a criterion for judging the sample's representation of the community. SPSS And the statement of the distribution curve Figure No. (1) and Table No. (1) illustrate this.

Table No. (1) shows Descriptive statistical characteristics of the research sample on the future thinking scale

T	pointer	worth	T	pointer	worth
1	Average Meaning	160.24	5	Skewness Skewness	-0.41
2	Mediator Median	161	6	Flatness Kurtosis	-0.05
3	Mode Mode	155	7	lower degree Minimum	89
4	standard deviation Std. Dev	22.11	8	highest score Maximum	208

Figure No. (1) shows

The normal distribution curve for the sample

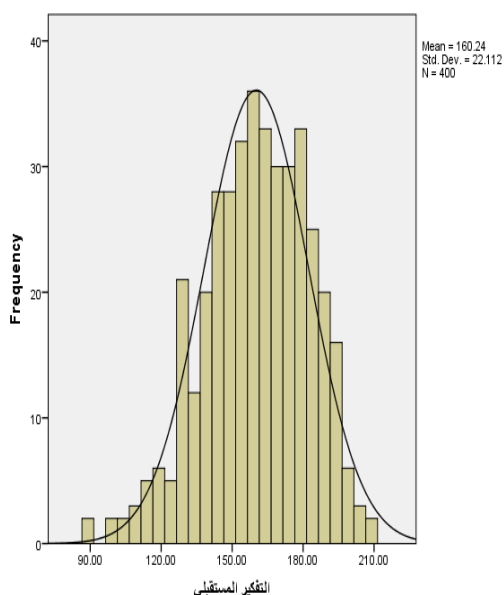


Table No. (2) shows *The t-test for the difference between the sample averages and the hypothetical mean of the Forward Thinking Scale*

Sample volume	SMA	The standard deviation	hypothetical mean	Calculated T-value	T-Table Value	degree of freedom	Indication level
400	160.24	22.11	129	28.25	1.96	399	D

In the light of the above table, we find that the medical group students have a high future thinking, because the profession they expect to pursue is one of the most prestigious professions, especially in Iraqi society, so their

Describe the scale of future thinking in its final form: The future thinking scale consisted of (43) items According to the pentagonal Likert gradient (Applies to me completely, applies to me often, applies to me sometimes, applies to me rarely, does not apply to me at all).

the fourth chapter Presentation, discussion and interpretation of results:

aFor the first goal: Identifying the future thinking of students of the medical group at the University of Dhi Qar

To achieve this goal, the researchers applied the scale of future thinking to the members of the research sample (400) male and female students, and the results showed that their average score on the scale was (160.24) Degree and standard deviation (22.11) degree, and when balancing this average with the hypothetical average ( ) for scale and adult (129) Degree, Using the t-test (t-test) For one sample, it was shown that the difference was statistically significant and in favor of the arithmetic mean, as the calculated t-value was higher than the tabular t-value of (1.96) with a degree of freedom (399) and a level of significance (0.05) Through this, we show that the research sample has a high level of future thinking and the table (2) explains it.

present behavior is linked to their view of future results, and this is what generates for them the pleasure and value of the goals they seek to achieve, and this is what matches With MacLeod's theory, where he pointed out that



future thinking is the individual's ability to look at the distant results that can be achieved in light of his behavior in the present through knowing the individual himself, planning his goals and anticipating various events in his life, where future thinking affects the well-being of individuals. Dr Psychological where they experience well-being through their involvement in the pursuit of goals of value and the adoption of these goals through the individual's ability to build cognitive representations about the future are interpreted as outcomes or events in their own life and goals are chosen for reasons of value and pleasure that correspond to the individual's basic motivational system (357 Macleod K. and Conway C. 2005:).

These results also indicate congruence with the dimensions that MacLeod emphasized, namely optimism and pessimism, as optimism is the expectation of individuals that good things will happen to them in the future, such as that they will be successful in applying for a job, as this dimension is manifested in the form of an overview of life and that it will be good in the future. Macleod K. 2017 : 49-50), and this confirms the extent of optimism among the medical group students.

It also matches what he mentioned (Turkish, Khudair, 2018) where they indicated that Future thinking is a key factor in developing creativity, improving the level of effectiveness of thinking, raising the level of achievement, improving self-concept, and raising the level of positive attitudes towards the learning and teaching process (Turki, Khudair, 2018: pg. 379).

These results are also consistent with a study (2011 , Zahra and Reza , Azam , Hejazi ) where The results showed that there is a positive, statistically significant correlation between future thinking and high academic achievement (Qarni, 2017: p. 192).

second goal: The significance of the differences in future thinking according to the variables of sex (males, females) and College (General Medicine - Dentistry - the pharmacy).

