

A Passion for Scientific Research among Faculty Members Students at the Universities of the Northern Region in Jordan

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Abstract

Objectives: The current study aimed to reveal the passion for scientific research among graduate students in the universities of the northern region in Jordan. the study sample consisted of 410 faculty members.

Methods: to achieve Objectives of the study, a descriptive analytical approach was applied. A questionnaire consisting of (41) items distributed to four areas: curiosity, surprise and personal pleasure, students' future aspirations, and students' academic motives.

Results: the results of the current study showed that the passion for scientific research among graduate students came With a medium degree closer to low. the results also showed that there are no statistically significant differences attributed to the variable of sex, academic rank and university type.

Conclusions: The study recommended conducting studies dealing with the relationship of the passion for scientific research with other variables, Such as: cognitive competence, emotional intelligence, and professional acumen.

Keywords: Passion, scientific research, graduate students.

شغف البحث العلمي لدى طلبة الدراسات العليا في جامعات إقليم الشمال بالأردن

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ملخص

الأهداف: تهدف الدراسة إلى الكشف عن شغف البحث العلمي لدى طلبة الدراسات العليا في جامعات إقليم الشمال بالأردن. تكونت عينة الدراسة من (410) أعضاء من هيئة التدريس في الفصل الدراسي الثاني 2021/2020. المنهجية: لتحقيق أهداف الدراسة، تم بناء استبانة مكونة من (41) فقرة، موزعة على أربعة مجالات، هي: حب الاستطلاع، والدهشة والمتعة الشخصية، وتطلعات الطلبة المستقبلية، ودوافع الطلبة الأكاديمية. النتائج: أظهرت نتائج الدراسة الحالية أن شغف البحث العلمي لدى طلبة الدراسات العليا جاء بدرجة متوسطة، وأقرب إلى المنخفضة، وبمتوسط حسابي (2.50)، كما أظهرت النتائج عدم وجود فروق ذات دلالة إحصائية تُعزى إلى متغير الجنس والرتبة الأكاديمية ونوع الجامعة. الخلاصة: أوصت الدراسة بإجراء دراسات تتناول علاقة شغف البحث العلمي مع متغيرات أخرى، مثل: الكفاءة المعرفية، والذكاء الوجداني، والنبوغ الميئي. الكلمات الدالة: شغف، البحث العلمي، طلبة الدراسات العليا.



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Introduction

The scientific research journey for graduate students begins with a "step", and the path to achieving these steps begins with an "idea", and the more these challenges in their research career they need will, endurance and passion to achieve the greatest achievements, and a sense of distinction by presenting their lofty message through scientific research, This is the persistence of successful graduate students seeking to acquire various sciences in cognitive fields, as they are considered an essential element in the scientific research process. Without them, it is impossible to start this journey, which has become a necessity for peoples and nations to develop, progress and serve societies. As they are the main tool in the scientific research process, they can only move forward with internal and external stimuli that take their hands towards distinction and uniqueness, and encourage them to convert ideas into applications, and translate them into reality. Also, these incentives may be launched by the researcher himself through high energy, patience, passion and love of work, or through his work environment. By providing an integrated research environment, with the supplies and tools associated with it, and providing rewards to those with achievements, and other services that all serve the scientific research (The Liberation Family, 2018). The passion for scientific research, its love, the immersion in its sea and the continuous flight in its sky creates a wonderful healthy atmosphere in the fields of scientific research, as the age of the scientist dies and goes in the pursuit of uncovering a new composition or studying a strange phenomenon, and it includes a description of universities in which the movement of science and scientists ripple and the celebration of scientific research and unlimited support. For everyone who wants to learn or search in enormous paper and electronic libraries, an elite of statisticians and supporters of scientific research, and easy and smooth administrative mechanisms in every science and in every specialty aimed at serving the student and the researcher, not complicating it. How do you revive the dead? He said did you not believe? He said yes, but let my heart calm down. "(The Holy Qur'an, Surat Al-Baqarah 260). He realizes that the question of Abraham, peace be upon him, is a question of passion, eagerness, and a search for more certainty, and that from the gracious affirmation that the Lord's response came to- my husband - came to reinforce and spew out in him the flame of passion for research and passion for it, and to develop in him the seed of curiosity and discovery of the unknown (Bin Jakhdal, 2019). Therefore, the passion for scientific research has a role in building pioneering scientific research, just as it is a scientific instinct for students that are formed from their amazement at the phenomena that surround them, through their love of inquiry, to the formation of a curious psychological structure called curiosity and observation (Freund, 2008). The current era has come to be described as the age of knowledge, as science is considered a cognitive achievement, as it added to humanity an elevation of the mind through knowledge based on empirical foundations that removed through it metaphysical knowledge that hindered the development of humanity. The most important tools of progress are dependent on progress in the field of scientific research, and international experiences confirm this, even if scientific research is not paid attention to; The Arab world will remain a region of imitation and consumption, and will not reach the level of global measurement by singing in the media about the sophistication of universities, their sizes and numbers, but rather the real action and the achievement achieved on the ground (Abdullah, 2013). Indeed, scientific research is what distinguishes the modern university from the old university, and it is what defines, develops, and brings distinction to the academic world (Neave, 2004). Scientific research is the spirit of academic performance in universities, as it plays a role in the nature and priorities of the academic duty of faculty members. Therefore, many university administrations have been keen to support scientific research carried out by faculty members individually or collectively or in cooperation with their students in postgraduate studies, Which works to publish researches after working on their evaluation by a number of specialists from refereed scientific journals (Abu Aisha, 2012). Scientific research contributes to the regenerative process as it works to revive old topics and ideas and achieve them in an accurate scientific investigation, thus developing them to reach new discoveries and achieve a new understanding of the past in the interest of a new start for the present and a forward-looking vision for the future (Mazriq& Bin Naqlah, 2011). Educators have dealt with several definitions of scientific research, as Al-Sweis (2010: 671) defined scientific research as "the organized efforts undertaken by the human being, using the scientific method and the rules of the scientific method to discover environmental phenomena to increase his control over them and to determine the relationship between these phenomena to face their

