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Rural women's participation in the agricultural activities (plant and animal) In Al-Zawiya sub-district, Baiji district, Salah al-D in Governorate

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ABSTRACT

The Objectives of the study was to find out how rural women in Al-Zawiya sub-district / Baiji district participate in agricultural activities (plant and animal). The data was collected through a personal interview using a questionnaire form prepared for this purpose, which the first part included measuring social and economic variables that may be related to the level of rural women's participation in agricultural activities, and the data was collected through a personal interview using a questionnaire form prepared for this purpose, which included the first part of the form measuring social and economic variables that may be related to the level of rural women's participation in agricultural activities, and the data was collected through a personal interview using a questionnaire (age, marital status, educational level, number of family members working in agriculture, type of farm holding). The second part, it relates to scale for measuring the level of women's participation in agricultural activities (plant and animal), and it included two inspects: First: the field of vegetable agriculture. Second: The agricultural and animal activities field to calculate the values of this variable (28) works. were identified in this field, through which the level of rural women's participation in agricultural and animal activities is numerically determined. To reach the objectives of the research, several statistical methods were used, namely: (arithmetic mean, range, Pearson's correlation law, Spearman's correlation law. And standard deviation). The results of the study revealed that the majority of the respondents fall within the category of medium participation, and that the two categories of medium and high participation constitute (76%) of the total respondents, where the study showed that there is a relationship Significant correlation between the level of knowledge and each of (age, educational level, number of family members, farm ownership).

مشاركة المرأة الريفية في الأنشطة الزراعية (النباتية والحيوانية) في ناحية الزوية / قضاء بيجي

رأفت رياض عبد الوهاب[1] ، محمد عزت محمد[2]و خيرالله فرج سبهان[1]
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الخلاصة

استهدف البحث التعرف على مشاركة المرأة الريفية في الأنشطة الزراعية (النباتية والحيوانية) في ناحية الزوية / قضاء بيجي . حيث شملت عينة البحث (50) مبحوثة يمثلون (50 %) من أجمالي عدد النساء في ناحية الزوية المشاركات في الأنشطة الزراعية ، وتم جمع البيانات عن طريق المقابلة الشخصية باستخدام استمارة استبيان اعدت لهذا الغرض مكونة من قسمين تضمن الجزء الأول من الاستمارة قياس العوامل الاجتماعية والاقتصادية التي قد يكون لها علاقة بمستوى مشاركة المرأة الريفية بالانشطة الزراعية(النباتية والحيوانية) وهي (العمر، الحالة الاجتماعية، المستوى التعليمي، عدد أفراد الأسرة العاملين بالزراعة، نوع الحيازة المزرعية) أما الجزء الثاني فيتعلق بأداة قياس مستوى مشاركة المرأة الريفية بالانشطة الزراعية(النباتية والحيوانية) وتضمن مجالين اولاً : مجال الانشطة الزراعية النباتية ولحساب قيم هذا المتغير تم تحديد (20) عملاً في هذا المجال والتي من خلالها يتحدد مستوى مشاركة المرأة الريفية بالانشطة الزراعية النباتية. ثانياً : مجال الانشطة الزراعية الحيوانية ولحساب قيم هذا المتغير تم تحديد (28) عملاً في هذا المجال التي من خلالها يتحدد مستوى مشاركة المرأة الريفية بالانشطة الزراعية الحيوانية رقمية. ولغرض الوصول الى اهداف البحث تم استخدام عدد من الوسائل الإحصائية وهي : (المتوسط الحسابي ، المدى ، قانون الارتباط بيرسون وقانون الارتباط سبيرمان . والانحراف المعياري)، أظهرت نتائج الدراسة ان غالبية المبحوثات يقعن ضمن فئة المشاركة المتوسطة، وان فئتي المشاركة المتوسطة والمرتفعة شكلتا نسبة (76%) من المجموع الكلي للمبحوثات، كما بينت الدراسة وجود علاقة ارتباط معنوية بين مستوى المعرفة وكل من (العمر, المستوى التعليمي .عدد افراد الاسرة , الحيازة المزرعية).

