



**Mathematics secondary school teachers and the problems they face and their relationship to their morale from their point of view in the Directorate of Education for the northeastern Badia reg**

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**Summary**

The aim of the study is to determine the seriousness of the problems facing secondary school mathematics teachers in the Directorate of Education and Learning for the northeastern Badia region, and how these issues relate to their morale. The study sample also included (109) mathematics teachers from the Directorate of Education and Learning for the northeastern Badia region, and their honesty and stability were verified, and the results of the research showed statistical differences ( $05.0 \geq \alpha$ ) between the arithmetic average of the total scores of the obstacles faced by mathematics teachers at the secondary stage, and the hypothetical average of these obstacles. It was also found that there were statistically significant differences ( $05.0 \geq \alpha$ ) between the arithmetic mean of the scores of the sample members. This research aims to explore the morale of mathematics teachers at the secondary level, as well as their environment emanating from this subject. In favor of the target group of this research, there is no statistical difference ( $05.0 \geq \alpha$ ) in the degrees of problems due to gender or experience, some of the influence is attributable to academic qualifications. The results also showed a statistically significant negative relationship between the problems faced by secondary school teachers of mathematics and their morale.

**Keywords:** problems, morale, secondary school, mathematics.

## **Introduction**

Mathematics has an important and vital role in the progress of people, as mathematics helps in confronting and solving many problems faced by society. Mathematics also has great cultural value, contributing to building a scientific community that thrives on emerging ideas and innovations. The role of mathematics is similar to that of the 'mirror', an urge, reflecting a high-level civilization and civilization, so throughout history man has sought to use the wonderful abilities to apply this racism in various spheres of life.' The advanced development of man is beneficial, and cultural and human progress depends on the development of mathematics (Al-Sadiq, 2001).

In order to produce a generation capable of meeting the requirements of comprehensive development, self-knowledge and understanding of others, facing the requirements of the times, and providing it with the skills that enable it to achieve its own learning, education in the faces of the modern era and many challenges that in turn impose many tasks on the teacher. (Al-Mahdi, 2007).

As the teaching profession is important for both the individual and society, and the large number of groups that teachers deal with on a daily basis, which led to the emergence of many problems and the inability of those in charge of performing their tasks properly. It is also known that the more important the profession, the greater the problems related to it, as the information revolution and the speed of its spread contributed to the tremendous progress of educational technology, which increased the teacher's workload and, as a result, the problems that prevent him from performing his job. Among the most important of these issues are the high number of tasks desired from the teacher and job security, the lack of salaries, the burdensome academic burdens, and the speed with which the information revolution spreads, (Aql, 2004).

The high morale of mathematics teachers also reflects the strength of their motivation to work and the extent of their desire to work as hard as they can, and this morale fluctuates in response to the work environment around them, and they need encouragement and support to be able to fully complete the educational goals, according to Al-Issawi (2005), and raising the morale of mathematics

teachers enhances their continuous enthusiasm for the teaching profession and improves the quality of their work (Al-Harbi, 2008).

The aim of (Abdul Aziz study, 2005) was to identify the challenges facing the arithmetic teaching of both boys and girls for the second intermediate grade and the study sample included (29) teachers, and (33) mathematics teachers for the second grade of the intermediate stage in Madinah. The study tool was a questionnaire, and in the study I came to the conclusion that the many scheduled lessons, the weak links between the topics of the chapters of the book scheduled for the second intermediate grade, and the contents of the student's book are focused on the cognitive aspect and not focusing on The emotional aspect of learning mathematics was one of the most important challenges related to the axis of student and student books. On the other hand, no emphasis was placed on the appropriate use of technology in education, teaching aids matched to students' needs were not provided, and some confused concepts were not adequately explained in some lessons. Teaching is the transfer of knowledge and skills from teacher to student, and this process involves designing lessons, preparing educational materials and providing an appropriate learning environment to achieve learning objectives. Teaching aims at the development of a student in all aspects of his academic and social life.

(Bangulpally, 2011) conducted a study titled 'Many Solutions to the Problems of Teaching Mathematics: Can Teachers Do It Effectively?'. The study used a sample of 500 teachers, and used the questionnaire method as a research tool. These methods were used as a solution to arouse the teacher's interest in solving the problems of teaching mathematics. The results of the study showed that the teacher is capable of this, that he loses the evolutionary culture of thinking, and does not realize the values of the various contradictions with which he tries to overcome difficulties with differences in the material and spiritual needs of a society. They face challenges in assessing students' responses to open-ended questions, and stress that dealing with math problems in a variety of ways contributes to the promotion of theoretical learning and meaningful learning for students.