problems and the ability to discover appropriate solutions to them". As for Khader (2011: 5), he defined it as: "Every activity with a method aims to produce new knowledge related to man's understanding of the natural phenomena that surround him, and ultimately leads to raising the human capacity to control these phenomena and control nature." It is deduced from the aforementioned that it is an organized and planned process, the aim of which is to reach information, verify the validity of a piece of information or hypothesis, clarify a situation or phenomenon and understand its causes and methods of dealing with it, or reach solutions to a problem that concerns and raises the anxiety and confusion of the individual and society, (i.e., making additions or amendments In the various fields of knowledge in order to enable man to build his civilization).

Scientific research is one of the functions of higher education whose institutions seek to develop knowledge but rather develop it through its research activities, whether it is research for faculty members or scientific dissertations for postgraduate programs (Atwan& Falete, 2011). Of great importance in diagnosing problems and proposing appropriate solutions (Al-Baridi, 2011). Scientific research thrives in the presence of postgraduate studies, as graduate students and their research, specifically doctoral research, are means of exploring knowledge in order to reach clear scientific additions, as it demonstrates the student's ability to possess scientific research tools well, and to use these Tools to achieve clear scientific goals characterized by originality and to define knowledge or dream of technical muscles (Kanaan, 2001).

In spite of the relentless efforts by those interested to improve and advance scientific research, the reality of scientific research in Jordan still needs to intensify efforts to develop and renew methods of scientific research, give adequate attention by the concerned authorities, and provide adequate support to advance the level of the researcher and scientific research, including It reflects positively on the research work and those in charge of it, so there are still difficulties facing researchers of all specialties, they are the tongue of researchers in the Arab world. If this indicates, this indicates the need to develop a clear and implementable strategy to reform the research work to raise its level to enter the global competition (Al-Kurdi& Al-Kurdi, 2019) .And since scientific research requires researchers to have qualities that enable them to do it creatively, he Al-Atoum and Manizel (2010) indicated some of these qualities, which are as follows: the availability of personal desire and self-motivation for research and its subject matter, the researcher's ability to patience and endurance when researching, and availability Sufficient time to conduct research, and the ability to complete the research work and submit it for publication or presentation at conferences, or submit it for discussion.

Fried (1995: 6) defined passion as "a motivational force that emanates from the power of emotion, generates energy, determination, faith and commitment in people and leads to the achievement of an enhanced vision (determination to achieve a highly desirable goal)." From a philosophical point of view Curran, Hill, Appleton, Vallerand and Standage (2015) saw that passion is a human experience without which the individual would not find meaning in his life. It provides him with a psychological card to participate and integrate in activities of value. In the academic field, it has been known (Goleman& Guo, 2013) as: the student's interest in a specific field, and the focus in it for a long period of time, with no interest in activities of interest to others. Florida (2002) notes that passion is one of the characteristics of creative people, that it stimulates creativity, and plays a large role in the lives and work of creative (Amabile& Fisher, 2009).

