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OCCUPATIONAL STRESS AMONG EXTENSION RESEARCHERS AT REGIONAL AGRICULTURAL RESEARCH STATIONS IN EGYPT

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ABSTRACT

This study investigates the nature, intensity, and sources of occupational stress among agricultural extension researchers working at regional research stations in Egypt. These professionals operate at the nexus of applied research and rural development, assuming overlapping responsibilities in research, field implementation, capacity building, and policy advising. However, institutional ambiguity, limited resources, and escalating expectations often constrain their working conditions, factors that collectively foster a high-pressure work environment. The study adopts a descriptive analytical approach, targeting a census sample of 73 researchers across three major stations. Data were collected through a structured questionnaire to capture the availability and perceived impact of various stress dimensions: organizational, personal, economic, professional growth, and health-related pressures. Findings reveal that over 90% of participants experience medium to high levels of occupational stress, with significant reported suffering. Economic pressures—particularly the cost of publishing, lack of institutional support for international dissemination, and inadequate research infrastructure—emerged as the most burdensome. Equally critical were stressors related to professional development, such as limited access to quality training and favoritism in participant selection. The results also underscore the cumulative effect of administrative ambiguity, limited autonomy, and weak internal communication as systemic stress inducers. The study concludes that occupational stress among extension researchers is not incidental but structurally embedded in the institutional framework. Addressing these pressures requires a strategic response that includes organizational restructuring, transparent policies for training and promotion, and sustainable investment in research infrastructure. This research contributes to understanding how institutional environments shape occupational well-being and research productivity in developing country contexts.

KEYWORDS: Occupational Stress, Agricultural Extension, Research Productivity, Institutional Constraints, Professional Development, Rural Research Stations, Egypt.

1. INTRODUCTION

Occupational stress can influence the mental health of workers as well as the performance of institutions. Yahaya et al. (2019) point out that it negatively affects an individual's mental state and job performance, which often results in absenteeism and people looking for new jobs. Other studies, such as (Torres et al., 2023; Bui et al., 2021) have revealed that working under excessive pressure, not having control over tasks, and not being clear about one's role can all cause ongoing anxiety, depression, and burnout. In recent years, occupational stress has garnered growing attention in the literature, particularly in the context of rapid organizational and economic transformations that directly impact various work environments.

Contemporary research indicates that occupational stress has become a serious threat to employee well-being and productivity. It adversely affects individuals' psychological states, contributes to reduced job performance and increased absenteeism, and diminishes job satisfaction—culminating, in some extreme cases, in full-blown burnout (Wa'wa, 2018; Katea, 2016; Shteivi, 2022; Al-Faidi, 2023).

In the agricultural context, regional agricultural research stations in Egypt represent a foundational pillar within the agricultural development system. These stations play a critical role in advancing the agricultural sector and achieving food security objectives. They serve as a central link between scientific research and practical application, employing a large number of extension researchers who carry out diverse responsibilities. These include the transfer of modern technologies to the field, provision of technical consultations, evaluation of agricultural projects, capacity building for farmers, and contributing to the formulation of agricultural development policies (Shalaby et al., 2023; Al-Samawi, 2025; Al-Maqal, 2003; Ajlouni, 2025). Still, performing this critical role takes place in a very demanding setting with multiple roles, little access to resources, and numerous authorities. Frequent trips to the field, fast-changing problems, and not having enough resources are constant concerns for extension researchers. In addition, they deal with more paperwork and try to balance what policies say with the needs farmers actually face. These conditions lead to significant psychological and occupational stress, negatively affecting researchers' motivation and performance quality (Baher, 2020; Elsayed et al., 2017; Darwish et al., 2023). Mansour et al. (2022) found high job dissatisfaction among Egypt's agricultural extension workers, with 78.2%

attributing stress to low income, lack of incentives, and being assigned unrelated administrative duties. The study also noted that many researchers lack specialized qualifications in extension work, deepening their sense of inadequacy. This is worsened by a shortage of extension agents relative to the large number of farmers they serve.

What causes occupational stress for extension researchers includes both job matters and the environment. Examples are spending many long hours, not knowing exactly what your role is, having squeezed job descriptions, poor facilities, little or no opportunity for incentives and promotions, not enough training, and poor communication between research and executive teams (Katea, 2016; Al-Khawli, 2019; Indraningsih et al., 2023). Other problems, such as issues related to climate change, money cuts, and poor links between research and policy, make the profession more stressful (Kumar et al., 2022; Khalifa et al., 2022). When the labor market is unstable and professionals rarely get promoted, researchers' job security weakens, and more people leave (Morales & Ventura, 2022). Organizational issues like single decision-making, poor information sharing, and few rewards for hard work are major stress points faced by Egypt's extension workers, who are also not well informed about managing stress, according to Darwish and colleagues (2023).

Similarly, Al-Khawli (2019) found that organizational stress negatively affected extension performance in Sharqia Governorate, particularly where overlapping duties and poor coordination between agricultural agencies existed. These results highlight the pressing need to revisit institutional policies shaping the work environment of extension researchers, who serve as vital conduits between scientific research and field implementation. As key actors in rural development and food security, understanding the sources of their occupational stress is essential not just academically, but strategically. Examining geographic and organizational variations in stress, along with effective coping mechanisms, can guide the creation of supportive frameworks that enhance stability and improve researcher performance.

Research indicates that occupational stress affects both mental health and professional behavior. Yi et al. (2018) noted that employees under high stress often resort to unhealthy habits like smoking and social withdrawal. Similarly, Abbas et al. (2025) found that school principals frequently adopt ineffective coping strategies when facing work pressure. In academic settings, researchers experience stress from publication demands, peer

evaluations, and teaching duties, which reduce self-efficacy and job satisfaction (Mark & Smith, 2010). Economically, stress leads to significant institutional costs due to lower productivity, increased healthcare expenses, and absenteeism (Hassard *et al.*, 2017). These findings highlight the importance of organizational efforts to address and reduce occupational stress.

Modern models, for example the Job Demand-Control Model (Karasek) and the Person-Environment Fit model, suggest that if job demands are too high, a person often doesn't have enough personal control or social support which is recognized as a main cause of occupational stress (Chambel *et al.*, 2020; Ahmad *et al.*, 2021). In Arabic studies, Wa'wa (2018) and Katea (2016) pointed out that stress is related to aspects of a job and the work environment. Coping with stress often relies on which strategies used. Hamza and Danbury (2021), as well as Maresca *et al.* (2022), explained that a supportive environment with effective communication and recognition helps improve adaptability. Naela (2024) claims that using positive coping methods, for example planning, analyzing, and seeking help, can make people more satisfied with their work. This is therefore important for knowing what stressors extension researchers deal with in their work. Besides exploring what causes and effects stress, it also develops real solutions that can be used to manage the unique problems faced by Egypt's agricultural sector.

occupational stressors in the workplace prevent researchers at Egypt's regional agriculture stations from performing well and helping develop the sector. Not enough funding puts strong pressure on them because it precludes participation in applied research, team-up projects and following top international publication guidelines (Bashir *et al.*, 2023; Mohammad *et al.*, 2017). It usually costs more for research to be published in global journals than most institutions can support. The lack of well-structured academic mentoring affects researchers' ability to arrange and carry out studies, mainly because they now have increased duties, tighter deadlines, and more regulations (Abushouk *et al.*, 2016; Shehata & Eldakar, 2018).

