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Article

A Field Study of the Job Stress Faced by Agricultural Employees in the Kirkuk Agriculture Directorate, Iraq

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ABSTRACT

The study aimed primarily to identify the job stress facing agricultural employees in Kirkuk Agriculture Directorate and determine the descending order of each area of study, This was achieved by using a data collection form that included three main areas of job stress: (personal stress, administrative stress, and organizational stress) , The research population consisted of all agricultural employees, totaling (600) agricultural employees in Kirkuk Agriculture Directorate, A random sample of (18%) was taken, comprising (108) agricultural employees ,The research results concluded that organizational stress ranked first in terms of importance, with a weighted mean of (3.41) and a percentage weight of (68.2%), followed by personal stress (3.11, 62.2%), and then administrative stress (3.06, 61.2%). The most prominent sources of stress were: role ambiguity, poor appreciation, lack of professional development opportunities, unfair wages, and high expectations without the necessary resources, Furthermore, continuous exposure to these stress may weaken an employee's ability to make sound decisions, innovate, and adhere to agricultural quality and safety standards. The study recommends implementing targeted training programs, improving administrative support systems, enhancing communication between leadership and employees, and creating a stimulating and supportive work environment, these steps are essential to ensuring the sustainability and competitiveness of the agricultural sector by maintaining the mental health and professional competence of its workers.

INTRODUCTION

The world today is facing development challenges as a result of the accelerating development race taking place among societies worldwide, which has come to rely on the formation and development of competitive advantages, one aspect of which is based on human development. This is in addition to the rapid change in the world resulting from globalization, which has transcended production and exchange systems to a revolution in information and communications systems, leading to changes in various sectors of society, its culture, and lifestyles, including the agricultural sector [1].

Agricultural extension is one of the organizations working and striving to advance agriculture and raise the level of performance of agricultural employees [2]. This is because it believes that agricultural

employees are the human force driving the wheel of agricultural production and improving the extension services provided, Agricultural extension in developing countries seeks to achieve its goals by developing the capabilities and skills of agricultural extension workers [3].

Accordingly, agricultural extension, through its management, which is the primary and decisive factor in increasing the effectiveness of the extension system, develops the performance of agricultural employees and enhances their capabilities by bringing about desirable behavioral changes in cognitive, skill, and emotional aspects, thereby raising their performance level and meeting their needs.

In light of modern concepts, extension management performs a set of functions, activities, and events related to planning, coordination, follow-up, and evaluation, in addition to collaborative work among all its employees to achieve the goals sought by the extension apparatus [4].

Therefore, the ability of extension units to fulfill their mission depends on the quality of their management, which enables the extension process to be controlled, organized, directed, and evaluated. Ineffective management affects the quality of these units' outputs [5]. Based on the above, the effectiveness of extension work is linked to the efficient performance of agricultural extension workers through management, which provides a stress-free work environment to help improve the extension process and enhance employee performance [6].

The human element represents the fundamental pillar upon which development efforts are based [7], The great and continuous scientific development in all agricultural fields and the resulting enormous amount of agricultural information, ideas, and innovations do not lead to real progress unless accompanied by the effective transfer of that information by the extension System [8].

Studies indicate that there are a number of problems and obstacles that hinder the agricultural extension system from performing its role efficiently and effectively, including job stress , job stress are one of the prominent issues facing various sectors, especially in the agricultural sector, which is one of the most important developmental and economic pillars in many countries [9], It is one of the basic topics that interest its study in terms of causes and effects, considering that job stress are one of the challenges facing the extension organization in achieving its goals, with the presence of high levels of job stress, which may negatively affect individual performance, and consequently the performance of the extension organization as a whole [10], The nature of extension work is characterized by a direct reliance on confronting climate change, in addition to dealing with modern agricultural technology and interacting with the diverse requirements of farmers and consumers [11].