Although it is agreed that passion is a positive tendency for the individual to prefer activities that he considers important in his life, and that it enhances motivation, leads to acquiring new skills, and better performance in the activities in which he is integrated, and it brings the individual to the highest levels of managing and facing change, but it is not so. anyway; Because it may be a compulsion and an excessive determination to engage in activity, and this supports the binary nature of passion; Harmonic passion that falls under the control of the individual enables him to choose freely when he is integrated into the activity, and it is associated with positive feelings, satisfaction with activity and psychological health, while the individual who is under the control of compulsive passion cannot follow the activity, and he lacks the ability to focus on it, and negative feelings such as conflict and guilt (Vallerand, 2015). Students who are passionate about research are persistent, stubborn, and assertive. They are also not easily discouraged or discouraged, and they have an open mind to be able to adjust their course of action towards achieving the goal when evidence indicates an alternative explanation or path that may be better, and when these traits are present when researching a topic, the student

feels a strong passionate relationship, But it does not necessarily have to be love, but rather a form of irresistible participation, and psychologists point out that when the individual pursues the goal, he feels motivated or intrigued and loses time or even loses the need for food or rest, and during this period he rises. With research, it generates new insights and methods that, although difficult, are as fun as finding answers to their research. And anchoring the research mission in a captivating topic confirms that passion is necessary to preserve it (Algase, 2013). In clarifying the structure of the problem of passion for scientific research, and in seeking to know a set of cognitive facts related to psychological readiness and paving the way for the process of moving in the field of scientific research. Astonishment, wonder and curiosity. As astonishment is the mainstay of scientific passion, it is what stimulates it to begin and renews it to continue. Thus, the curiosity of inquiry and discovery is emitted in the hearts and minds of those seeking truth, as if the scientific passion for that becomes a bird whose heart beats in astonishment and its wings fail with a love of inquiry and curiosity. With it, enormous energy is produced to find many solutions to temporary or rectangular problems; These emotions have become a basic motivation in much of the research and a psychological basis for continuing with it. It is also the impetus for the act of discovery and research (Bin Jakhdal, 2019). Schopenhauer (2010) reports that by surprise, a state of mental and psychological tension mixed with anxiety and full of concern and sometimes pain and suffering. It thus provides us with the desire and energy to search for the answer. In this, Al-Ateeq (2013) believes that a mature research mentality is one that glorifies questioning, considers it one of its most important pillars at all, and gives it extreme sanctity and utmost importance, because it is the most unique method due to its transgression of the logic of axioms and the final answers that we strongly believe in, and that the question puts us Against ourselves and our old convictions. The importance of questioning stems from being the strongest motivation for a passion for exploration and viewing, which is the justification for a passion for science and scientific research, for it is a tool of certainty and based on the gates of the search for truth, grows with training, and his mental drive is based on what is called a passion for (Bin Jakhdal, 2019). As for curiosity, it is the source of new discoveries, real experience, and ideas that go beyond the familiar reality, and it is one of the main motives behind innovative production, which may distinguish innovators from others, and identify those who will contribute to the development of civilization (Obadeh, 1994). Curiosity, in its cognitive dimension, relates to inquiring about information, and this is evident when the researcher thinks deeply about solving the thorny issues that may surround the topic of his research, and which fuel his sense of scientific astonishment, which is the most important motive for curiosity. This is because it provides energy and directs reconnaissance and observation for possible entrances and exits to include on knowledge solutions (Bin Jakhdal, 2019).

A THE PREVIOUS STUDIES

In Britain, (Stoper, Childs, Hayward & Feast (2011) conducted a study to investigate the relationship between harmonious passion and obsessive craving for study, academic participation and combustion among university students. The sample of the study consisted of (103) psychology students in British universities. The results of the study indicated that there is a positive relationship between obsessive passion and combustion, and that obsessive passion is negatively related to two dimensions of combustion - cynicism and incompetence -. The results also indicated that harmonious craving correlates negatively with combustion, and that harmonic craving and obsessive craving explain the contrast in combustion; Harmonious passion predicts higher dedication and less cynicism, while obsessive passion predicts more preoccupation.

In Pakistan, the study of Khan (2014) aimed to uncover students' passion for degrees in institutions of higher education, and the study sample consisted of (242) students studying in institutions of higher education. The results of the study showed that pressure to hire; Academic self-concept, academic recognition, parenting, anxiety and stress were among the main factors predicting students' passion for academic degrees. While financial matters, concerns do not indicate a statistically significant impact. Al-Harthi and Yunus [4] conducted a study of Makkah al-Mukarramah to reveal "the level of passion and happiness among secondary school students in the city of Makkah and the relationship of passion in both types (harmony and compulsive) to happiness." The study sample consisted of (1157) high school students, day-school