The way an institution is run also adds to stress by preventing different groups from cooperating and leaving individuals on their own (Hanafi, 2011). Larger aspects, including political and social stresses, can reduce freedom in academic study and inquiry (Zain-Al-Dien, 2016). Women in research face difficulties in getting promoted, guidance and funds, which leads to more frustration and disappointment

among them (Mousa, 2021). The pandemic also highlighted some weaknesses in institutions, especially their poor digital systems and difficulty doing research remotely (Sadek & Kora, 2020; Obinyan & Tella, 2022). Seeing these stressors helps us identify the causes of research decline and gives us the support needed to suggest ways to boost working environments and research quality in Egypt's agricultural organizations.

1.1. Research Problem

Agricultural research stations in Egypt are mainstays in its system of agriculture research and extension. In these stations, extension researchers handle different responsibilities by doing both research and outreach activities. Their duties also require them to design and carry out extension programs, organize seminars, assist farmers, continue their education at a high level, publish research findings, and apply what they discover in the agricultural field. Although they are essential for promoting changes in farming and supporting farmers, they have to manage these activities under heavy pressure, reduced resources, and weak institutional assistance.

Since their jobs include various types of academic, extension, and societal responsibilities, extension researchers tend to experience a lot of stress at work. The pressure could be caused by the hierarchical system, the pressure to get promoted or challenges that affect the whole society and economy. The study aims to understand the stressors and their effects on research and extension activities. This way, it tries to provide knowledge that supports solutions that better the workplace and help extension researchers promote sustainable agriculture.

1.2. Research Objectives

1. To identify the independent variables of the respondents among extension researchers.
2. To determine the extent to which the respondents experience occupational stress related to the following dimensions: nature of work, extension-related scientific research, personal and social pressures, economic pressures, health-related pressures, and pressures associated with professional development.
3. To assess the degree to which the respondents suffer from the identified occupational stressors.
4. To examine the relationship between the respondents' independent variables—namely age, academic qualification, years of

experience in extension research, monthly income, and achievement motivation and both the degree of occupational stress they experience and the level of suffering associated with it.

5. To explore the respondents’ suggestions for reducing occupational stress among extension researchers working in regional research stations.

1.3. Statistical Hypothesis

There is a statistically significant correlation between the respondents’ independent variables (age, academic qualification, years of experience in extension research, monthly income, and level of achievement motivation) and both the degree of occupational stress they experience and the extent of their suffering from it at regional agricultural research stations.

1.4. Significance of the Study

The main value of this study comes from the fact that it examines extension researchers at Egyptian regional research stations. They link scientific information to the practical actions used in the field. Although exosystems give them a central role and influence in modern farming, they must deal with continual job stress, competing roles, and not having enough resources – all of which can harm their well-being, work performance, and society’s trust in them.

In terms of scientific research, the study shines because it explores occupational stress from all of these dimensions: organizational, research-related, personal, economic, health-related, and developmental. It tries to measure the stressors and understand how these factors relate to people’s demographics, occupations, and mental health. It plays a role in filling a research gap since Arabic studies in the field often lack work on stress among extension researchers. Results from the study can help guide decisions in government and research to find the main causes of stress and provide solutions that increase both the quality of services and the satisfaction of mental health professionals.

Operational Definitions

- Occupational Stress: Refers to the factors present in or surrounding the work environment of extension researchers that affect their research and professional performance.
- Extension Researchers: In this study, this term refers specifically to agricultural extension researchers working in the selected regional agricultural research stations, ranging in rank

from Assistant Researcher to Full-Time Principal Researcher.

2. METHODOLOGY

This study was conducted on all extension researchers holding the positions of Assistant Researcher, Associate Researcher, Researcher, Senior Researcher, Principal Researcher, and Full-Time Principal Researcher at three regional agricultural research stations. These included:

- Sakha Agricultural Research Station (41 extension researchers)
- Sabaheya Agricultural Research Station (25 extension researchers)
- Gemmeiza Agricultural Research Station (7 extension researchers)

Thus, the total sample comprised 73 extension researchers. Field data were collected using a structured questionnaire administered through face-to-face interviews, designed to align with the research objectives. Data collection took place in February 2025.

Table 1: Distribution of Extension Researchers in the Selected Agricultural Research Stations.

No.	Selected Agricultural Research Stations	Number of Respondents	Percentage of Total Sample
1	Sakha Agricultural Research Station	41	56.16%
2	Sabaheya Agricultural Research Station	25	34.25%
3	Gemmeiza Agricultural Research Station	7	9.59%
	Total	73	100%

3. RESULTS

The characteristics of the extension researchers in Table 2 give insight into why certain types of stress might be more common for their jobs. Forty-three-point eight percent (43.8) belongs to middle-aged people (ages 41–54), more than thirty-eight and four (38.4) who are older than fifty-five and only seventeen and eight (17.8) in the youngest age group. From this, it appears that most attendees have considerable expertise. As mentioned by Darwish et al. (2023), although experience promotes competence in the field, it may increase stress because both expectations and a feeling of being undervalued by the institution can rise.

The majority of participants report having between 18 and 30 years in research (64.4%), suggesting these are mid-career professionals facing pressure every day to continue researching, getting promoted, and publishing regularly. There are several academic ranks, and 19.2% of the group are

called principal researchers. Having different roles in healthcare organizations is important because stress levels can vary widely. According to their income, most adults (50.7%) have low wages, and only 16.4% earn a high amount. Bashir et al. (2023) suggest that the major burden is financial, emphasizing that a limited budget can lead researchers to engage less in their work, which contributes to workplace stress. Concerning their place of residence, most personnel (57.5%) stay in the same governorate as their duty post, while one-fifth commute from other areas,

which may increase stress from transport costs and lack of incentives, Mohammad et al. (2017) reported. Finally, the results for achievement motivation and ambition revealed high percentages among the respondents, with 82.2 percent and 84.9 percent, respectively. These findings reflect a strong intrinsic drive for success and advancement, even in the face of ongoing stress. However, this internal drive could itself become a source of pressure if not supported by adequate organizational structures, as highlighted by Shehata and Eldakar (2018).

Table 2: Distribution of Respondents According to Their Personal and Demographic Variables.

Variable	Category	F	%	Variable	Category	F	%	
Age	Low (27-40 years)	13	17.8%	Years of Experience	Low (5-17 years)	17	23.3%	
	Medium (41-54 years)	32	43.8%		Medium (18-30 years)	47	64.4%	
	High (55 years and above)	28	38.4%		High (31 years and above)	9	12.3%	
	Total	73	100%		Total	73	100%	
Academic Rank	Assistant Researcher	6	8.2%	Monthly Income	Low (7,000-11,333 EGP)	37	50.7%	
	Associate Researcher	14	19.2%		Medium (11,334-15,667 EGP)	24	32.9%	
	Researcher	13	17.8%		High (15,668-20,000 EGP)	12	16.4%	
	Senior Researcher	16	21.9%		Total	73	100%	
	Principal Researcher	10	13.7%	Place of Residence	Same station location	18	24.7%	
	Full-Time Principal Researcher	14	19.2%		Same governorate	42	57.5%	
	Total	73	100%		Different governorate	13	17.8%	
Gender	Male	49	67.1%	Achievement Motivation		Total	73	100%
	Female	24	32.9%		Low (7-13 points)	0	0%	
	Total	73	100%		Medium (14-20 points)	13	17.8%	
Marital Status	Married	63	86.3%		High (21 points and above)	60	82.2%	
	Single	5	6.8%		Total	73	100%	
Family	Divorced	2	2.7%	Level of Ambition	Low (10-16 points)	0	0%	
	Widowed	3	4.1%		Medium (17-23 points)	11	15.1%	
	Total	73	100%		High (24-30 points)	62	84.9%	
Family	Low (0-2 members)	9	12.3%		Total	73	100%	
	Medium (3-4 members)	27	37.0%					
	High (5 members or more)	37	50.7%					
	Total	73	100%					

3.2. Degree of Achievement Motivation

The results presented in Table 3 indicate that extension researchers possess a high level of achievement motivation (overall mean = 3.30), reflecting professional commitment and personal engagement in task performance. This is particularly evident in statements that express focus and determination to complete tasks even outside official working hours. These findings align with what Abushouk et al. (2016) and Shehata and Eldakar (2018) emphasized regarding the connection between intrinsic motivation and organizational commitment.