Al-Rifai's study (2006) confirmed the detection of the level of morale among male and female teachers in Islamic education in public secondary schools in Jordan, and the determination of the impact of this on the outcomes of their students. The study sample included 100 teachers of Islamic

education in secondary schools, and a questionnaire consisting of 50 items was developed to achieve the objectives of that study. Where the study found that teachers of Islamic education have an average degree of morale, and there are statistically significant differences between males and females, and preference among females. The analyzes also showed that the academic qualification does not affect the degree of morale. There was a negative correlation between the morale score and the teacher's teaching performance. The subject related to Islamic education and the performance of students in it.

(Yisrael, 2008) conducted a study to determine the impact of specialized groups on the morale of teachers in the secondary stage who teach the ninth grade, and the sample members consisted of (5) teachers. That study consists of interviews and observations. Results in Ohio show that a healthy school environment boosts teachers' morale, affecting students' academic achievement and teacher-peer interactions. Also, the teacher loses his passion for teaching when the level of morale decreases, and he feels frustrated with himself. The study showed that there are many schools that seek to provide better services to students, using a collaborative work approach that gives teachers more freedom to make important decisions and involve them in the decision-making process during classes.

### **Search Problem**

The teaching profession is exposed to many issues that negatively affect the performance of teachers, and the disclosure of these issues is a crucial and positive step in the effort to do everything possible to help, reduce the seriousness of problems that hinder learning, and as a result, produce positive educational outcomes (Abou Foda, 2008). Proper working conditions that provide opportunities for teacher advancement and achievement are just one of many aspects that have an impact on teachers' morale and ability to perform their jobs with high motivation and morale (Jawad, 2010).

Secondary school math teachers also face a variety of challenges, and these challenges can have a positive or bad impact on teachers' morale. In order to better understand the issues faced by secondary school mathematics teachers and how these issues relate to their morale and research considered these issues (Al-Rifai, 2006).

### **Research Objectives**

This study aims to:

- Determine the degree of severity of problems facing mathematics teachers at the secondary stage.
- Determine the morale of mathematics teachers in secondary schools from their point of view.
- Determine whether disparities in the severity of problems experienced by secondary school mathematics teachers are due to their experience, educational background, or gender.
- Determine the relationship between the seriousness of mathematics teachers' problems and their morale in secondary schools.

### **Research Questions**

The research questions were summarized in:

1. Is the actual average of the hypothetical scale of problems created by the researcher for this purpose different from the degree of problems experienced by secondary math teachers ( $\alpha > 0.05$ )?
2. Is the default average of the morale scale established by the researcher for this purpose different from the moral level of mathematics teachers at the secondary stage ( $\alpha > 0.05$ )?

### **Importance of research**

The importance of research lies in:

1. The results of this research should help secondary school mathematics teachers identify the most important challenges they face in the classroom and in working on developing solutions.
2. The results of this research should be useful to those responsible for teacher preparation and training programs, as well as those who want to create training programs that help mathematics teachers solve their problems.
3. Use this research to assess the morale of mathematics teachers in secondary schools through moral and financial incentives, and it may be useful to give feedback to individuals working in the fields of education and interested in mathematics, and work to raise the morale of mathematics teachers.

### **Research limitations**

- Human limits: secondary math teachers.
- spacial limits: Government schools in the Directorate of Education and Learning of the northeastern Badia region.
- Time limits: 2021/2022 academic year

### **Theoretical framework**

High school math teachers face a variety of issues in their field, and these issues are very important for teachers, especially because students at this stage have characteristics that distinguish them from students in other stages, and because mathematics is one of the crucial subjects that students struggle to understand for a variety of reasons, some of which are related to the physical learning environment.

#### **Problems of mathematics teachers related to classroom management.**

Effective classroom management is one of the main pillars on which the educational process is based, and regardless of the experience of the subject or teaching techniques, the teacher cannot successfully complete the objectives of the study, if he is unable to control the class and maintain its structure. The ability to maintain a classroom system is also one of the essential elements of the educational process, as the teacher must devote a lot of time and effort to this process, and a number of things such as, student disengagement and lack of diversity in teaching methods, can make things confusing in the classroom and weaknesses in the curriculum and chaotically organized classrooms (Al-Huwaidi, 2006).

#### **Problems of mathematics teachers related to the school curriculum.**

If used correctly, a textbook can be a valuable tool in the process of learning and teaching and the teacher's job is more complex than just helping students absorb material from their math textbooks. The textbook is not the only source of material, nor is it a substitute for the teacher as it is categorically error-free, especially since errors in mathematical problems may discourage students from trying to solve additional problems; the content of the material should be organized sequentially and consistently; and the content of the book is appropriate for all (Al-Sadiq, 2001)

#### **The problems of mathematics teachers related to the student.**

High school is a very important stage in everyone's life because it witnesses the maturity and growth of the student, and high school students are characterized by a number of physical characteristics. The student is at the heart of the educational learning process, and the educational environment has been prepared with all its human and material resources for the student, and the ability to visualize, which helps in their understanding of abstract concepts such as engineering, mathematics, and others, distinguishes students at that stage from others. This stage is also seen as one of emotional stress as its members are characterized by shyness and sensitivity to everything around them, (Al-Omaria, 2021).