education. The results of the study showed a high level of harmonious and general passion, and a medium level of compulsive passion. In Canada, the study Schellenberg & Bailis (2017) aimed to reveal students' beliefs about passion and its impact on academic performance and experiences, specifically if these beliefs are based on harmonious or obsessive passion, and the study sample consisted of (195) university students at the University of Manitoba, and the results of the study showed that Students had varying levels of passion, and as students expected to have academic passion regardless of the type of passion prevailing was associated with substantially higher levels of performance compared to those who were not enthusiastic, the participants believed that students with strong levels of passion had academic experiences. More positive than those without any harmonious passion. Although students may overestimate the role that passion plays in determining academic performance, they distinguish between types of passion when appreciating an individual's academic experiences. And (Saville, Bryan, Eckenrode & Maley (2018) conducted a study aimed at revealing the level of passion and fatigue in college students, and the study found that students who were harmoniously enthusiastic about their academic activities were subjected to less fatigue than enthusiastic students who were obsessed, who in turn suffered from less exhaustion. Of unenthusiastic students. The results indicate that being passionate about academic activities may reduce fatigue in college students, and that the effect may be greater when students are harmoniously motivated. In Iraq, the study of Ahmed and Alwan (2018) aimed to reveal the academic passion of high school students in the schools of excellence affiliated with Al-Karkh districts (first, second, and third). The sample of the study consisted of (199) male and female students. The results of the study showed that high school students have a high academic passion.

Al-Jarrah and Al-Rabee (2020) conducted a study in Jordan aimed at "uncovering the relationship between academic passion and academic burnout among postgraduate students at Yarmouk University." The study sample consisted of (230) graduate students, and the results of the study showed that the level of harmonious passion was high, the level of obsessive passion came to a medium degree, and that the level of academic burnout came to a moderate degree.

B Comment on a previous studies

We note from the previous studies that it happened in different learning environments, the common features in between its deals with the subject of passion. As they used it in survey studies through a questionnaire tool by (Stoper, Childs, Hayward & Feast. 2011), (Khan. 2014), (Schellenberg & Bailis. 2017), (Saville, Bryan, Eckenrode & Maley (2018) and (Ahmed and Alwan. 2018) in addition to (Al-Jarrah and Al-Rabee. 2020). However, its varying in their goals some of them aimed to reveal the relationship between obsessive and harmonious passion on the study of (Stoper, Childs, Hayward & Feast. 2011) and (Al-Jarrah and Al-Rabee. 2020), where the results of these studies showed that harmonious passion come in a high degree.

Based on the foregoing, the most important feature of this study is that it deals with the passion of scientific research among graduate students in the universities of the northern region in Jordan. The study was also characterized by the tool, as it has been built by the researchers were added different variables than previous studies. Therefore, in view of the scarcity of literature that talks about the passion for scientific research, and in the absence of studies that talked about this topic in light of the science of female researchers after prolonged research, this study came to root the topic of passion for scientific research among graduate students, to be a qualitative leap in the thought of graduate students, To be serious researchers aiming at what is higher, finer and more beneficial to their societies, and to move them from being the recipients of knowledge and science to the producers of it, by unleashing their energies and walking according to what they have been created for, as they be the successors of God on earth, in compliance with the Almighty saying: "And when your Lord said I am I will make a caliph on earth "(Surat Al-Baqarah, Verse 30).

C The study problem and its questions

The one who looks at the reality of the letters and dissertations they produce by postgraduate students will notice their low level, as many of them resort to libraries and centers to buy studies or resort to studying consumed subjects, and this may be an indication of a decrease in the passion for scientific research among graduate students. And based on the

importance of the passion for scientific research, (Delwani, Khairy, Makdashi and Al-Trabelsi (2020) affirm that there is a truth that must be instilled in students that scientific research is not a blockage, merit, or achievement. But it is passion, innovation and persistence. But as long as the passion for scientific research is absent, then scientific research will remain in the wind. If it happens to find someone who is passionate about it, it will grow stronger, and if fate decides, someone who believes in the value of research and the quality of content will be sent to him at the head of a higher academic institution. The conditions and transformations will continue to control its quality until it has a sound plan and a comprehensive vision, linking it to the reality, the labor market and the requirements of the times. From here, scientific research becomes a culture and a way of life. In the absence of studies that talk about the passion for scientific research in light of the science of female researchers, this study came to reveal the level of passion for scientific research among graduate students in Jordanian universities in the northern region. And that by answering the following questions:

1- What is the level of passion for scientific research among graduate students from the viewpoint of the faculty?

2- Are there statistically significant differences at the significance level ($0.05 \geq \alpha$) between the average responses of faculty members to the level of passion for scientific research due to the variables: (gender, academic rank, and university type)?

D Study Objectives

The study sought to reveal the level of passion for scientific research among graduate students from the point of view of faculty members, and to reveal the effect of gender, academic rank, and university type on the faculty members' estimates of the level of passion for scientific research.