However, the presence of moderate levels in statements related to aspirations for promotion or reluctance to take on leadership responsibilities may suggest the influence of institutional pressures and insufficient incentives, as noted by Mansour et al. (2022). Additionally, the low mean score for the statement "I only do the work to avoid accountability" (1.70) indicates that most respondents are not driven by fear of punishment but rather by intrinsic awareness of their role. This finding is consistent with Bashir et al. (2023), who highlighted the impact of positive motivation in high-pressure work environments. These results

suggest a strong internal drive among researchers; however, the actual investment of this motivation

remains dependent on the institution's ability to provide a stable and encouraging environment.

Table 3: Distribution of Respondents According to Their Level of Achievement Motivation.

No.	Statement	Always	Sometimes	Rarely	Never	Weighted Mean	Rank
1	I work with intense focus when performing assigned tasks.	66	7	0	0	3.90	1
2	I do not enjoy extension tasks that involve high responsibility.	41	10	19	3	3.22	7
3	When I face a problem at work, I delegate the task to someone else.	49	19	5	0	3.60	5
4	When assigned a task, I remain preoccupied with it even outside work hours until it is completed.	54	17	2	0	3.71	3
5	I do not concern myself much with advancing in my extension research career.	38	14	13	8	3.12	8
6	It is essential to be prepared to perform tasks in order to achieve goals.	64	6	1	2	3.81	2
7	I perform only the required amount of work to avoid being held accountable.	11	0	18	44	1.70	4
	Overall Mean					3.30	

3.3. Professional Ambition

Table 4 finds that extension researchers are very ambitious, as their weighted mean score is 2.65 out of 3. This implies that they are very dedicated to their research and extension roles and desire to help improve farming. Responses such as “I wish to publish studies that improve the lives of farmers” and “I work towards being the best by focusing on both quality and new ideas” got the highest ratings, clearly showing the importance of practical work.

However, items concerning academic recognition and making international connections had lower scores, which might be because of the few incentives given by institutions as well as limited access to external networks – this finding is in line with what Bashir et al. (2023) and Shehata and Eldakar (2018) suggested. It appears from these results that researchers are mainly interested in making a positive impact, which suggests that institutions must support efforts that advance knowledge and benefit society.

Table 4: Distribution of Respondents According to Their Level of Professional Ambition.

No.	Statement	Always	Sometimes	Rarely	Weighted Mean	Rank
1	I strive to achieve scientific accomplishments that contribute to the development of agricultural extension.	61	12	0	2.84	3
2	I aspire to publish extension research with a positive impact on farmers and the community.	69	4	0	2.95	1
3	I continuously work on developing my research skills to achieve my professional goals.	58	15	0	2.79	4
4	I wish to become a scientific reference in the field of agricultural extension.	51	22	0	2.70	5
5	I seek opportunities to participate in local and international conferences and seminars to enhance my expertise.	41	31	1	2.55	7
6	I aim to apply the results of my research to improve agricultural productivity.	47	15	11	2.49	8
7	I aspire to provide innovative solutions to the challenges facing the agricultural sector.	51	20	2	2.67	6
8	I work on building a network of scientific relationships with local and international researchers.	35	33	5	2.41	9
9	I aim for excellence in my research and extension work through commitment to quality and innovation.	64	8	1	2.86	2
10	I look forward to receiving awards or scientific recognition for my research efforts.	32	27	14	2.25	10
	Overall Weighted Mean				2.65	

3.4 Level of Occupational Stress and Researchers' Suffering

The results presented in Table 5 reveal a concerning picture of the occupational stress

experienced by extension researchers at regional agricultural research stations in Egypt. The data indicate that more than one-third of the sample (32.9%) suffer from a high level of occupational

stress, while over half (54.8%) experience a moderate level. Only 12.3% reported a low level of stress. These findings closely align with the data on the degree of suffering from this stress, where 38.4% reported a high degree of suffering, and 54.8% reported a moderate degree. This means that more than 90% of the sample operate in a pressure-laden environment to varying degrees.

It points out that occupational stress for extension researchers is not just a personal or situational concern, but it stems from the way institutions are organized, which holds back research and extension work. Darwish *et al.* (2023) similarly noted that in Egypt, the high rate of overlapping tasks, poor infrastructure, and lack of institutional backing increase the stress since it is now an issue for one's professional, mental, and social health.

Shehata and Eldakar (2018) discovered that experiencing a lot of occupational stress in

agricultural research over time causes people to burn out and feel less motivated, especially if they do not receive promotions or recognition. In their paper, Bashir and colleagues (2023) found that the three main sources of stress here are limited workplace resources, not being valued, and being given repeated tasks outside one's expertise. They also highlight issues with how institutions are ready to address occupational stress as a significant risk to both employees and the organization. Yahaya *et al.* (2019) pointed out that constant workplace stress may weaken each employee's commitment, encourage taking more time off, and decrease the organization's efficiency over time. The high levels of stress noted in this study mean that the job roles and system structure are out of balance, so it's necessary to introduce changes such as redistributing duties, building infrastructure and creating flexible support, to accord with modern workforce standards.

Table 5: Overall Level of Occupational Stress and Suffering among Respondents.

Overall Occupational Stress Level	Frequency	Percentage (%)	Overall Suffering Level	Frequency	Percentage (%)
Low (70–97 points)	9	12.3	Low (61–88 points)	5	6.8
Moderate (98–125 points)	40	54.8	Moderate (89–116 points)	40	54.8
High (126 points and above)	24	32.9	High (126–144 points)	28	38.4
Total	73	100	Total	73	100

3.6. Occupational Stress Related to the Nature of Work

Table 6 presents a diagnostic analysis of occupational stressors related to the nature of work among extension researchers at regional agricultural research stations in Egypt. The overall weighted mean for the prevalence of stress was 1.56, while the corresponding mean for the level of suffering was 1.47. This close alignment suggests that these stressors are not incidental or transient but rather structurally embedded within the daily professional environment, producing enduring functional and psychological implications.

The highest-ranked source of stress was the limited availability of extension tools and equipment at the research stations, with a mean of 2.01 for prevalence and 1.82 for associated suffering. This finding underscores a persistent infrastructure deficit that continues to hinder both extension and research functions. Similar conclusions were drawn by Bashir *et al.* (2023) and Obinyan and Tella (2022), who emphasized that inadequate technical resources in underfunded institutions serve as a major driver of occupational stress and a contributor to diminished staff morale. Institutional dysfunction also emerged

as a key concern. The statement concerning the selection of committee members based on personal connections rather than professional competence ranked second in terms of reported suffering (1.88), indicating weakened governance structures and a lack of procedural equity. This aligns with the findings of Mousa (2021), who linked institutional non-transparency to heightened occupational tension and declining organizational commitment.