### **Problems of mathematics teachers related to educational supervision.**

The supervision process aims to assist teachers in setting their goals, creating a strategy to achieve those goals, evaluating students' work and themselves, identifying the most effective teaching strategies and utilizing them when directing their material, and keeping them up to date with all relevant developments in their area of expertise. Assist teachers in completing their professional development and completing any remaining training requirements (Ayesh, 2008).

### **Problems of mathematics teachers related to the physical learning environment.**

It is believed that the success of the thinking process is greatly influenced by the educational environment, and since mathematics depends heavily on the thinking process, the physical educational environment must be taken into account because it contributes to stimulating and developing thinking. All these areas encourage students to think and create, but the lack of teaching aids and the teacher who uses only the blackboard are some of the obstacles to this, (Saadeh, 2014).

### **Morale**

Definition of morale: It is a process in which the teacher's practices and level of motivation are influenced by his beliefs, feelings and attitudes about the teaching profession (Al-Badri, 2005: 143)

### **Morale boosters**

1. The need for belonging and social acceptance: A person's sense of security increases by belonging to a strong group with which to unite, such as organizations that defend the rights of those who work there and work to improve living standards.
2. The need for appreciation and encouragement: A real worker who makes every effort for the duties assigned to him needs someone who appreciates his effort and motivates him to continue striving for excellence.
3. By giving him more responsibilities and powers, the individual is better able to complete the tasks required of him. He is also informed of the importance of the work he does, and efforts are made to boost his self-confidence. Financial incentives include bonuses, allowances, housing insurance, and transportation insurance (El-Essawy, 2005)

### **Factors affecting morale**

1. Appropriate work for teachers: Proper work should provide teachers with opportunities for their progress and achievement.
2. Effective supervision: In order for supervision to be effective, the work group must be protected and helped solve problems and give it a sense of security and certainty (Jawad, 2010).
3. Security and high standard of living: Teachers want a safe life where they can feed, clothe and house their families without worrying about money.
4. Proper administration of justice: Teachers want to be treated well and fairly, in terms of salary, and appreciation of their efforts and competencies, as teachers with the same experience and competence must be paid equal salaries, and whenever teachers feel that other teachers have obtained privileges without prior effort, this leads to a collapse in their morale.
5. Feeling that they are making progress towards their goals: Teachers want to feel that they are making progress towards their goals, they are appropriate in their work, they are contributing to their efforts, and that they are developing their practices in their profession.



6. Teachers want to work in environments that are suitable for their profession and provide them with the amenities they want. They require attractive spaces where they can relax and recover. (Al-Badri, 2005-b)

(Dupree, 2011) argues that there are factors that affect teachers' morale:

1. **Constructive Work Environment:** A constructive workplace includes a welcoming atmosphere that fosters harmony, acceptance and cooperation between the governing body and the teachers themselves. It also gives teachers an opportunity to interact with their co-workers and exchange ideas with them while working, in addition to enough time to complete the tasks assigned to them and take into account the psychological conditions resulting from work pressure.

2. **Teaching with Autonomy:** Raising teachers' morale results in giving them the freedom to choose the teaching strategy that best suits students and benefits them, as well as avoiding traditional practices that stifle innovation and creativity in the educational process.

3. **Positive Parental Participation:** Supporting parents and involving them in supporting and educating their children is crucial to the success of the education system and teachers. Involving parents in the role of their child's education and encouraging teachers ultimately improves teacher morale.

4. **Leadership Support:** The principal must possess strong leadership qualities and work to develop intimacy, trust and love between him and teachers in order to improve trust and harmony between teachers and administrators. This can be done by involving teachers in the development of educational policies, choosing effective teaching strategies and changing curricula.

5. **The characteristic of high morale:** Many of the characteristics of high morale that appear in the actions of people and their groups, most notably: belief in the necessity and importance of the message that the institution seeks to convey, the strategies it uses to do so, and the unity of all its members. workers in achieving these strategies, and the existence of a psychological climate characterized by love and cooperation between workers. Sacrifice made for the benefit of the general public and motivated by workers' sense of achievement (El Esawy, 200)

The strength of the individual in overcoming internal conflicts between him and his colleagues, the low rate of collision between members of the organization, and the enthusiasm of the members of the organization to work together and cooperate without external influence are: The three main indicators identified by Najjar (2002), to measure raising the level of employee spirit. This perception also coincides with previous positive experiences of institutional members. In addition to the positive attitudes of members towards the goals of the group

## **Method and procedures**

### **Research Methodology:**

The researcher followed the survey study, which follows the descriptive approach.