E The importance of studying

This topic is of interest to everyone involved in scientific research, including students and academics, in light of the scarcity of previous studies related to this topic in Jordanian environments. And its addition to educational literature, which includes new research knowledge of the level of passion for scientific research among graduate students, which embodies its importance in bridging the research gap in the theoretical literature related to the subject of study, and it also sheds light on a scientific problem in scientific research in universities in the northern region, and its impact on the level of A passion for scientific research among graduate students. The results of this study also contribute to informing decision-makers in Jordanian universities, especially faculty members, to direct their methods of academic supervision towards instilling a passion for students in scientific research, as it strengthens the strengths and addresses the weaknesses in the field of enhancing the passion for scientific research among students of studies. Its importance lies in the design of its tool that can be used in the study of different topics. In addition to encouraging researchers to use the study tool in carrying out various studies, perhaps for societies different from the current study community, or to study variables different from the variables of this study. Conventional and procedural definitions: This part deals with two sections of definitions, formal definitions and procedural definitions:

Passion idiomatically: it is "a strong desire for a specific activity that people prefer and love, find important, and occupy their effort, energy and time on a regular basis" (Vallerand, 2012: 3). Scientific research idiomatically: the process of collecting and analyzing data according to the systematic processes to reach a specific goal (Ekici, 2017). The passion for scientific research is defined procedurally by the degree to which respondents will register the passion for scientific research tool in its following areas: curiosity, amazement and personal pleasure, students' future aspirations, and students' academic motivations, which were built to achieve the goals of the study.

Method and procedures

A Study Approach

The descriptive approach was used in order to identify the level of passion for scientific research among graduate students and to reveal the impact of gender, academic rank and type of university, so as to their suitability to the nature of

the study and its *objectives*. The study data were collected through the scientific research passion questionnaire

B Study population and sample

The study population consisted of all faculty members in the universities of the Northern Region in Jordan for each of the ; Yarmouk University, Irbid & Al-Hosan University Colleges, Jadara University and Irbid Natioal Universty, for the first semester 2020/2021 and their number (1448) faculty member within the ranks; Assistant Professor, Co-Professor and Professor. A simple random sample was selected from the study population consisting of (410) members of the faculty. Which rated (28%) of the study population. The sample size is acceptable for the purposes of the present study because the researchers rely on the questionnaire as a data collection tool (MacMillan& Schumacher, 2001).

C Study tool

To achieve the objectives of the study, a questionnaire was built for the passion for scientific research among postgraduate students in the universities of the Northern Region in Jordan, through reviewing the theoretical and research literature of (Bin Jakhdal, 2019) and Ahmad and Al-Abbas (2005), related to the passion for scientific research. In addition to surveying the opinions of faculty members, to know their experience in determining the passion for scientific research among graduate students. And to check the validity and stability of the tool. The following has been done:

First: The questionnaire was presented to a group of (8) arbitrators distributed among the faculty members of the Faculties of Education at Yarmouk University, the Hashemite University, and the University of Jordan. They were asked to express their views on the tool in terms of its comprehensiveness and importance, and to add or delete what they deem appropriate from the tool, and to make any other suggestions. After this step was taken, all the arbitrators confirmed the effectiveness of the tool, and all opinions were taken by deleting two paragraphs, and three paragraphs were amended by a group of arbitrators with specializations in psychology, measurement and evaluation, and the Arabic language in Jordanian universities. The questionnaire consisted in its initial form of (43) items. After making the amendments requested by the arbitrators, the number of paragraphs of the tool became (41).

Second: The validity of the passion for scientific research tool was verified by applying the test-retest method by applying the study tool, and re-applying it after two weeks to a group from outside the study sample consisting of (30) members and members of the faculty. Pearson correlation between their estimates both times, and accordingly, Pearson correlation coefficient between the two applications was (0.91). The stability coefficient was also calculated by the internal consistency method according to the Cronbach Alpha equation, which reached (0.92). Based on the above, these two values are acceptable and give a positive indication of the reliability of the questionnaire (Odeh, 2010). And the five-gradient scale slope is adopted, as follows: very high, high, medium, low, and very low. This tool was corrected based on the following weights: (1, 2, 3, 4, 5) for the aforementioned degrees, and the following scale was adopted for the purposes of analyzing the results:

From 1.00 - 2.33 a few

From 2.34 - 3.67 medium

From 3.68 - 5.00 big

The scale was calculated by using the following equation:

Upper limit of scale (5) - lower limit of scale (1)

Number of required classes (3)

$5 - 1 = 1.33$

And then add the answer (1.33) to the end of each category.

Study results and discussion

Firstly. Results related to the first study question, which stated: "What is the level of passion for scientific research among graduate students in the universities of the North Region from the viewpoint of the faculty members?" To answer this question, the arithmetic averages and standard deviations of the level of passion for scientific research among graduate

students were extracted, and Table (1) illustrates this.