الكلمات المفتاحية: المرأة الريفة , اعمال زراعية ، الارشاد الزراعي ، نقل التقانات الزراعية

INTRODUCTION

The modern generation of economists, whether from rich or developing nations, pays close attention to the development process (Daudi, 2008: 5). The agricultural sector plays an important part in the economy of many established and developing nations across the world, and countries are working to grow it in order to ensure food security for their citizens and the raw materials needed by numerous businesses (Kashash, 2002: 217-218). Agriculture is critical to the growth of the national economy and the provision of both quantity and quality food to residents in order to attain food security and abundance, which leads to the establishment of a strong economic foundation (Al-Saadi, et - al, 2014: 62). With the economic depression that prevailed in the world, the urgent need to increase the economic activity of women and their participation in the development process became clear, for this purpose in the late seventies and early eighties, measures were taken to encourage women to participate in economic activity and start income-generating projects, to improve their status and to facilitate their access in general to the resources they need (ESCWA, 2005: 80). Much of the development literature reveals that extension organizations in many nations throughout the world are interested in rural women, and that these organizations are unique in specific plans to enhance agricultural production regions, since women are direct partners in production (Al-Rimawi, et – al, 1996: 361). Rural women constitute an effective human element that has left its imprint within the family and agricultural operations, eventually becoming a productive component for some local rural items that help raise family income and standard of living (Abu Talib and Hiam, 2003:28). As a result, Iraqi society must profit from women as a productive resource that participates in the development process, because women make up more than half of the population and possess productive powers and qualities that should be efficiently used (Al-Taweel, 2008: 26). The advancement of rural women, as well as the development of their knowledge, attitudes, and agricultural abilities, is a critical problem for increasing agricultural productivity and attaining long-

term rural development in Iraq. The relevance of this issue stems from the fact that in some agricultural operations, women account for up to 60% of the workforce (Nassif, 2006: 7). Determining rural women's attitudes regarding starting or working on small initiatives is an essential predictor of how well these projects may be authorized and distributed in rural areas (Hade, 2022: 18). In third-world nations, women who labor in agricultural sectors make up a large part of the workforce (Awad, 2009, 7). Despite this, the role of rural women in agricultural activities has not received the attention that it deserves. As a result, providing information about rural women's participation in agricultural activities aids decision-makers in developing plans and activities that will help involve rural women and provide them with fair opportunities to develop their skills and productive capacities, resulting in comprehensive development. Given the poor agricultural productivity in Iraq in general, and Salah al-Din Governorate in particular, a field research to uncover the reality of women's labour in the agricultural sector, both crop and animal, was necessary.

Hence, the study takes a starting point to answer the following research questions:

- What are the agricultural activities (plant and animal) that rural women participate in?
- What is the relationship between the participation of rural women in agricultural activities plant and animal in (The al-Zawiya sub-district) and its relationship to some variables (age - marital status - educational level - number of family members - the type of farm tenure).

Research Objectives:

First, determining the level of rural women's participation in agricultural activities (plant and animal) in the Al-Zawiya sub-district.

Second, Determine the relationship between participation of rural women in agricultural activities and some studied variables (age - marital status - educational level - number of family members - the type of farm tenure).

Statistical Hypotheses:

1- There is no significant correlation between the level of women's participation in agricultural activities (plant and animal) and (age).

2- There is no significant correlation between the level of women's participation in agricultural activities (plant and animal) and (marital status).

3- There is no significant correlation between the level of women's participation in agricultural activities (plant and animal) and (Educational level).

4- There is no significant correlation between the level of women's participation in agricultural activities (plant and animal) and (the number of family members).

5- There is no significant correlation between the level of women's participation in agricultural activities (plant and animal) and (type of farm tenure).

research importance:

The study's significance stems from the fact that it focuses on a key segment of the population: rural women working in agriculture, who have demonstrated that they are powerful agents of change, capable of removing barriers and bringing about change (Al-Mutawa and Nafisa, 2007: 6). Rural women, as producers, suffer even larger barriers to accessing vital productive resources and services, technology, market intelligence, and financial assets than their male counterparts (FAO, 2018:4) We shed light on the roles open to rural women to participate in the development process in the governorate's society to round out the elements of this study, considering that rural women make up a substantial sector in the governorate, with a population of (883779). (1) As a result, we anticipate their taking an active role in regional rural development. In general, this research is beneficial in a number of ways, including

1- This study aids extension program planners in determining the degree of rural women's engagement in agricultural activities Under the current circumstances to establish extension programs that contribute to women's skill development in agricultural activities.