To achieve this goal, the researchers used two-way analysis of variance Way Anova Two, To identify the significance of the differences in future thinking according to the variables of gender and college and the table (3-4) shows that .

Table No. (3) shows Arithmetic averages and standard deviations of the future thinking scale according to the variables of gender and college

Variables	the number	SMA	standard deviation
Male	59	156.19	20.31
Male	16	160.38	22.33
Male	39	161.67	16.44
all males	114	158.65	19.38
feminine	149	160.77	24.76
feminine	49	158.73	22.03
feminine	88	162.23	20.85
Entire female	286	160.87	23.11
medicine	208	159.47	23.63
medicine teeth	65	159.14	21.94
pharmacy	127	162.06	19.54
total	400	160.24	22.11

Table No. (4) shows The results of the two-way analysis of variance to reveal the significance of the differences in future thinking according to the variables of sex and college

Contrast sources.of.v	sum of square.s.of.s	degree of freedomDF	mean squareMS	q valueF	indicationSig
sex	439.863	1	439.863	0.895	not significant
the college	657.846	2	328.923	0.670	not significant
gender * college	489,719	2	244.860	0.498	not significant
The error	193532.613	394	491.200	---	---
total	10465505	400	---	---	---

and indicate the results to the following :

1. There is a difference in future thinking according to a variable sex. The computed value of (0.895) is significant at the level of (0.05) and a degree of freedom (1-394). These results can be explained to the conditions and factors that prepare both sexes to acquire the characteristics of future thinking that are available in the early stages and their ability to plan and build mental representations towards the future to achieve their goals and aspirations, and this leads to the absence of differences between them, as the requirements of university life require mental abilities and cognitive representations. to achieve and achieve their goals.

2. There is a difference in future thinking according to a variable the college. The computed value of (0.670) is significant at the level of (0.05) and a degree of freedom (3-394). These results can be explained by the fact that the faculties of the medical group are distinguished students, despite their different faculties, but their mental abilities are high and they have the ability to think about their future through setting goals and planning for them, as the individual's thinking in a particular profession and aspires to reach it leads to the absence of differences between medical faculties.

3. There is no significant interaction between the variables (sex and college). The computed value of (0.498) is not significant at the level of (0.05) and the degree of freedom (3-394). In light of the above results in point (1 and 2), we can explain the lack of interaction between the variables of gender and college, because their future expectations have one goal, which is to occupy a prestigious job in society, because medical colleges have high and important functions and positions in Iraqi society, and that their future aspirations are what explain to us the lack of The interaction between sex and college.

## Recommendations

In view of the findings of the current research, the researcher recommends that With the following:

- 1- Preparing educational programs to educate university students about the importance of future thinking and its role in their future lives.
- 2- It is necessary to include in university curricula the lessons of teaching future thinking skills and how to plan to achieve their goals in the future.

## Suggestions:

- 1- Conducting a similar study on university students in humanities faculties of the current research variable and comparing it with its results.
- 2- Conducting a study on future thinking according to the theory of Signer's theory (Seginer. R. 2009).
- 3- Conducting a study on future thinking and their relationship to the psychological well-being of university professors.

## Reference

- [1] Ismail, Bushra (2004): The reference in measurement and evaluation, 1st edition, Anglo-Egyptian Library, Cairo.
- [2] Melhem, Sami Muhammad (2007): Research Methods in Education and Psychology, Dar Al Masirah for Publishing and Distribution, Amman - Jordan.
- [3] Al-Imam, Mustafa, and others (1990): Evaluation and Measurement, Ministry of Higher Education and Scientific Research, University of Baghdad, Dar Al-Hikma for Printing and Publishing.-Baghdad .
- [4] Al-Tariri, Abdul Rahman bin Salman (2014): Psychological and educational measurement and its theory-set it up-Its applications, 2nd floor, Al-Rushd Library, Riyadh.