### **Study Respondents:**

The study respondents in the field of mathematics for the secondary stage in the northeastern Badia region includes a community of (152) teachers, distributed among government schools affiliated to the Department of Education for the northeastern Badia region.

### **Study Tools:**

The two study tools were developed: “Identifying the problems faced by secondary school teachers of mathematics” and “Identifying morale” and after returning to the theoretical literature and previous relevant studies, as follows:

The first study tool: “Problem Questionnaire”

Based on previous studies, the researcher conducted a questionnaire to assess the degree of difficulties faced by mathematics teachers at the secondary stage from the teachers' point of view: the study of Habash (2014), the study of Al-Harbi and Al-Mu'azzam (2013). Al-Araimi (2007) and other studies used the open questionnaire to ascertain an exploratory sample of teachers' perspectives regarding the difficulties they face when teaching mathematics. The questionnaire originally included (57) items divided into four categories, including (16) items in the category of topics related to mathematics curricula. And the field of problems related to the student, and consisted of (16) paragraphs. And the

area of problems related to educational supervision, and consisted of (13) paragraphs. And the field of problems related to the physical educational environment, and consisted of (12) paragraphs.

### **Authenticity of the Problem Questionnaire:**

In order to assess the validity of the paragraph, the degree of proportionality of the paragraphs with the areas in which they were placed, and the proposed amendment, it was presented to a number of specialists from the faculty members in Jordanian universities, in order to confirm the apparent honesty of identifying the problem. The researcher made the appropriate changes to the paragraphs of the questionnaire and deleted some paragraphs. The researcher used paragraphs that focus on the research topic.

### **Stability of problem identification:**

The researcher used the test and re-test procedure to ensure the stability of the solutions to the problem (test retest), as the questionnaire was conducted on a sample of (20) teachers who were not part of the sample. Two weeks later, the investigation was repeated on the same sample and the stability coefficient was determined. The reliability coefficient of the test was calculated with the problem solved using Pearson's correlation coefficient, and it was found that (0.92); the internal consistency coefficient was also calculated using the cronbach's alpha equation, and it was discovered that (0.99); these values are acceptable for this type of test.

### **Second Research Tool: Morale Questionnaire**

By referring to previous relevant studies, including Al-Rifai's (2006), Al-Duaa and Al-Saida (2010), and (Haroun and weshah), the researcher devised a morale questionnaire to assess. Morale of secondary school mathematics teachers from the teachers' point of view (2008). The questionnaire contains 34 items in its initial version, each paragraph was given a specific weight on the Likert scale with a maximum of five points, and the alternative (a very large score) was given five points. The alternative has four degrees of high agreement, three degrees of neutrality, two degrees of disagreement, and one degree of extreme disagreement.

### **Authenticity of the Morale Questionnaire:**

A group of specialized faculty members from Jordanian universities were asked to evaluate the validity of the paragraph, the appropriateness of the paragraphs and the areas in which they were placed, as well as the proposed amendment in order to confirm the validity of the paragraph, a clear validity of the morale questionnaire. The researcher made the appropriate changes to the paragraphs of the questionnaire and deleted the paragraphs that are not suitable for the research.

### **Stability of Morale Questionnaire:**

The questionnaire tool was applied to a sample of (20) male and female teachers from outside the study sample, and it was reapplied to the same sample after two weeks to determine whether the identification of the second problems is fixed or not. This was done by using the Test-Retest policy. The reliability coefficient and its coefficient were then calculated using Pearson's correlation coefficient, where the total reliability coefficient of the research tool was (86), and the internal consistency coefficient was extracted using the cronbach's alpha equation, where the research instrument's reliability coefficient was (82.0). These values are suitable for this type of research.

### **Statistical processing:**

Statistical Package for the Social Sciences (SPSS) for the data

### **Results:**

1. The nature of mathematics, which requires great effort on the part of teachers to transfer it to students, especially since the secondary mathematics curriculum is characterized by educational rigor, and the diversity of students' mental abilities in one semester, which the teacher requires the use of appropriate teaching strategies for different levels of students and works to develop their skills in sports and development.
2. The school's unfair policies against the math teacher, including increasing his teaching quota, their lack of appreciation for his efforts, their actions against students, and their failure to activate the foundations for success and failure, may also be responsible for differences in beliefs among teachers and these policies may conflict with or align with the school's vision and goals.

### **Recommendations:**

1. The educational supervisor will hold intensive training sessions and educational seminars for high school mathematics teachers to help them solve problems and advance professionally.
2. Striving to provide an enabling learning environment that seeks to help secondary school mathematics teachers achieve the desired learning outcomes.
3. Since they have the right to engage in the development process, secondary school math teachers should be involved in curriculum design and development.

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