2- Because women's roles differ from men's, recognizing women's capabilities and how to utilize them is a critical requirement for good planning, this study adds to showing women's engagement in agricultural activities, both crop and animal, in Al-Zawiya sub - district.

3- The findings of this study will aid personnel at the Ministry of Agriculture's and Extension Centers in producing extension messages and training programs aimed at building rural women's skill sets and enhancing their agricultural knowledge.
4- The descriptive technique utilized in this study can be used to more specific research on agricultural operations.

Procedural definitions:

1- Standard of living: This refers to the level of living that rural women enjoy with contemporary conveniences such as gadgets, equipment, and machinery, as well as the type of the home in which the respondent resides, which indicates their standard of living.
2- Involvement in agricultural operations. It refers to the role that rural women play in agricultural activities represented by (crops and animals), and the overall work done by women represents the degree of their engagement in agricultural activities, as measured by numbers.

Research Methodology:

The study is part of an exploratory and diagnostic research project that follows a descriptive Approach. This sort of research is beneficial in giving data on the reality, opinions, approbation, and responses of the respondents on a certain topic or issue.

Search area :

The study area is represented by the Al-Zawiya sub-district, which is officially associated with Salah Al-Din Governorate's Baiji District. Which is characterized by the fact that rural women participate with men in agricultural work, in both its animal and plant aspects.

Research Population and sample:

The research Population represents all rural women in the Al-Zawiya sub-district, with a total of (100) respondents, of whom a simple random sample of (50%) was selected, resulting in a total of (50) respondents.

Prepare questionnaire form:

The questionnaire form is the method adopted in collecting field data, as a form consisting of two parts was prepared as follows:
- The first part of the questionnaire included measuring the social and economic variables that may be related to the level of rural women's participation in agricultural activities (plant and animal), which are (age, marital status, educational level, number of family members working in agriculture, type of farm tenure).
- The second part relates to a tool for measuring the level of rural women's participation in agricultural activities (plant and animal), which requires the respondents to choose an alternative from among three alternatives, and the following numerical values have been assigned to these alternatives: I always participate (3). I participate sometimes (2). I do not participate (1).

Validity

It refers to how closely the measure's elements correspond to the content of the attribute being measured. A panel of experts and specialists in the subject assesses this (Murad and Amin, 2002: 351). The ideal technique to attain face validity, according to (Ebel), is for a committee of arbitrators to evaluate the validity of the paragraphs in order to measure what was meant to be tested (Ebel,1971:555). The questionnaire was given to a group of experts and specialists from the Department of Economics and Agricultural Extension at the College of Agriculture, the Department of Psychological and Educational Sciences in the College of Education, and the professors of the Sociology Department at the College of Arts at the University of Baiji, who were asked to identify their opinions and observations about the questionnaire's paragraphs. After considering their observations and suggestions, some changes were made to the questions included in the questionnaire, including the safety of its formulation and the extent of its clarity, as well as their suitability to the respondents and the standards used to achieve the research objectives. The researchers used a percentage of agreement (75 percent) on each paragraph of the questionnaire to determine the questionnaire's face validity, which is one of the ways to determine the tool's validity.

Extracting the stability root, which represents the tool's validity coefficient, was used to verify the content's validity. The scale axes' content validity coefficient ranged from 0.90 to 0.95, indicating the scale's subjective validity.

Reliability

If the same instrument is used on him and the same circumstances are followed, the individual will get the same results (Murad and Amin, 2002: 359) It also refers to stability, which suggests that if the measuring method for a certain phenomena is repeated, the degree will remain consistent (Abdul Hafeez and Mustafa, 2000: 178). A pre-test was done on a basic random sample of (30) respondents, and the exploratory sample's data was gathered between December 27, 2020, and February 2, 2021.
The half-split method, which is one of the finest ways for calculating the stability coefficient, was used to find the stability coefficient of the agricultural activity categories (plant and animal) (Murad and Amin, 2002: 360). And utilizing the basic correlation coefficient (Pearson), which is typical of half of the test, to discover the correlation between odd and even items for each domain. The (Spearman) equation was then used to carry out the corrective operation. Because the variances of the two parts of the test are close, the root of the reliability coefficient was used to extract the validity of the test.