Means and standard deviations of the level of passion for scientific research among graduate students from the viewpoint of the faculty members arranged in descending order according to the arithmetic means

Rank	NO.	Field	Mean	SD	Level
1	4	students' academic motivation	2.59	.810	moderate
2	3	Students' future aspirations	2.53	.809	moderate
3	2	Surprise and personal pleasure	2.47	.833	moderate
4	1	Curiosity	2.45	.762	moderate
		Total degree	2.50	.776	moderate

It can be seen from Table (1) that the arithmetic averages ranged between (2.45-2.59), where the field of academic motivation of students came first with the highest arithmetic average of (2.59), while probability came in last place, with an arithmetic average of (2.45), and the arithmetic average of passion for research came in the first place. Scientific as a whole (2.50); That is, with a medium degree of appreciation, and the researchers believe that the passion for scientific research among postgraduate students came at a medium level, and this can be attributed to the students' pursuit of scientific degrees rather than real knowledge, in order to obtain the prestigious social position in the society to which they belong, and the weak upbringing of students on Reading and love of science, the weak financial capabilities of students, and the weak interest of faculty members in developing a passion for scientific research among students through the courses they study, and through the theses and messages that they supervise. In this context, Al-Khatib (2003) emphasized that the most important problems of scientific research are: the low level of spending, the lack of material and human resources, and the absence of clear policies that enhance the process of scientific research. And (Al-Jarrah and Al-Rabee, 2020) The arithmetic averages and standard deviations of the estimates of the study sample individuals were calculated on the paragraphs of each field separately, as they were as follows:

First: Curiosity

Table II. The arithmetic means and standard deviations of the items related to the curiosity, arranged in descending order according to the arithmetic means

Rank	NO.	Items	Mean	SD	level
1	1	Students wonder about the most precise words they hear in lectures, which may express strange phenomena in the cognitive field.	2.74	1.141	moderate
2	4	Students ask questions when they finish a research result that leads to another research idea.	2.61	1.026	moderate
3	5	Students respond positively to strange elements in the environment while trying to discover them.	2.52	.899	moderate
4	3	Students eagerly seek to research various topics in their field of knowledge.	2.46	.909	moderate
5	6	Students access the most difficult databases; passionately to seek research ideas.	2.45	.879	moderate
6	7	Students research every idea proposed in the courses they study.	2.41	1.046	moderate
7	2	Students persist in (reading and following up) research developments in the field of knowledge.	2.33	.875	Low
8	8	Students strive to participate in scientific conferences to learn about new topics.	2.21	.944	Low
		Curiosity	2.45	.762	Moderate

It is evident from Table (2) that the arithmetic averages ranged between (2.21-2.74). Paragraph No. (1) states: "Students question the most accurate words they hear in lectures, which may express strange phenomena in the cognitive

field.” First place with a mean of (2.74), while paragraph No. (8) came, which reads: "Students strive hard to participate in scientific conferences to learn about new topics." In the last place, with a mean of (2.21). The mean of the survey as a whole was (2.45), and the average rating is close to the few. This result can be attributed to the lack of students' participation in scientific conferences, the lack of time for students as a result of obligations and responsibilities, and the repetition of information in research, as they do not seek to search for information and theoretical literature talking about topics, and the weak visibility of students in their field. Cognitive. The results of this study agreed with what Aziz & Bouzgaya (2012) indicated to the many difficulties and obstacles that scientific research is exposed to, represented by: underestimating the value of scientific research and considering it an intellectual luxury, the difficulty of obtaining information, the lack of scientific resources, and the lack of seriousness of research.

Second: Surprise and personal pleasure

Table III The arithmetic means and standard deviations for the items related to Surprise and personal pleasure, arranged in descending order according to the arithmetic averages