Therefore, agricultural employees face multiple challenges that accumulate to form job stress, which negatively impacts their job performance and their ability to achieve and innovate [12], Studies have shown that any employee, including agricultural employees, often spends many years performing their job duties within the organization, ranging on average between (20-30 years), meaning they spend approximately (100) thousand hours, equivalent to a third of their life. While an individual performs their work as a means of satisfying their needs and fulfilling their desires, the stress and difficulties they face can contribute to a decrease in their needs or their elimination, leading to a dysfunction within them as a natural response, thus affecting their behavior and performance [13], Agricultural employees face time stress to complete tasks during specific seasons required by agricultural production, in addition to stress resulting from difficult field conditions, such as exposure to hot or cold weather, working in remote locations, and reliance on equipment that may require continuous maintenance. Furthermore, organizational and administrative stress cannot be ignored, such as a shortage of financial and technical resources, or varying levels of coordination between agricultural institutions, in addition to high expectations from management. and farmers simultaneously [14], Despite the diversity of these stress, they may share the characteristic of directly impacting job performance, which is the pivotal element upon which the success of agricultural institutions in achieving their strategic objectives is based. An

employee who suffers from continuous and intense work pressure may experience a decline in their ability to make sound decisions, a diminished capacity for innovation, or a decline in their commitment to implementing agricultural quality and safety standards, this counter-effect of work pressure poses a real challenge to institutions aspiring to raise production efficiency and increase the competitiveness of the agricultural sector [15].

From this perspective, the study of the job stress facing agricultural employees emerges as both a scientific and practical necessity, Understanding the nature of these stress will help in developing policies and procedures that limit their negative effects and contribute to the development of a supportive and stimulating work environment. It is also an important step toward enhancing the stability of human resources in the agricultural sector, raising their level of professionalism, and achieving the desired development goals.

Accordingly, this study aims to shed light on the reality of job stress facing agricultural employees in the Kirkuk Agriculture Directorate, and to develop practical proposals and recommendations that contribute to improving working conditions and enhancing the long-term sustainability of the agricultural sector. From this perspective, the research aims to answer the following research questions:

II. MATERIALS AND METHODS

The current research falls within the framework of survey research that falls within the descriptive approach. Its importance is highlighted by its being the only approach concerned with studying phenomena and their current status, providing a description of their characteristics, and providing data on the respondents' opinions, expressing them qualitatively or quantitatively [16], It thus focuses on describing the job stress faced by agricultural employees, a fact emphasized by this method.

Participants

The Kirkuk Agriculture Directorate was chosen for the current research because it is one of the multi-ethnic governorates, which calls for understanding the stress faced by those of different ethnicities. The research community included all agricultural employees in the Kirkuk Agriculture Directorate, working and distributed across the divisions and agricultural units, totaling (600) agricultural employees. A simple random sample of (18%) agricultural employees in the Kirkuk Agriculture Directorate was taken, comprising (108) agricultural employees.

Data Collection

The research tool is defined as the means by which data is collected from the study population [16], To achieve the research objective of determining the level of stress facing agricultural employees in the Kirkuk Agriculture Directorate, a questionnaire was designed based on several methods, including the opinions of experts and specialists, studies, research, and articles related to the field of work stress, The questionnaire serves as a basic tool and one of the best means by which the data required to achieve the research objectives can be obtained. It is presented in the form of a set of questions that the respondents are asked to answer [17], In order to obtain the necessary data for the research, the questionnaire consisted of three domains: (personal stress, administrative stress, organizational stress), with (30) items for each domain and five alternatives (strongly agree, agree, neutral, disagree, strongly disagree) for the respondents to complete. Each alternative was given numerical values (1, 2, 3, 4, 5), respectively.

Validity of the Scale

Validity is one of the important characteristics of various scales, Validity of the scale is one of the most important aspects of a good scale. It refers to the suitability of the method or tool to measure what should be measured, It is the degree to which the scale can achieve its objectives and thus increase the

level of confidence in the research findings, such that they can be generalized [18], To verify the validity of the instrument, apparent validity and content validity were used by presenting the questionnaire to a group of experts and specialists in the fields of agricultural guidance, business administration, and education, Content validity is the extent to which the scale components represent aspects of the measured aspect [19].

Data Analysis

After collecting, transcribing, and tabulating the data, the data was analyzed using manual analysis and the statistical analysis program (SPSS).

III. RESULTS AND DISCUSSION

This research discusses the results of the current study, based on the objectives it seeks to achieve, this is done in light of the data obtained from the respondents, and the results are analyzed and arranged according to the areas and themes to determine the job stress facing agricultural employees in the Kirkuk Agriculture Directorate.

Job Stress Facing Agricultural Employees in The Kirkuk Agriculture Directorate.