Moderate levels of stress were reported about issues such as task overload, lack of managerial recognition for extension work, and rigidity in task performance, with suffering scores ranging between 1.49 and 1.62. These stressors are largely organizational, stemming from role ambiguity and poorly defined job responsibilities. This observation is supported by Shehata and Eldakar (2018), who argued that persistent role uncertainty exacerbates professional fatigue and gradually undermines job performance. Interestingly, stressors related to interpersonal dynamics, such as insufficient peer collaboration and perceived unfairness in task distribution, received relatively lower scores. This may reflect a degree of professional normalization or adaptive coping, though these issues remain relevant and warrant targeted institutional responses.

Results indicate that stress at work is caused by issues with work itself and the environment surrounding it. Inadequate infrastructure and problems with logistics are the main material stressors, whereas weak governance and giving the wrong people the wrong roles are the main structural stressors. As a result of these insights, it is now obvious that major changes in institutions are needed to ensure fair resource allocation, better transparency, and responsible management and accountability. Enforcing these reforms supports better mental health and increases performance among workers in agricultural extension.

3.7. Occupational Stress Associated with Scientific Research Practice

Table 7 gives details about the stress factors affecting extension researchers in the course of their scientific research. Both the frequency of stressors (weighted mean of 2.10) and their level of impact (mean of 1.97) are relatively high. The statistics point to the major difficulties researchers encounter both during fieldwork and while working within regional agencies.

Not having enough international scholarships for agricultural extension research was ranked as the

main cause of stress and it had an occurrence of 2.63 and suffering of 2.42. This also highlights a problem with institutions, as Bashir et al. (2023) mentioned that less money from outside leaves researchers with weakened international presence and a limited number of studies. The next biggest cause of stress, with a mean score of 2.45, was when decision-makers failed to use the results of research. It demonstrates that there is a gap between research and how it is used in policymaking which was also marked by Obinyan and Tella (2022) as a big source of frustration for many professionals. Moreover, accessing participants for research purposes (2.30), gathering reliable data (2.00) and not having a main database (2.12) were structural stress factors. Such difficulties underline a thin and unstable system for support and knowledge which slows down research development, as indicated by Shehata and Eldakar (2018).

Though inadequate information sharing among colleagues (1.82) and updated statistical resources (1.90) were not given as high a score, they are still a sign that scientific collaboration could be better. According to Yahaya and colleagues (2019), having good support from peers helps reduce stress and makes research better.

Table 6: Distribution of Respondents According to the Level of Occupational Stress Related to the Nature of Work and the Degree of Suffering.

No.	Statements	Stress Availability (High / Medium / Low)	Weighted Mean	Rank	Degree of Suffering (High / Medium / Low)	Weighted Mean	Rank
1	The multiplicity of tasks required during work	15 / 37 / 21	1.92	3	6 / 33 / 34	1.62	3
2	Lack of managerial appreciation for the extension work I perform	16 / 14 / 43	1.63	4	12 / 15 / 46	1.53	4
3	Lack of understanding and cooperation among colleagues to complete required tasks	3 / 24 / 46	1.41	10	6 / 21 / 46	1.45	6
4	Conflict and competition among researchers over incentives, promotions, and job requirements	12 / 18 / 43	1.58	5	8 / 15 / 50	1.42	8
5	Lack of flexibility in performing assigned extension work	7 / 21 / 45	1.48	8	8 / 20 / 45	1.49	5
6	Lack of fairness in distributing extension tasks among colleagues	6 / 22 / 45	1.47	9	7 / 18 / 48	1.44	7
7	Selection of committee members based on personal relationships rather than competence	21 / 29 / 23	1.97	2	20 / 24 / 29	1.88	1
8	Lack of available equipment and extension tools at the research station	25 / 24 / 24	2.01	1	20 / 20 / 33	1.82	2
Overall Weighted Mean			1.56			1.47	

Overall, the outcomes highlight many pressures for researchers—for example, not having enough funds, problems with handling administration, access to research locations, and low levels of

knowledge resources.

Fixing these issues needs significant policy adjustments in research: increased worldwide funding, combined research databases and delivery

of research results to policies and actions in agriculture.

Table 7: Distribution of Respondents According to the Level of Occupational Stress Related to Scientific Research Practice and the Degree of Suffering.

No.	Statements	Stress Availability (High/Medium/Low)	Weighted Mean	Rank	Degree of Suffering (High/Medium/Low)	Weighted Mean	Rank
1	Inconsistency of statistical data related to extension research	19 / 33 / 21	1.97	6	15 / 36 / 22	1.90	6
2	Lack of cooperation among colleagues in sharing research information	13 / 36 / 24	1.85	7	15 / 30 / 28	1.82	7
3	Difficulty in accessing research participants	34 / 28 / 11	2.32	3	34 / 27 / 12	2.30	3
4	Difficulty in obtaining accurate statistical data	23 / 31 / 19	2.05	5	24 / 25 / 24	2.00	5
5	Failure of decision-makers to implement research findings	48 / 18 / 7	2.56	2	43 / 20 / 10	2.45	1
6	Lack of international scholarships for extension research	52 / 15 / 6	2.63	1	43 / 18 / 12	2.42	2
7	Absence of a database for extension research	26 / 32 / 15	2.15	4	28 / 26 / 19	2.12	4

3.8. Personal and Social Stress Among Extension Researchers

Table 8 presents a quantitative representation of the personal and social stressors experienced by extension researchers at regional agricultural research stations. The overall weighted mean for the availability of these stressors was 1.71, while the mean for the associated suffering was 1.61. Although these levels are relatively lower than those observed for organizational or economic stress, they remain significant and impact the quality of work life and the balance between professional and family responsibilities.

The statement "Management does not adopt a participatory approach or promote teamwork" ranked highest in terms of suffering (1.90), indicating a deficiency in institutional leadership practices and a decline in collaborative leadership styles. This observation matches what Yahaya et al. (2019) observed: a lack of collaboration at work leads to feelings of isolation and lower levels of engagement among employees.

The statement "I feel discomfort when colleagues do not cooperate with me" indicates that interpersonal interactions are a primary source of

informal stress for workers, which is reflected in a mean suffering score of 1.82. This is in line with Wataya et al, (2025) who pointed out how poor relationships at work can cause chronic stress, especially in jobs that require frequent social interaction.

A rating of 1.71 indicates that employees may find it difficult to develop trust and to be critical of others. Furthermore, the responses for "I am not able to do all that is asked of me at work" (1.53) and "Work increases my absence from family events" (1.48) were low which may mean either individuals adapt to working conditions or think work-related sacrifices are simply a part of everyday life. Overall, the data show that stress at work for extension researchers primarily arises from the internal workplace culture, their personal and professional relationships, and challenges in balancing work with home life. The research stresses the need for psychological and professional systems that help people work together, respect each other, and look after their feelings. To handle this area of stress, it is important to create stronger teamwork, increase cohesion within teams and support leaders in using leadership approaches that are inclusive and supportive.

Table 8: Distribution of Respondents According to the Level of Personal and Social Occupational Stress and the Degree of Suffering.