Rank	NO.	Items	Mean	SD	Level
1	21	Students talk eagerly about the scientific research that they have completed or that they seek to carry out	2.88	1.097	moderate
2	20	Students realize the importance of their accomplished research.	2.85	1.149	moderate
3	15	Students always seek to meet with their teachers to benefit from their experiences.	2.75	1.058	moderate
4	12	Students add to lectures and research seminars a positive healthy atmosphere.	2.66	.952	moderate
5	9	Students tell me that the time they spend doing research is very short and interesting.	2.63	1.094	moderate
6	25	Students always strive to be distinguished and pioneering in scientific research.	2.61	1.078	moderate
7	17	Students research topics that they are passionate about.	2.57	.999	moderate
8	13	Students have ambition, challenge, diligence, and distinction in a competitive manner in scientific research.	2.55	.895	moderate
9	14	Students with enthusiasm and commitment rush to conduct the scientific research that is required of them in the courses.	2.51	1.086	moderate
10	10	Students are drawn to research of high scholarly value and original ideas (and distance themselves from expendable topics).	2.48	1.086	moderate
11	19	I can notice their enthusiasm when talking about scientific research and its topics.	2.44	1.174	moderate
12	11	Their passion to scientific research eliminates all the obstacles they face during the research process.	2.40	.941	moderate
13	18	Students turn the ideas that provoke them into research topics from which to start.	2.35	1.013	moderate
14	23	Students' passion for scientific research contagious and attractive for their colleagues.	2.34	.988	moderate
15 th	24	I feel that (their minds, hearts, and souls) are associated with scientific research.	2.28	.849	Low
16	16	Students seek real knowledge, not only to attain a certificate.	2.10	.894	Low
17	22	Students publish many scientific papers in scientific journals even before reaching the thesis or thesis stage.	1.92	.988	Low
		Surprise and personal pleasure	2.47	.833	moderate

It is evident from Table (3) that the arithmetic averages ranged between (1.92-2.88). Paragraph No. (21) which states:

“Students talk eagerly about their scientific research that they have completed or those they want to do or those in charge of it” in the rank. The first, with an arithmetic average of (2.88), while paragraph No. (22) came, which reads: “Students publish numerous scientific papers in refereed scientific journals even before reaching the thesis or thesis stage,” ranked last, with an average arithmetic of (1.92). The arithmetic mean of amazement and personal enjoyment as a whole was (2.47); With an average rating closer to a few. This result may be attributed to the students’ lack of patience and responsibility, and the increase in their numbers in lectures, which hinders the presentation of students’ research topics and their use, in addition to the teaching methods used by faculty members based on indoctrination, and the weak motivation and enthusiasm of students to search for modern topics in The knowledge field, and the students’ poor knowledge of the basics of publishing research in scientific and international journals. In this context, the study of Al-Kurdi and Al-Kurdi (2019) confirms the obstacles facing scientific research in Jordan, represented in intensifying efforts to upgrade scientific research methods through care by the concerned authorities, whether official or private, to provide adequate support to advance the level of the researcher and scientific research. This leads to achieving a positive impact on research work and those in charge of it.

Third: Students' future aspirations

**Table IV. The arithmetic means and standard deviations
of the items related to students' future aspirations arranged in descending order according to the means**

Rank	NO.	Items	Mean	SD	Level
1	32	Students focus their energies and efforts in a specific fields of knowledge.	2.70	.989	moderate
2	34	Students' thoughts show the future vision of their study field	2.68	.975	moderate
3	31	Students focus their energies and efforts in specific fields of knowledge.	2.67	.947	moderate
4	26	Students eagerly seek to attend scientific lectures that give them high research skills.	2.58	.999	moderate
5	33	Students take opportunities from challenges to prove their success in scientific research.	2.55	.948	moderate
6	30	Students for their profession achievements through their scientific research.	2.52	1.002	moderate
7	27	Passionate students seek to find solutions to the most difficult problems facing society.	2.49	.962	moderate
8	35	Students with their attitudes demonstrate their research capabilities to conduct excellent and high-level research and to publish it in international magazines.	2.48	.864	moderate
9	29	Students' passion is clearly demonstrated through scientific research and their professional mission.	2.43	.965	moderate
10	28	Students focus on making their research highly cited in the future.	2.39	1.001	moderate
		Students' future aspirations	2.53	.809	moderate

Table (4) shows that the arithmetic averages ranged between (2.39-2.70). Paragraph No. (32) which states that “students focus their energies and efforts in a specific direction in their knowledge fields” came in first place with an arithmetic average of (2.70), while Paragraph No. (28), which reads: “Students focus on making their research highly cited in the future,” came last, with a mean of (2.39). The arithmetic average of the students' future aspirations as a whole was (2.53), with a moderate grade. This result can be attributed to the lack of planning on the part of students, as students only seek to publish research regardless of its quality in terms of title, and the extent to which humanity needs such results, and it may also be due to the negative view of students, as they see their colleagues with higher degrees as unemployed. Work, which may frustrate them, and the students’ future vision is clearly weak, and the absence of interest in the noble message, which students are supposed to strive to achieve through scientific research.