The research results showed that the (3) areas of work pressure facing agricultural employees in the Kirkuk Agriculture Directorate had a weighted mean between (3.06-3.41) points, which is higher than the hypothetical mean of (3) points, with a percentage weight between (61.2-68.2%) points, as shown in the following table:

Table 1. Distribution of respondents according to their opinions on the areas of job stress facing agricultural employees in Kirkuk Directorate

Average weight percentile	weighted mean	Axes	Sort by importance	Form sequence
68.2	3.41	organizational	1	3
62.2	3.11	character	2	1
61.2	3.06	Administrative	3	2
63.86	3.19			General average

It is clear from the table above that the respondents emphasized the importance of the areas of job stress facing agricultural employees in the Kirkuk Agriculture Directorate. However, organizational job stress ranked first in terms of the level of importance or the respondents' approval of them, as they achieved a weighted mean of (3.41) degrees, and a percentage weight of (68.2%) degrees, which is higher than the weighted means of the other axes. The reason for this may be due to the absence or ambiguity of tasks and responsibilities, which leads to a lack of clarity in the roles of agricultural employees, in addition to weak planning and a shortage of competent administrative cadres, which increases instability. This is consistent with study [19].

While the area of administrative work stress ranked last in terms of importance or respondents' approval, it achieved a weighted mean of (3.06) points, with a percentage weight of (61.2%) points. This is lower than the weighted means of the other axes. This may be due to the multiplicity of administrative tasks and conflicting roles, which exceed the expectations, tasks, and capabilities required of agricultural employees, as well as the limited resources available to them.

The Descending Order of Each Research Area (Personal Stress, Administrative Stress, Organizational Stress).

Personal Stress

The research results showed that the (10) items related to personal stress received a weighted mean score between (3.68 - 2.65) points, and a percentage weight between (73.6 - 53%) points, as shown in the

following table:

Table 2. Distribution of respondents according to their opinions on the personal stress they face

Weight percent	weighted mean	items	Sort by importance	Form sequence
73.6	3.68	Unfair wages put a lot of stress on me.	1	4
69.2	3.46	I have difficulty convincing farmers of agricultural recommendations.	2	2
68.8	3.44	I feel frustrated that I don't get the appreciation I deserve at work.	3	10
62	3.1	Work causes me a lot of anxiety.	4	5
60.8	3.04	I have difficulty managing time.	5	6
60.4	3.02	I feel psychological pressure due to the large number of tasks and responsibilities	6	3
58.8	2.94	I feel stressed due to excessive workload.	7	1
58.2	2.91	I have difficulty balancing work and personal life.	8	7
57.6	2.88	I feel frustrated that some farmers don't respond to me.	9	8
53	2.65	Lack of camaraderie between me and my colleagues at work	10	9

The table above shows that respondents emphasized the item “Unfair wages put psychological pressure on me.” This is reinforced by its ranking first in terms of importance or respondents’ approval, with a weighted mean of 3.68 points and a percentage weight of 73.6%, which is higher than the weighted means for the other items. This may be due to the fact that unfair wages can lead to a decrease in work motivation and impact performance and productivity.

Meanwhile, the item “The lack of a sense of camaraderie between me and my colleagues at work” ranked last in terms of importance or respondents’ approval, with a weighted mean of 2.65 points and a percentage weight of 53%, which is lower than the other weighted means. This may be due to weak social relations, which indicate an absence of positive human relationships, such as respect, cooperation, or effective communication.

Administrative Stress

The research results showed that the (10) items related to the administrative stress facing agricultural employees in the Kirkuk Agriculture Directorate received a weighted mean between (2.78-3.8) points, with a percentage weight between (55.6-76) points, as shown in the following table:

Table 3. Distribution of respondents according to their opinions on the administrative stress they face

Weight percent	weighted mean	items	Sort by importance	Form sequence
76	3.8	I feel unappreciated by management for my efforts.	1	5
75.6	3.78	Lack of opportunities for promotion and professional development affects	2	3
72	3.6	I think that work pressure reduces the quality of performance.	3	7
71.6	3.58	Long working hours affect my mental health.	4	2
68.8	3.44	I feel bad about not being involved in setting goals for the business I do.	5	10
67	3.35	I consider work stress a normal part of my job.	6	4
66.4	3.32	I find myself in situations that require making quick decisions under pressure.	7	6
62	3.1	I feel job instability in my job	8	1
60	3	I feel that some of the tasks assigned to me are difficult and complicated.	9	8
55.6	2.78	There is a conflict between my duties and responsibilities and what is expected of me.	10	9

It is clear from the table above that the respondents confirmed that the items “I feel that the management does not appreciate my efforts” is important, and this is reinforced by its obtaining first place in terms

of the level of importance or the respondents' agreement with it, as it achieved a weighted average of (3.8) degrees and a percentage weight of (76%) degrees, which is higher than the weighted averages of the other items. The reason for this may be attributed to the fact that agricultural employees are aware of the importance of encouraging and appreciating the efforts of the extension organization, which helps them exchange information, knowledge and skills among themselves to develop their capabilities, which enables them to achieve the goals of the extension organization.