No.	Statements	Stress Availability (High/Medium/Low)	Weighted Mean	Rank	Degree of Suffering (High/Medium/Low)	Weighted Mean	Rank
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1	Management does not adopt a participatory approach or promote teamwork	23 / 26 / 24	1.99	2	22 / 22 / 29	1.90	1
2	Long working hours affect my ability to follow up with my children's studies	7 / 31 / 35	1.62	8	11 / 26 / 36	1.66	4
3	I am criticized when pointing out colleagues' mistakes	15 / 20 / 38	1.68	6	18 / 16 / 39	1.71	3
4	Work conditions do not allow me to complete all required tasks	10 / 24 / 39	1.60	9	10 / 19 / 44	1.53	6
5	I feel discomfort when colleagues do not cooperate with me	23 / 27 / 23	2.00	1	18 / 24 / 31	1.82	2
6	I find it difficult to react appropriately when facing problems at work	12 / 27 / 34	1.70	5	5 / 32 / 36	1.58	5
7	Work pressure affects my participation in family events	17 / 13 / 43	1.64	7	8 / 19 / 46	1.48	7
	Overall Weighted Mean		1.71			1.61	

3.9. Economic Stress among Extension Researchers

Table 9 highlights the significant weight of economic stressors in the work environment of extension researchers at agricultural research stations. The overall weighted mean for the availability of such stressors was 2.36, while the mean level of associated suffering was 2.22. These are among the highest recorded means across the various stress dimensions, indicating a direct and persistent impact on performance and professional well-being.

The statement "The high cost of publishing extension research" ranked first in both availability (2.84) and suffering (2.63), reflecting a genuine financial burden that limits researchers' ability to publish and engage in the scientific community. This issue is particularly pressing in the absence of supportive funding policies. These findings are consistent with Bashir et al. (2023), who noted that publication costs are among the most critical stress factors for researchers in developing countries, especially with the growing emphasis on international publishing and institutional performance evaluations. Closely following was the statement "Lack of financial support for international publication," which ranked second in terms of suffering (2.62). This result points to a clear disconnect between the strategic goals of agricultural research institutions and their operational support

systems. Obinyan and Tella (2022) emphasized that the absence of such support erodes researchers' intrinsic motivation, fosters a sense of research isolation, and hinders global academic competitiveness.

Financial difficulties are clear in responses such as "High pricing at scientific conferences" (2.30), "Research resources are not available" (2.26), and "Postgraduate education is costly" (2.23). As seen from the survey, the financial plan for researchers is not effective in promoting sustainable careers, which agrees with Shehata and Eldakar (2018), who argued that poorly managed finances in research institutions inhibit growth and creativity.

Notwithstanding their slightly lower scores in this survey, both "Inadequate salary relative to workload" (2.05) and "Insufficient bonuses" (2.21) are still common reasons for disappointment and a feeling of being undervalued. This agrees with Mousa (2021), who related these financial stresses to higher rates of burnout and employees wanting to quit. All of this suggests that money-related worries are not peripheral but rather a critical structural factor slowing both career advancement and research achievements. To solve this, wide institutional changes are needed, such as better financing for scientific articles, lowering costs for further studies, and adopting a flexible policy on research budgets, as a main plan to stimulate research in agriculture.

Table 9: Distribution of Respondents According to the Level of Economic Stress and the Degree of Suffering.

No.	Statements	Stress Availability (High/Medium/Low)	Weighted Mean	Rank	Degree of Suffering	Weighted Mean	Rank
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					(High/ Medium / Low)		
1	The salary does not match the amount of work I do	32 / 21 / 20	2.16	8	28 / 21 / 24	2.05	8
2	The cost of publishing extension research is high	64 / 6 / 3	2.84	1	54 / 11 / 8	2.63	1
3	I feel dissatisfied with the small amount of bonuses I receive	35 / 24 / 14	2.29	6	30 / 28 / 15	2.21	7
4	I am unable to meet both family and research financial needs	32 / 26 / 15	2.23	7	31 / 27 / 15	2.22	6
5	The cost of postgraduate registration is high	46 / 16 / 11	2.48	5	38 / 14 / 21	2.23	5
6	The cost of attending extension-related scientific conferences is high	45 / 22 / 6	2.53	4	34 / 27 / 12	2.30	3
7	No financial support is provided for publishing extension research internationally	61 / 8 / 4	2.78	2	53 / 12 / 8	2.62	2
8	Lack of material and logistical resources for conducting extension research projects	50 / 13 / 10	2.55	3	34 / 24 / 15	2.26	4
	Overall Weighted Mean		2.36			2.22	

3.10. Health-Related Occupational Stress among Extension Researchers

Table 10 highlights the health dimension as one of the most concerning aspects of occupational stress faced by extension researchers working in regional agricultural research stations. The overall weighted mean for the availability of health-related stressors was 1.97, while the corresponding mean for the level of suffering was 1.90. These figures reflect a clear intersection between physical and psychological stress, and underscore the direct impact of such pressures on job quality and mental well-being in this vital sector. The statement "Illness of a family member affects my job performance" ranked first in terms of suffering (2.15), indicating the emotional and social extension of health-related stress, particularly concerning the balance between personal and professional responsibilities. This supports the findings of Yahaya *et al.* (2019), who emphasized that family-related stress amplifies the effects of occupational pressure, especially among individuals who juggle dual roles within and outside the institution. Direct stressors stemming from the work environment also emerged prominently. The statement "Commuting fatigue to the research station" recorded the second-highest mean for

suffering (1.97), followed by "Long working hours affect my mental state" (1.84). These results point to persistent temporal and spatial stressors that negatively affect mental health and reduce researchers' energy, focus, and capacity for sustained performance, as also noted by Diehl *et al.* (2021). Other items addressed the biological impact of stress, including "Work pressure may cause conditions like hypertension and diabetes" (1.85) and "Continuous tensions in the workplace cause psychological stress" (1.81). These findings highlight that the consequences of occupational stress are not limited to emotional fatigue but may extend to serious physical health risks. This underscores the need to prioritize occupational health as an institutional responsibility on par with performance and productivity.

Taken together, the results indicate that the agricultural extension environment generates a wide range of health-related stressors. Addressing these issues requires more than conventional professional support mechanisms. There is a clear need for effective preventive healthcare programs, improved transportation conditions, and rational regulation of work hours. Such measures are essential to ensure the long-term physical and psychological sustainability of the workforce in this critical sector.

Table 10: Distribution of Respondents According to the Level of Health-Related Occupational Stress and the Degree of Suffering.

No.	Statements	Stress Availability (High/ Medium/ Low)	Weighted Mean	Rank	Degree of Suffering (High/ Medium/ Low)	Weighted Mean	Rank
1	Long working hours affect my mental state	19 / 32 / 22	1.96	3	16 / 29 / 28	1.84	4
2	Work-related stress may cause hypertension and diabetes	20 / 28 / 25	1.93	4	17 / 28 / 28	1.85	3
3	Frequent workplace tensions cause me psychological stress	15 / 32 / 26	1.85	5	17 / 25 / 31	1.81	5
4	Illness of a family member affects my job performance	34 / 18 / 21	2.18	1	33 / 18 / 22	2.15	1
5	Commuting to the research station causes physical fatigue	31 / 19 / 23	2.11	2	22 / 27 / 24	1.97	2
	Overall Weighted Mean		1.97			1.90	

3.11. Occupational Stress Related to Professional Development among Extension Researchers

Table 11 highlights the structural and procedural constraints that limit professional development opportunities for agricultural extension researchers. The overall weighted mean for the availability of such stressors was 2.02, while the corresponding mean for the degree of suffering was 1.96. These values reflect both a heightened awareness of professional development challenges and a tangible psychological and functional impact within the institutional framework.