Measurement of Independent Variables:

The independent variables included in the study were measured as follows:

1- **Age**: measured by the number of respondents' age years during the data collection interval.

2- **Marital status**: It means whether the woman is married, widowed, divorced, or single, and numerical codes (4-3-2-1) are assigned to her, respectively.

3- **Educational level**: It was measured by assigning digital codes, as follows: ((Illiterate (1), read and write (2), primary (3), intermediate (4), middle school (5)).

4- **Number of family members working in agriculture**: It was measured through the total number of family members of the respondents working in agriculture, both males and females.

5- **Type of farm tenure**: This variable was measured based on the ownership of the agricultural land of the respondents' family (ownership - contract - rent - other mentioned) and numerical values were assigned to it (4-3-2-1) respectively.

Dependent variables Measurement:

To measure the level of women's participation in agricultural activities, it was divided into two fields:

1: The field of agricultural activities(Plant production):

Twenty works in this field have been found to compute the values of this variable, through which the degree of rural women's engagement in agricultural activities (crop activities) is determined. In the agriculture activities field, the respondents were able to obtain numerical values ranging from (20-60).

2: The field of agricultural activities (Animals production):

Twenty-eight works in this field were selected to calculate the values of this variable, which determine the amount of rural women's engagement in agricultural animal labor. The study was able to get values in the cattle field that ranged from (28-84) numerical values.

As a result, the whole scale consists of (48 agricultural operations), with numerical values restricted to (48-144).

Data collection:

After ensuring that all of the scientific requirements required in the questionnaire form have been met, the form is ready for data collection. The data gathering period was from June 2, 2022, to September 5, 2022.

Statistical methods:

Because the data has a normal distribution, a set of parametric statistical procedures, such as Frequency, Percentages, Range, Arithmetic Mean, Pearson's simple correlation coefficient, Spearman, weight percentile, t-test, and correction factor, were employed to meet the research's goals.

RESULTS AND DISCUSSION

1 - Determining the level of rural women's total Participation in agricultural work (plant and animal) in a general description in the Al-Zawiya sub-district.

The data analysis revealed that the respondents received the maximum numerical value (133) at the level of total participation in agricultural work and the lowest numerical value (87) at the level of overall participation in agricultural work, with an arithmetic average of (110.7), According to the law of range and category length, the numerical values acquired by the respondents were divided into three groups, as shown in Table (1).

Table (1): Distribution of respondents according to the level of total Participation in agricultural activities (plant and animal) in the Al-Zawiya sub-district

Categories of Participation in agricultural activities	number	percentage	Average Participation per category
87-102	12	24	94.66
103-118	21	42	108.09
119-134	17	34	125.23
Total	50	100%	

110.7= $\bar{x}$ 12.88=S.D

According to the preceding data, the biggest percentage of respondents (42%) fit into the medium Participation category, with an average Participation of (108.09). Following that is a proportion (34%) that fits into the high Participation group, with an average of (125.23). While it accounted for the smallest number (24%) of respondents in the low participation group. This means that the level of participation of rural woman is middle tend to high, with an average of (94.66). As can be seen from the table above, the majority of respondents fell into the middle Participation group, with the two categories of moderate and high Participation accounting for 76% of the total number of respondents. This is due to the fact that women do the majority of agricultural tasks, particularly those that demand patience and a little muscular exertion, as seen by the increased activity of women in vegetable crops. While their contribution to grain crops declines and may become extinct as a result of machinery and men do so, women also look after and serve animals, requiring them to do work that enhances their overall commitment to work.

2 - Determine the correlation between the Participation of rural women in agricultural activities (plant and animal) and some independent variables (age - marital status - educational level - number of family members - the type of farm tenure).

1- Age: The results of the data analysis showed that the age range of the respondents ranged between (15-59) years and that their average age was (30) years, and the respondents were distributed into three categories according to this variable, as shown in Table (2).