While the items "There is a conflict between my duties and responsibilities and what is expected of me" ranked last in terms of importance or approval by the respondents, it achieved a weighted mean of (2.78) points and a percentage weight of (55.6%) points, which is one of the lowest weighted means of the other items. The reason for this may be attributed to the assignment of agricultural employees to carry out administrative tasks that hinder their technical activity and negatively impact their relationships, in addition to the existence of a lack of clarity in the job role, which is represented by a conflict or discrepancy between the duties and responsibilities officially defined in the job description and what management or colleagues actually expect from the employee.

Organizational Stress

The research results showed that the (10) items related to the organizational stress facing agricultural employees in the Kirkuk Agriculture Directorate received a weighted mean score between (3.76 - 2.89) points, and a percentage weight between (57.8 - 75.2) points, as shown in the following table:

Table 4. Distribution of respondents according to their opinions on the organizational stress they face

Weight percent	Weighted mean	items	Sort by importance	Form sequence
75.2	3.76	I feel there are few opportunities to learn new skills and gain new experiences.	1	9
74	3.7	I feel restricted by some laws and administrative instructions.	2	2
73.6	3.68	The nature of my work does not allow me to make bold decisions to develop the business.	3	10
73.2	3.66	I need modern technologies for my work that keep pace with the development taking place.	4	7
72	3.6	It bothers me to receive orders and instructions without discussing them or giving my opinion on them.	5	5
70.4	3.52	I am assigned tasks that conflict with my specialization and skills.	6	8
64.8	3.24	I feel that the authority that the organizational structure gives to superiors is a coercive means of issuing orders .	7	4
60.8	3.04	I have difficulty organizing my time because of the large number of tasks assigned to me.	8	1
60.4	3.02	My managers sometimes apply rules and regulations capriciously	9	3
57.8	2.89	I feel like I'm being targeted by my bosses at work	10	6

It is clear from the table above that the weighted averages of the items in the field of organizational stress are close in their estimates. However, the item "I feel there are few opportunities to learn skills and acquire new experiences" came in first place in terms of the level of importance or the respondents' approval of it, as it obtained a weighted average of (3.76) points, which is higher than the weighted averages of the other items, and a percentage weight of (75.2) points. This may be due to the weakness of training programmers based on the needs of agricultural employees, which develop their capabilities to keep pace with developments in the agricultural sector, especially agricultural extension work, in addition to the weakness of policies that encourage continuous learning, which leads to restricting the opportunities for agricultural employees to develop their skills.

The items "I feel like I'm being targeted by my bosses at work" ranked last in terms of importance or approval by the respondents, with a weighted mean of 2.89 points, the lowest of the weighted mean scores for the other items, and a percentage weight of 57.8 points. The reason may be due to the agricultural

employees' awareness of the existence of biased behaviors or practices by the extension manager, in addition to the weakness of human relations management in the work environment due to the extension manager not choosing the appropriate communication language.

IV. CONCLUSIONS

Agricultural employees in the Kirkuk Agriculture Directorate suffer from work-related stress, manifested in the form of problems and difficulties they encounter in their professional lives. This stress is one of the primary factors that influence, in one way or another, the performance of agricultural employees in their assigned tasks. Thus, work-related stress results from the interaction of personal, organizational, and administrative sources, and all of these areas impact their performance in providing extension services to their target audience. The results showed that organizational, personal, and administrative pressures constitute stressors of varying intensity, with organizational pressure topping the list of influences. The research provided clear evidence that continued exposure to these pressures can hinder employees' ability to perform their duties efficiently, make sound decisions, maintain innovation, and adhere to quality standards in agricultural services. Therefore, we recommend reconsidering the organizational structure and work mechanisms to ensure clarity of tasks, reduce functional overlap, and train administrative leaders on stress management and employee motivation techniques. Training programs should also be organized on stress and time management, as well as adapting to the work environment.