The statement "Lack of internet access at the workplace to support extension research skills" ranked highest in both availability (2.58) and suffering (2.55), indicating a significant digital gap that hampers self-directed learning, reduces research efficiency, and isolates researchers from global academic engagement. This is consistent with the findings of Al-Malki and Abdulaziz (2022), who emphasized that weak digital infrastructure is a major barrier to independent professional advancement, particularly in resource-constrained research institutions. Closely following was the statement "Poor quality of available training programs for extension researchers," with a suffering mean of 1.92. This points to a gap in the quality of training interventions and a lack of alignment between the practical needs of researchers and the

content of offered programs. This finding echoes Shehata and Eldakar (2018), who noted that inadequate linkage between training content and job demands leads to learning frustration and erodes trust in professional development mechanisms.

Institutional inequities also emerged, especially in the item regarding "Selection of trainees based on personal relationships." The relatively high suffering score (1.81) associated with this item reinforces concerns about transparency and suggests a climate of exclusion and professional stagnation. Similarly, the statement "Difficulty allocating time for self-directed professional development" (suffering mean: 1.74) reflects how daily work burdens leave little room for continuous learning, thus limiting opportunities for skill renewal and readiness in a rapidly evolving extension landscape.

Taken together, these findings indicate that stress related to professional development among extension researchers is not solely a consequence of resource scarcity. Rather, it stems from structural challenges related to organization, access, and content quality. Addressing these challenges requires a comprehensive strategic restructuring that includes enhancing digital infrastructure, improving the quality and relevance of training programs, and ensuring equitable access to capacity-building opportunities within a transparent and efficient institutional framework.

Table 11: Distribution of Respondents According to the Level of Occupational Stress Related to Professional Development and the Degree of Suffering.

No.	Statements	Stress Availability (High/ Medium/ Low)	Weighted Mean	Rank	Degree of Suffering (High/ Medium/ Low)	Weighted Mean	Rank
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					Medium/ Low)		
1	Limited training courses for developing extension research skills	22 / 23 / 28	1.92	4	18 / 27 / 28	1.86	4
2	High cost of professional development training programs	24 / 21 / 28	1.95	3	21 / 22 / 30	1.88	3
3	Selection of trainees based on personal connections rather than merit	25 / 17 / 31	1.92	4	21 / 17 / 35	1.81	5
4	Difficulty in allocating time for self-directed professional development	12 / 31 / 30	1.75	5	10 / 34 / 29	1.74	6
5	Poor quality of available training content for extension researchers	19 / 34 / 20	1.99	2	17 / 33 / 23	1.92	2
6	Lack of internet access at the workplace to support extension research activities	51 / 13 / 9	2.58	1	51 / 11 / 11	2.55	1
	Overall Weighted Mean		2.02			1.96	

3.12. Analysis of the Relationship between Independent Variables and Occupational Stress

The results of Pearson correlation analysis revealed statistically significant negative relationships between several personal and professional characteristics of the respondents and both the degree of occupational stress and the level of suffering from it in regional agricultural research stations.

The strongest correlation was observed with the variable of achievement motivation, where the correlation coefficient with stress availability was $r = -0.70$, $p < 0.01$, and with the level of suffering was $r = -0.58$, $p < 0.01$. These findings suggest that researchers with higher levels of intrinsic motivation are better able to regulate their professional behavior and cope with daily challenges, which reduces both their perception of and vulnerability to stress. This aligns with the principles of Self-Determination Theory, which posits that autonomous motivation enhances psychological resilience and adaptability in the face of pressure. The result is also supported by the findings of Yahaya *et al.* (2019) and Mousa (2021).

A moderate negative relationship was also identified between monthly income and both the availability of stressors ($r = -0.64$, $p < 0.01$) and the level of suffering ($r = -0.55$, $p < 0.01$), indicating that financial security plays a key role in mitigating occupational stress. This is particularly relevant in light of the frequent complaints reported in the study regarding high publishing and conference costs and the lack of sufficient financial incentives.

Similarly, years of experience in extension research were negatively correlated with both stress availability and suffering ($r = -0.44$ for both),

suggesting that accumulated knowledge and skills enable researchers to develop effective coping strategies and reduce the impact of both organizational and psychological stress. This pattern supports the conclusions of Shehata and Eldakar (2018), who emphasized the role of professional experience in enhancing stress management. In contrast, the variables of age and academic qualification showed weak, non-significant negative correlations, indicating that these demographic characteristics are not primary determinants of occupational stress. Their influence may be moderated by more immediate organizational or psychological factors.

Taken together, these results indicate that understanding occupational stress among researchers cannot rely solely on demographic indicators. Rather, it requires the integration of psychological and professional dimensions—particularly motivation, income, and experience—into the analysis of the work context. These findings highlight the need for comprehensive institutional interventions that account for these variables in order to promote occupational well-being and enhance scientific productivity.

Table 12: Correlation between Independent Variables and Both the Availability of Occupational Stressors and the Degree of Suffering.

Independent Variable	Correlation with Stress Availability	Correlation with Degree of Suffering
Age	-0.14	-0.19
Academic Qualification	-0.12	-0.18
Years of Experience	-0.44	-0.44
Monthly Income	-0.64 **	-0.55 **

Achievement Motivation	-0.70 **	-0.58 **
Note: Correlation coefficients marked with ** indicate statistical significance at the 0.01 level (2-tailed).		

3.13. Respondents' Suggestions for Reducing Occupational Stress

The ideas in Table 13 reflect the sensible thoughts of agricultural extension researchers about reforming institutions to help reduce work-related stress faced by staff at regional research stations. Out of the proposals, more people (83.6%) endorsed giving scholars additional funds to support publication and training. This is likewise noted by Bashir et al. (2023), who argue that proper funding is important to reduce stress for professionals and to allow researchers in less wealthy regions to connect with universities worldwide.

Close behind in importance, 80.8% suggested making sure workplaces are suitable and that essential tools are accessible. According to Obinyan and Tella's findings (2022), infrastructure plays a role in increasing stress and affecting how successful research can be. Many participants (76.7%) considered it important that projects are shared out honestly and straightforwardly. This matches Karasek's model, which shows that stress rises when the demands of a role are higher than a person's control over them.

It was also brought up by researchers that too many administrative tasks and bias in who gets training can be problems. Also, 54.8% emphasized that it was important to have equal opportunities in advancement and to honor work-related achievements. As Al-Khawli's study (2019) indicates, perceptions of organizational injustice tend to weaken both morale and satisfaction with the job.

Almost half of the respondents saw a need for workplace psychology support, because dealing with occupational stress calls for addressing both workplace factors and emotional states. Yahaya et al. (2019) found that ongoing stress decreases employees' commitment and their involvement in the organization.

All things considered, such suggestions highlight the significance of reforms that stress fairness, empowerment, and support within institutions. They need to go above just enhancing tools and resources to help maintain the career value, mental health, and long-term stability of extension staff in agriculture.

Table 13: Respondents' Suggestions for Reducing Occupational Stress Among Extension Researchers at Regional Research Stations.