Table (2): Distribution of respondents according to age and average Participation in agricultural activities

age categories	frequency	percentage	Average Participation per category	Correlation n coefficient r
15-29 year	26	52	105.11	0.34*
30-44 year	19	38	117.94	
45-59 year	5	10	112.2	
Total	50	100%		

10.16=SD 30= $\bar{x}$

According to Table No. 2, the age group (15-29) years has the largest percentage (52%) of respondents, followed by the age group (44-30) years, which has the second highest proportion (38%) of respondents, and the age group (44-30) years has the lowest percentage (10%) of respondents (45-59 years).To determine whether there are significant differences between the average Participation s to the agricultural activities of the respondents according to the age groups. The Pearson's sample

correlation equation used, and the value was (0.34 *) It indicates that there is a positive significant correlation between the two variables at the level (0.05). Therefore, we reject the statistical hypothesis, and we accept the alternative hypothesis, which states that there is a significant correlation between the level of women's participation in agricultural activities (plant and animal) and (age). This may be because respondents of the age group (15-29) participate in agricultural activities less because they do not have sufficient experience, while the middle-aged participants (30-44) have cumulative experience and a high ability to perform agricultural activities, that is, this experience increases over time and with age.

2-marital status:

The results of data analysis showed that the highest percentage (70%) of the respondents are married, followed by respondents from the category of single women, with a rate of (14%), And that (10%) of the respondents are divorced, and that the lowest percentage (3%) of the respondents are widows. The respondents were distributed into four categories according to this variable as shown in Table (3).

Table (3): Distribution of respondents according to marital status and average Participation in agricultural activities

Marital Status Categories	number	percentage	Average Participation per category	Correlation coefficient r
married	35	70	109.25	0.12
widow	3	6	117.33	
Divorced	5	10	114	
single	7	14	112.17	
Total	50	100%		

According to Table No. 3, the respondents in the widow's group had the greatest average of overall engagement in agricultural activities (117.33). While below it is within the group of married respondents, with a value of (109.25), and among widowed respondents, the average value of engagement in agricultural activities grows. To determine if there are significant differences between the average contributions to agricultural activities of the respondents according to marital status, the (Spearman) correlation equation was used, as its value was (0,12). This means (there are no significant differences between the level of total participation of rural women in agricultural activities (plant and animal) according to marital status), As a result, the statistical hypothesis is accepted and the alternative hypothesis is rejected. This might be because rural women's engagement in agricultural, plant and animal activities is unaffected by their marital status or widowhood.

3-Educational level:

The results of data analysis that the highest percentage of respondents are from the elementary category (42%), Followed by the category of women who read and write (30%), The percentage of illiterate respondents and those with an intermediate certificate or above reached 14% for both categories. The respondents were divided into four categories according to this variable, as shown in Table (4):

Table (4): Distribution of respondents according to educational level and average contribution to agricultural activities

Educational level Categories	number	percentage	Average Participation per category	Correlation coefficient r
illiteracy	7	14%	96.42	0.49**
read and write	15	30%	109.73	
elementary	21	42%	111.28	
Intermediate	7	14%	125.25	
Total	50	100%		

According to the preceding data, the respondents who read and write had the lowest average overall contribution to agricultural activity (96.42). And the highest average among responders who received an intermediate certificate, as well as the amount, was (125.25). To see if there were any significant correlation in the averages of respondents' engagement in agricultural activities based on their educational level. the Spearman hierarchical correlation equation was used, as the value was (0.49**), which indicates the existence of a positive significant correlation between the two variables at the level (0.01), Therefore, we reject the statistical hypothesis, and accept the alternative hypothesis which states that there is a significant correlation between the level of women's participation in agricultural activities (plant and animal) and the educational level. This may be because the educational level of rural women increases, This is sensible since it would allow them to be exposed to more varied channels of communication to give knowledge in other agricultural domains as their expertise in the field of agricultural activities (plant and animal) grows.

4-number of family members:

The respondents were distributed into three categories according to this variable, as shown in Table (5). Where the results of the data analysis showed that the highest percentage (44%) of the number of family members is within the first category (2-4 individuals), followed by respondents from the category (5-7) individuals at a rate of (32%) and that the lowest percentage (24%) was within Class (8-10) individuals, as shown in Table (5).