- [5] The Representatives, Naji Mahmoud, Al-Nasser, Hazem Suleiman, and Shutb, Anas Aswad
- [6] Turki, Safaa Hamed, and Khudair, Marwan Yassin (2018): Psychological flow and its relationship to future thinking among graduate students, *Journal of Educational and Psychological Research*, No. 59.
- [7] Rabie, Shehata (2014): *Personality Measurement*, 5th floor, Dar Al Masirah for Publishing and Distribution, Amman.– Jordan .
- [8] Razuqi, Raad, Daoud, Dhamia, and Muhammad, Nabil (2018): *Series of Thinking and its Patterns*, Part 4, Dar al-Kutub al-Ilmiyya.
- [9] Muhammad, Nabil (2018): *Series of Thinking and its Patterns*, Part 5, Dar Al-Kutub Al-Ilmiyya.
- [10] Saudi, and Al-Jundi (2019): A proposed program in light of the dimensions of sustainable development to develop future thinking skills in science for middle school students, *Journal of Scientific Research in Education*, No. 20, Part 15.
- [11] Shutb, Anas (2018): Future thinking and the perceived environment and their relationship to beyond emotion, unpublished doctoral thesis, Ibn Al-Haytham College, University of Baghdad.
- [12] Abdel-Rahman, Saad (1998): *Psychometrics, theory and practice*, 3rd edition, Dar Al-Fikr, Egypt - Cairo.
- [13] -Akl, Magdy Saeed, and Abu Musa, Iman Hamid (2019): The effectiveness of an electronic learning environment that employs active learning strategies in developing future thinking skills in technology for seventh grade students, *Journal of the Islamic University of Educational and Psychological Studies*, No. 6, Volume 28.
- [14] Ghoneim, Muhammad Abd al-Salam (2004): *Principles of psychological and educational measurement and evaluation*.
- [15] Fakhro, Hessa Abdel-Rahman, Omar, Mahmoud Ahmed, Al-Subaie, Turki, Turki, Amna Abdullah (2010): *Psychological and Educational Measurement*, 1st Edition, Al-Masira House for Publishing and Distribution, Amman.
- [16] Farag, Safwat (1980): *Psychometrics*, Arab Union House for Printing and Publishing, Egypt - Cairo.
- [17] -Goli, Osama Ismail (2006): *Psychotherapy between medicine and faith*, Scientific Library, Beirut - Lebanon.
- [18] Mustafa, Amani Muhammad Taha (2020): A proposed program of activities based on entrepreneurship to develop future thinking skills and the trend towards entrepreneurial learning in geography for secondary school students, *Journal of Educational Sciences*, first issue, Part 4.
- [19] Wali, Ibtisam Abbas Yassin (2018): Future thinking and its relationship to self-awareness among university students, unpublished MA thesis, University of Diyala.
- [20] (2018): Future thinking and its relationship to beyond emotion among university students, *Journal of the College of Basic Education*, No. 100, Volume 24.
- [21] Qarni, Suad Kamel (2017): The relative contribution of future orientation and self-regulation in predicting academic resilience among academically outstanding students at the Faculty of Education, Minia University: A study from a positive psychology perspective, *Faculty of Education*, October 6 University, Volume 1. foreign sources:
- [22] A D'Argembe, et al, (2010), Component processes underlying future thinking, *Memory & Cognition*, 38 (6), 809-819.
- [23] Anna L. (2012), Future thinking and learning in Improvisation and a collaborative devised theater project within primary school students, *Procedia Social and Behavioral Sciences*, 45, 104–113.
- [24] Aspinwall G. (2005), The psychology of future-oriented thinking: from achievement to proactive coping, adaptation, and aging, *Motivation and Emotion*, V.29, N. 4, pp. 203 -228.
- [25] Atance M. and Oneill K. (2001), Episodic future thinking, *Trends in cognitive sciences*, 5 (12), 533-539.
- [26] Edward C. et al, (2019), A Positive psychological approach to suicide theory-research- and prevention, Springer Press.
- [27] Karl K. et al. (2017) Episodic future thinking: mechanisms and functions, *Current Opinion in Behavioral Sciences*, 17, 41-50.

- [28] Macleod. A , Conway , (2005 ) , Well-being and the anticipation of future positive experiences : The role of income, social networks, and planning ability , *Cognition and emotion* 19 (3), 357-374.
- [29] Macleod. A , Conway (1996), The specificity of autobiographical memory and imageability of the future, *Memory& Cognition*, 24 (1), 116
- [30] Byrne A. (1997), Attrbutions and accessibility of explanations for future events in anxiety and depression, *British Journal of Clinical Psychology*, 36, 505-520.
- [31] Min-Yine(2005), Hopelessness and positive and negative future thinking in parasuicide, *British Journal of Clinical Psychology*, 44. 495 - 504.
- [32] Conway, (2007), Well-being and positive future thinking for the srlf versus others, *Cognition and emotion* 21 (5), 1114-1124.
- [33] Macleod.(2017), *Prospection Well-Being and Mental Health*, Oxford Press.
- [34] Min-Yine & Hsin. Tai, (2016), The effect of future thinking curriculum on future thinking creativity of junior high school students, *Journal of Modern Education Review*, V.6, N. 3, pp. 176-182.