No.	Suggestion	Frequency	%	Rank
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1	Increase financial support for extension researchers, particularly for publication and training.	61	83.6%	1
2	Improve the work environment through the provision of extension equipment and tools.	59	80.8%	2
3	Reassess the task distribution system to ensure fairness and transparency.	56	76.7%	3
4	Provide regular, specialized training opportunities that meet researchers' needs.	53	72.6%	4
5	Reduce non-specialized administrative burdens that hinder research productivity.	52	71.2%	5
6	Establish financial and moral incentive systems to motivate researchers and improve job satisfaction.	49	67.1%	6
7	Improve coordination between research stations and implementation agencies.	46	63.0%	7
8	Activate psychological and professional support systems to help researchers cope with stress.	42	57.5%	8
9	Ensure real opportunities for promotion based on clear and objective criteria.	40	54.8%	9
10	Develop digital infrastructure and provide internet and electronic resources at the stations.	37	50.7%	10

4. RESEARCH DELIMITATIONS

This study was conducted within a set of delimitations designed to ensure methodological coherence and maintain a focused research scope, while acknowledging the constraints of practical applicability. Although these delimitations enhanced the internal accuracy of the findings, they may also affect the generalizability of the results, as follows:

1. **Geographical Delimitation** The scope of the study was limited to regional agricultural research stations in the Arab Republic of Egypt. This provided a realistic setting for analyzing occupational stress among extension researchers. However, the findings may not be directly generalizable to other research institutions with differing administrative structures, resource levels, or institutional policies.
2. **Temporal Delimitation** Data were collected during the academic year 2024–2025. Future changes in administrative policies, economic conditions, or national agricultural research priorities may influence the nature or intensity of occupational stress over time.
3. **Topical Delimitation** The study focused on six specific dimensions of occupational stress: nature of work, scientific research, social stress,

economic stress, health-related stress, and professional development. Other possible stressors, such as environmental, legal, or policy-related pressures, were not examined.

4. **Instrumental Delimitation** The study relied primarily on a closed-ended questionnaire for data collection. While this tool ensured consistency in responses and facilitated statistical analysis, it may have limited the depth of insight and introduced potential biases related to self-reporting or social desirability.

5. RECOMMENDATIONS

1. Enhance research and extension infrastructure to ensure adequate access to essential tools and digital resources.
2. Adopt comprehensive and equitable professional training policies that address the evolving needs of extension researchers.
3. Strengthen internal and external support for scientific publishing, including financial subsidies and institutional encouragement.
4. Restructure task distribution and administrative supervision systems to promote transparency and fairness.
5. Foster a collaborative work environment and participatory leadership practices that enhance team cohesion and motivation.
6. Activate psychological and social support mechanisms within research institutions to mitigate the effects of chronic stress.
7. Align research outputs with agricultural development policies, ensuring the effective integration of scientific findings into decision-making processes.

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REFERENCES

- Abbas, Q. E., Zulfikar, A., Gavrishyk, E., & Gilani, N. (2025). Navigating Leadership Challenges: Stress and Coping Strategies Among Secondary School Principals. *The Knowledge*, 4(1), 37–47. <https://doi.org/10.63062/tk/2k25a.41030>
- Abushouk, A. I., Hatata, A. N., Omran, I. M., Youniss, M. M., Elmansy, K. F., & Meawad, A. G. (2016). Attitudes and Perceived Barriers Among Medical Students Towards Clinical Research: A Cross-Sectional Study in an Egyptian Medical School. *Journal of Biomedical Education*, 2016, 1–7. <https://doi.org/10.1155/2016/5490575>
- Ahmad, J., Zahid, S., Wahid, F. F., & Ali, S. (2021). Impact of Role Conflict and Role Ambiguity on Job Satisfaction: The Mediating Effect of Job Stress and Moderating Effect of Islamic Work Ethics. *European Journal of Business Management and Research*, 6(4), 41–50. <https://doi.org/10.24018/ejbmr.2021.6.4.895>
- Ajlouni, B. A. (2025). The Educational Cycle in Developing Advanced Skills So That Students Can Achieve the Sustainable Development Goals. *Middle East Journal of Educational and Psychological Sciences*, 5(1), 213–189. <https://doi.org/10.56961/mejeps.v5i1.895>
- Al-Faidi, D. F. A. (2023). Occupational Stress and Its Relationship to Decision-Making Among a Sample of Female Police Officers in Benghazi. *Al-Manara Scientific Journal*, 5, 181–194. <https://doi.org/10.37376/asj.vi5.4126>
- Al-Khawli, M. (2019). Path Analysis of the Impact of Organizational Pressures on Extension Workers' Performance in Sharqia Governorate. *Zagazig Journal of Agricultural Research*, 46(5), 1675–1706. <https://doi.org/10.21608/zjar.2019.48184>

- Al-Maqal, N. A. B. E. (2003). Sustainable Agricultural Development and Agricultural Extension in the Gulf Cooperation Council Countries: Prospective Roles. *Journal of Gulf and Arabian Peninsula Studies*, 29(111). <https://doi.org/10.34120/jgaps.v29i111.1637>
- Al-Samawi, A. A. A. A. (2025). The Awareness of Some Yemeni Extension Workers of the Importance of Agricultural Extension Work Areas and Their Training Needs. *Sana'a University Journal of Applied Sciences and Technology*, 3(1), 663–678. <https://doi.org/10.59628/jast.v3i1.1228>
- Baher, A. (2020). The Relationship Between Occupational Stress and the Evaluation of Physical Education Teachers' Performance Level in Nineveh City Center. *ISSJ*, 2(9), 45–52. <https://doi.org/10.71377/2aj7rn20>
- Bashir, A., Raza, Q., Hussain, D., Iqbal, S. A., Akram, A., Azhar, M., & Tahir, I. (2023). Obstacles Encountered by Medical Students in Conducting Academic Research – A Cross-Sectional Study. *American Journal of Health, Medicine and Nursing Practice*, 9(6), 1–10. <https://doi.org/10.47672/ajhmn.1705>
- Bui, T., Zackula, R., Dugan, K., & Ablah, E. (2021). Workplace Stress and Productivity: A Cross-Sectional Study. *Kansas Journal of Medicine*, 14. <https://doi.org/10.17161/kjm.vol1413424>
- Chambel, M. J., Carvalho, V. S., & Neto, M. (2020). Job Demands–Control Model and Employees' Mental Health: The Mediating Role of Work-Family Conflict. *Psicologia*, 34(1), 13–23. <https://doi.org/10.17575/psicologia.v34i1.1467>
- Darwish, A., Ahmed, T., & Mikhail, T. (2023). Managing Work Stress Among Agricultural Extension Workers in Some Egyptian Governorates. *Journal of the Scientific Society for Agricultural Extension*. <https://doi.org/10.21608/mgiz.2023.173588.1004>
- Diehl, E., Rieger, S., Letzel, S., Schablon, A., Nienhaus, A., Pinzon, L. C. E., & Dietz, P. (2021). The Relationship Between Workload and Burnout Among Nurses: The Buffering Role of Personal, Social and Organisational Resources. *PLoS ONE*, 16(1), e0245798. <https://doi.org/10.1371/journal.pone.0245798>
- Elsayed, S., Hasan, A. A., & Musleh, M. (2017). Work Stress, Coping Strategies and Levels of Depression Among Nurses Working in Mental Health Hospital in Port-Said City. *International Journal of Culture and Mental Health*, 11(2), 157–170. <https://doi.org/10.1080/17542863.2017.1343859>
- Hamza, A., & Danbury, L. (2021). The Role of Imam in Algerian Mosques: Organizational Frameworks and Their Relationship to Factors Causing Occupational Stress. *Al-Mi'yar Journal*. <https://doi.org/10.46313/1707-025-053-046>
- Hassard, J., Teoh, K. R. H., Visockaite, G., Dewe, P., & Cox, T. (2017). The Cost of Work-Related Stress to Society: A Systematic Review. *Journal of Occupational Health Psychology*, 23(1), 1–17. <https://doi.org/10.1037/ocp0000069>
- Ḥanafi, S. (2011). University Systems in the Arab East: Publish Globally and Perish Locally vs Publish Locally and Perish Globally. *Current Sociology*, 59(3), 291–309. <https://doi.org/10.1177/0011392111400782>
- Indraningsih, K. S., Ashari, A., Syahyuti, S., Anugrah, I. S., Suharyono, S., Saptana, S., Iswariyadi, A., Agustian, A., Purwantini, T. B., Ariani, M., & Mardiharini, M. (2023). Factors Influencing the Role and Performance of Independent Agricultural Extension Workers in Supporting Agricultural Extension. *Open Agriculture*, 8(1). <https://doi.org/10.1515/opag-2022-0164>
- Khalifa, R. Kh., Shalouf, F. M., & Talaba, A. S. (2008). The Role of Agricultural Lending in Developing the Livestock Sector in Jabal Akhdar District. *Al-Mukhtar Journal of Sciences*, 17(1), 116–142. <https://doi.org/10.54172/mjsc.v17i1.857>
- Katea, Z. M. (2016). Psychological Stress and Its Relationship to the Advancement of the Value System Among Kindergarten Teachers: A Field Study in the City of Baghdad. *Journal of Kufa Studies Center*, 1(43). <https://doi.org/10.36322/jksc.v1i43.4924>
- Kumar, L., Chhogyel, N., Gopalakrishnan, T., Hasan, M. K., Jayasinghe, S. L., Kariyawasam, C. S., Kogo, B. K., & Ratnayake, S. (2022). Climate Change and Future of Agri-Food Production. In *Elsevier eBooks* (pp. 49–79). <https://doi.org/10.1016/b978-0-323-91001-9.00009-8>
- Mark, G., & Smith, A. P. (2010). Effects of Occupational Stress, Job Characteristics, Coping, and Attributional Style on the Mental Health and Job Satisfaction of University Employees. *Anxiety, Stress & Coping*, 25(1), 63–78. <https://doi.org/10.1080/10615806.2010.548088>
- Maresca, G., Corallo, F., Catanese, G., Formica, C., & Lo Buono, V. (2022). Coping Strategies of Healthcare Professionals With Burnout Syndrome: A Systematic Review. *Medicina*, 58(2), 327. <https://doi.org/10.3390/medicina58020327>