Table (5): Distribution of respondents according to the number of family members working in agriculture and the average of participation in agricultural activities

Categories of family members	number	percentage	Average Participation per category	Correlation coefficient r
(2-4) person	22	44%	119	-0.70**
(5 - 7) person	16	32%	110.93	
(8-10) person	12	24%	95.16	
Total	50	100%		

$\overline{x} = 5.4$ S.D = 2.2

Table No. (5) indicates that the highest average of participation in agricultural activities of the respondents was within the category (5 - 7) individuals, and its amount was (110.93), While the lowest average within the category of (10-8) individuals was (95.16). To determine whether there is significant correlation between the averages of participation in the agricultural activities of the respondents according to the number of family members of the respondents. The simple correlation equation for a person was used and the value was (0.70-**), It indicates that there is an inverse significant correlation between the two variables at the level (0.01). Therefore, we reject the statistical hypothesis and accept the alternative hypothesis which states that: There is a significant correlation between the level of women's participation in agricultural activities (plant and animal) and (the number of family members). The reason for this may be due to the scarcity of manpower, which means that women have to increase their efforts to complete their agricultural work, and this is what the results showed that women who work in simple families are more than those in complex families, due to the lack of family members who help them.

5-type of farm tenure:

When distributing the respondents according to the type of farm tenure of their families into four categories as shown in Table (6) it was found that the highest percentage (42%) of the respondents'

families have tenure type (ownership), Followed by a percentage (28%) of the respondents' families have tenure type (contract), And percentage (16.72%) of the respondents' families have tenure type (rent), While the lowest percentage (14%) of the respondents' families have tenure type between partnership and inheritance.

Table (6): Distribution of the respondents according to type of farm tenure and average participation in agricultural activities

type of farm tenure	number	percentage	Average Participation per category	Correlation coefficient r
ownership	21	42%	111.19	0.17
contract	14	28%	104.92	
rent	8	16%	105.25	
other mentioned	7	14%	127.28	
Total	50	100%		

To determine whether there are significant differences between the averages of participation in the agricultural activities of the respondents according to the type of tenure, the Spearman ordinal correlation equation was used, and its value was (0,17). This means (there is no significant correlation between the level of women's participation in agricultural activities (plant and animal) and the type of tenure, Therefore, we accept the statistical hypothesis, and reject the alternative hypothesis. The reason for this may be because women carry out agricultural activities despite the different types of farm tenure of agricultural land by their families.

CONCLUSIONS

Based on the results, the research concludes the following:

1-The level of rural women's participation in agricultural activities in general is high, as 76% of the respondents participate in agricultural activities at a medium and high degree. Therefore, we conclude that women have a significant impact on agricultural production, both plant and animal, as they represent a high percentage of the workforce.

2-Some variables did not show any significant differences in the level of rural women's participation in agricultural activities, and this indicates the presence of other variables that may be related to the level of participation in agricultural activities that the research did not study.

3-The respondents of young ages are more involved in agricultural activities because they are active and energetic, the presence of women within simple families made them exert more energy to finish their work, Also, leaving the respondents to study greatly contributed to their carrying out agricultural work from a young age as a result of customs and traditions that prevent women from completing their education and engaging from an early age in field work and taking care of animals.

Recommendations

According to the findings of the study, the researchers recommend the following:

1-The importance of utilizing women's resources and boosting their appeal to work, as well as encouraging them to do so since they are an effective productive force in the countryside, particularly in agricultural employment, and may help provide agricultural goods to local markets.

2-The importance of building agricultural initiatives that attract rural women and encourage them to develop and benefit from their agricultural talents in order to enhance their income and way of living.

3-Organizing training courses on themes such as how to make agricultural goods and refining their production procedures, as well as enhancing animal care and service ways.

4-Increasing the number of female agricultural engineers working in agricultural divisions, extension centers, and extension farms affiliated with the Agricultural Extension Authority in the General Authority for Extension to benefit from their efforts in educating rural women to change their perceptions of their work and make them aware of their importance.

5-Providing agricultural loans and facilities to enable women to start initiatives that use contemporary technical approaches to make women's job easier and save time and effort.

6-Preparing agricultural television shows for rural women in order to address the issues that rural women face and to help them advance in their agricultural expertise.

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