REFERENCES

- [1] Al- Mashhadani, Mithal Abdul Latif Salman,) 2006(, Building a Model for the Mechanism for Evaluating In-Service Training for Technical Agricultural Extension Staff in Iraq, Unpublished PhD Thesis, College of Agriculture, University of Baghdad.
- [2] Aljubory, K. A., & Al-Hamouli, A. I. (2020). Attitudes of Students of the Faculty of Agriculture Towards Using the Internet in Agricultural Work-A Comparative Study Between Egypt and Iraq. *Plant Archives*, 20(2), 945-965.
- [3] Swanson, B. E., & Rajalahti , R. (2017). Agricultural Extension and Advisory Services: A Global Review. *Food Policy*, 67, 221-230. <https://doi.org/10.1016/j.foodpol.2017.01.002>
- [4] Mohammed, K. A., & Mahmood, E. T. (2022, July). Attitude of Al-Qasimia Village Farmers in Hawija District/Kirkuk Province Toward Cultivation and Consumption White Eggplant. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1060, No. 1, p. 012147). IOP Publishing. <https://iopscience.iop.org/article/10.1088/1755-1315/1060/1/012147>
- [5] Abdul Latif, M., Al- Salhi , A., Kata, Y., & Muhammad, M. (2023). The role of the agricultural extension in educating farmers about the legislation on protecting the environment from pollution with chemical pesticides. *Kirkuk University Journal for Agricultural Sciences* , 14 (1), 218-229. doi : 10.58928/ku23.14118.
- [6] Liu, J., et al. (2016). The impact of training programs on job satisfaction of agricultural extension workers in developing countries. *Journal of Developmental Studies*, 35(2), 98-103. <https://doi.org/10.1016/j.jdsci.2016.07.005>
- [7] Hussein, E. A., & Mohammad, K. A. (2023, April). Diffusion of Agricultural Ideas Through the Website of the Agricultural Extension and Training Department on the Social Networking “YouTube”. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1158, No. 9, p. 092003). IOP Publishing. <https://iopscience.iop.org/article/10.1088/1755-1315/1158/9/092003>
- [8] Kassie, M. (2015). Factors influencing agricultural extension services and their impact on rural development in developing countries. *Agricultural Economics*, 46(3), 120-130. <https://doi.org/10.1016/j.agecon.2015.02.008>

- [9] Al- Jaf , Tahir Muhammad Laiq , (2002), The level of performance of agricultural employees carrying out field extension work in Iraq, Master's thesis, University of Baghdad, Department of Extension and Agricultural Education.
- [10] Al- Maasher, Issa Ibrahim (2019), The Impact of Work Pressure on the Performance of Workers in Five-Star Jordanian Hotels (Field Study), Master's Thesis, Faculty of Financial and Administrative Sciences, Middle East University for Graduate Studies.
- [11] Al- Mufarji , Ikhlas Thaer Mahmoud, (2015), The role of agricultural employees in implementing agricultural extension activities in Kirkuk Agriculture Directorate and its relationship to some variables, Master's thesis, Tikrit University, Department of Economics and Agricultural Extension.
- [12] Al- Salhi, ATH (2020), Extension activities provided to rice farmers raising in the awareness for compost manufacture in al- diwaniyah province, *Iraqi Journal of Agricultural Sciences*, 51(6), pp:1679
- [13] Ahmed, Hafez Farag , (2007), Contemporary Administrative Issues, 2nd ed., Alam Al- Kutub , Cairo.
- [14] Khalil, S., & Mahmoud, M. (2017). The Role of Training and Incentives in Agricultural Extension Workers' Job Satisfaction: A Case Study. *Journal of Agricultural Research*, 52(5), 140-145. <https://doi.org/10.1016/j.jdsci.2017.01.005>
- [15] Youssef, Jumaa Sayed, (2007), Stress Management, Center for Development of Graduate Studies and Research, Cairo University.
- [16] Al- Jadri, AH. (2008), The guide in preparing and writing theses and theses, 1st, Al- Warraq Publishing and Printing, Amman, pp:89
- [17] Bishna, Hanan, and Naim Bouamoucha, (2020), Validity and Reliability in Social Research, *Journal of Human and Social Sciences Studies*, Volume 3, Issue 2.
- [18] Al- Mashhadani, S. S. (2019), scientific research methodology, 1ST ed, Osama Publishing House, Amman, pp:121.
- [19] Layeeq, T., Hama Salih, C., & Shexani, N. (2023). Organizational Obstacles for extension workers and Their Impact on the Effectiveness of Agricultural Extension Management in Sulaymani Governorate - Kurdistan Region- Iraq. *Kirkuk University Journal for Agricultural Sciences*, 14 (4), 188-203. doi : 10.58928/ku23.14417