- McDonough, C., Nuberg, I. K., & Pitchford, W. S. (2014). Barriers to Participatory Extension in Egypt: Agricultural Workers' Perspectives. *The Journal of Agricultural Education and Extension*, 21(2), 159-176. <https://doi.org/10.1080/1389224x.2014.927374>
- Mansour, T. G. I., Abdelazez, M. A., & Eleshmawiy, K. H. (2022). Challenges and Constraints Facing the Agricultural Extension System in Egypt. *Journal of Agricultural Sciences - Sri Lanka*, 17(2), 241-257. <https://doi.org/10.4038/jas.v17i2.9740>
- Mohamed, D. G. M. R. (2023). An Analytical Study of the Impact of Work Pressures on the Performance of Agricultural Extension Workers at the Shahat Services Office in Jabal Al Akhdar. <https://doi.org/10.37375/bsj.vi16.1928>
- Mohammad, A., Shehata, A., & Ammar, S. (2017). Challenges to Academic Research and International Publishing in the Discipline of Tourism and Hospitality Management in Egypt. *Journal of Association of Arab Universities for Tourism and Hospitality*, 14(2), 67-78. <https://doi.org/10.21608/jaauth.2017.48145>
- Morales, G. A. E., & Ventura, E. C. (2022). Occupational Stress and Coping Styles in Relation to Job Performance of Teachers in Elementary Schools in Zone III, Division of Zambales, Philippines. *International Journal of Education Humanities and Social Science*, 05(01), 154-163. <https://doi.org/10.54922/ijehss.2022.0352>
- Mousa, M. (2021). Academia Is Racist: Barriers Women Faculty Face in Academic Public Contexts. *Higher Education Quarterly*, 76(4), 741-758. <https://doi.org/10.1111/hequ.12343>
- Naela, A. A. (2024). Strategies for Coping With Occupational Stress as Predictors of Job Anxiety and Job Satisfaction Among Married Female Teachers in Irbid Governorate. *Jordan Journal of Educational Sciences*, 20(4), 635-652. <https://doi.org/10.47015/20.4.1>
- Obinyan, O., & Tella, A. (2022). Nigerian LIS Academic and Scholarly Publishing Experience: Challenges and the Way Forward. *Proceedings of the Association for Information Science and Technology*, 59(1), 235-241. <https://doi.org/10.1002/pra2.619>
- Sadek, G., & Kora, M. A. (2020). Transformation to Virtual Training During COVID-19 Pandemic: Case Report From a Low Resources' Country. *Journal of Microscopy and Ultrastructure*, 8(4), 205. https://doi.org/10.4103/jmau.jmau_48_20
- Shalaby, M. Y., Bakhit, A. A., Saqr, E. H., Makkawi, H. F., & Al-Assar, T. M. (2023). Extension Specialists' View of the Marketing Problems of Agricultural Crops and How to Confront Them in Light of the State's Orientation to Achieve Food Security in Some Governorates of the Arab Republic of Egypt. *Journal of Agricultural, Environmental and Veterinary Sciences*, 7(2), 92-113. <https://doi.org/10.26389/ajsrp.n230123>
- Shehata, A., & Eldakar, M. A. M. (2018). Publishing Research in the International Context. *The Electronic Library*, 36(5), 910-924. <https://doi.org/10.1108/el-01-2017-0005>
- Shteiwi, T. (2022). Occupational Stress and Its Relationship to Burnout Among Lecturers in Faculties and Departments of Physical Education in Palestinian Universities. *Palestine Technical University Journal of Research*, 10(5), 155-168. <https://doi.org/10.53671/pturj.v10i4.274>
- Torres, G. M. S., Backstrom, J., & Duffy, V. G. (2023). A Systematic Review of Workplace Stress and Its Impact on Mental Health and Safety. *Lecture Notes in Computer Science*, 610-627. https://doi.org/10.1007/978-3-031-48041-6_41
- Wataya, K., Tachikawa, H., Nemoto, K., Sasahara, S., Oi, Y., Doki, S., Hori, D., Hirai, K., Takahashi, S., & Arai, T. (2025). Association Between Occupational Stress and Mental Health in Healthcare Workers During the Coronavirus Pandemic in 2019. *Cureus*. <https://doi.org/10.7759/cureus.81007>
- Wa'wa, S. A. (2018). Classification of Models Explaining Occupational Stress. *Journal of Economics and Finance*.
- Yahaya, A., Yahaya, N., Ramli, J., Hashim, S., & Zakariya, Z. (2019). The Effects of Workplace Stress on Employee Productivity. *International Journal of Education and Research*, 7(1), 123-135.
- Yahaya, A., Maakip, I., Voo, P., Mee, S. K. S., & Sawai, J. P. (2019). The Effects of Occupational Stress on the Management of an Organization. *International Journal of Asian Social Science*, 9(2), 248-255. <https://doi.org/10.18488/journal.1.2019.92.248.255>
- Yi, X., Yang, J., Gao, X., & Li, F. (2022). The Relationship Between Occupational Stress, Mental Health and Work Ability of Coal Chemical Workers in Xinjiang. *Frontiers in Psychiatry*, 13. <https://doi.org/10.3389/fpsy.2022.903534>
- Zain-Al-Dien, M. M. (2016). Student Academic Freedom in Egypt: Perceptions of University Education Students. *Universal Journal of Educational Research*, 4(2), 432-444. <https://doi.org/10.13189/ujer.2016.040218>