Fourth: The students' academic motivations

Table V. The Arithmetic Means And Standard Deviations For The Items Related To The Students' Academic Motivations, Arranged In Descending Order According To The Arithmetic Averages

Rank	NO.	Items	Mean	SD	Level
1	42	Theses and dissertations submitted by postgraduate students contribute to enhancing the research reputation of the colleges.	2.72	1.149	moderate
2	36	Students frequently suggests pioneering research ideas during lectures.	2.69	.954	moderate
3	37	Students discuss with us as professors their intention to include some new research topics in their field of knowledge.	2.68	.929	moderate
4	39	Students take initiative steps to help their colleagues in scientific research.	2.64	1.070	moderate
5	38	Students propose ideas that make the courses more research-oriented than do-it-yourself.	2.51	.987	Average
6	40	Students do extremely well in their research that is considered requirements for the courses	2.50	.980	Average
7	41	The vision and mission of the colleges is realized through the students 'endeavor to conduct scientific research.	2.49	.951	Average
		The students' academic motivations	2.59	.810	Average

It is evident from Table (5) that the arithmetic averages ranged between (2.49-2.72), where paragraph No. (42) came which states: "The scientific dissertations and dissertations submitted by postgraduate students contribute to raising the research reputation of the faculties" in the first place with an arithmetic average of (2.72), while Paragraph No. (41), which reads "Faculties' vision and mission is achieved through students 'pursuit of scientific research," came last, with an average of (2.49). The mean of the academic students' motivations as a whole was (2.59), with a moderate grade. This result may be attributed to the poor quality of the messages submitted by the students, and to the fact that students seek to fill their spare time when they are not working, and the existence of an academic environment that does not allow students to submit proposals to develop course plans by adding new proposed subjects, and it may be due to the absence of collective coordination by the Deanships. The college reaches the students, which may happen randomly, and the students 'academic motives are not met, in addition to the imposition of some research topics on students by the professors as titles of letters and theses without the slightest desire of the student for these topics.

Secondly. The results related to the second study question, which stated: "Are there statistically significant differences at the significance level ($0.05 \geq \alpha$) in the faculty members' estimates of the level of passion for scientific research attributable to the variables: (gender, academic rank, and university type) "? To answer the second study question, the arithmetic averages and standard deviations were extracted for the response of the study sample to the level of passion for scientific research among graduate students according to the variables: gender, academic rank, university type, and Table (6) illustrates this.

Table VI. The arithmetic averages and standard deviations of the level of passion for scientific research according to the variables of sex, academic rank, and university type

Variables	Categories	Mean	SD	NO.
Gender	Male	2.54	.789	265
	Female	2.44	.751	145
Academic rank	Assistant Professor	2.60	.661	132
	Professor Associate	2.44	.828	135
	Professor	2.47	.821	143
University type	Especially	2.53	.773	124
	Government	2.49	.779	286

Table (6) shows an apparent variation in the arithmetic averages and standard deviations of the level of passion for scientific research due to the difference in the categories of the variables of gender, academic rank, and university type, and to show the significance of the statistical differences between the arithmetic averages, the triple analysis of variance was used in Table (6).

Table VII. Three-Way Anova Of The Effect Of Gender, Academic Rank, And University Type On The Level Of Scientific Research Passion

Source of variance	SS	DF	MS	F- value	Sig
Gender	1.300	1	1.300	2.163	. 142
Academic rank	2.324	2	1.162	1.934	146
University type	003	1	003	.005	. 941
The error	243.378	405	601		
Macro	246.564	409			

Table (7) shows the following: There are no statistically significant differences ($0.05 \geq \alpha$) due to the effect of gender, academic rank, and university type, and this result may be attributed to the fact that the faculty members' interest in scientific research is due to promotion and obtaining the academic rank, most likely. And regardless of the gender of the faculty member. Also, recently, many faculty members in a Jordanian university have been dismissed as a result of not publishing scientific research, which indicates the absence of a passion for scientific research even among professors, as well as the increase in the requirements and job burdens on faculty members, specifically what the current period is witnessing of Transformations that require more attention to academic matters at the expense of scientific research, and it may go back to the faculty members' view that the research presented is not taken and placed on the shelves, thus weakening their efforts to inculcate a passion for scientific research in students, as well as the professors' endeavor to face the burdens of life and carry out academic work. The principle of the position and not the profession, and just as the current epidemiological situation has a great impact on professors and students alike, the scarcity of students who are passionate about scientific research, the absence of a scientific research system or plan that should be enacted before the beginning of carrying out research in order to be of value and benefit, and the weakness of the empowerment of teachers. With scientific research skills in public and private universities, and the weakness of the strategic orientations of colleges and universities.

Recommendations

- Spreading the spirit of hope and ambition among graduate students by faculty members for a better academic future; This helps them to remain interested in scientific research.
- The necessity for faculty members to focus on the content of the courses they teach for students, and to enable them to increase their passion for scientific research.
- Spreading the culture of passion for scientific research among students, and its importance for the advancement of the society to which they belong.
- Conducting studies dealing with the relationship of passion for scientific research with other variables. Such as cognitive competence, emotional intelligence, and professional acumen.

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