

## **(Application Level of Unsound Environmental Behaviors among the Rural Women in Al-Alam District, Salah Al-Din Governorate, Iraq)**

Hafsa Fatah Hade

College of Agriculture and Forestry, University of Mosul, AL-Mosul, Iraq.

Corresponding author's email: [Hfshalnzy48@uomosul.edu.iq](mailto:Hfshalnzy48@uomosul.edu.iq)

### **Abstract**

The incorrect practices carried out by field crop farmers, and their repeated occurrence during their negative handling of agricultural soils, represent a cause of soil degradation, which necessitates intensifying agricultural extension activities to address and reduce them. The purpose of the current study is to accurately determine the rural women's level of Unsound Environmental Behaviors among the Rural Women in Al-Alam District generally. It also involves determining its level in multivariable; water, air, food, and land. In addition to ranking those fields according to their importance. The research also aimed to evaluate the association between the level of application of practices and some personal variables of the female participants included in the study. A random sample of 10% of the total rural women in the district, numbering 1200, was selected, resulting in 120 rural women undergoing the research procedures. A questionnaire list was performed, consisting of two classes: class I included the personal variables, while class II included a scale for the dependent variable. In order to statistically assess the face validity and content validity of it in its initial form, a number of experts and specialists in the field of agriculture, extension, psychology, soil sciences and the environment. A sample of 30 respondents were chosen to measure the reliability and validity of the scale. The statistical Alpha Cronbach's method was dependent to measure the reliability coefficient which reached 0.86 and the validity coefficient 0.92. The research variables were measured using the scales specific to each of them. As for the dependent variable, it was measured using 52 paragraphs distributed over the following research fields: (water, air, food, agricultural land) with a number of (13, 14, 13, 12) respectively. A four-point scale was set for each paragraph that included the alternatives (always, sometimes, rarely, never), to which values were assigned. The current results appeared that the level of rural women's application of unsound environmental behaviors in Al-Alam generally average tends to rise. A significant inverse correlation was found

between the level of application and most of the research variables. The research concluded that rural women lack awareness of the seriousness of these practices. The research recommended intensifying extension and training activities directed at women to reduce wrong practices, activate extension services directed at rural women, and increase the number of female agricultural extension work.

**Keywords:** Key      Unsound Behaviors      Rural Women

## **Introduction**

Sustainable agricultural development is of paramount importance to societies, especially developing ones, as it focuses on preserving natural resources and ensuring their sustainability as a guarantee for the rights of present and future generations. Therefore, it has become imperative for governmental and non-governmental organizations to actively participate in it and urge people to protect it, as it has become a benchmark for measuring the progress of nation [1]. To ensure the success of this process, it must be based on objective foundations and sound studies that distance it from randomness and unsound behaviors, thus achieving its important goals effectively and impartially [2]. Development, in its various forms, aims to achieve a comprehensive agricultural revolution in most sectors of society, whether industrial, social, educational, or health-related, in a way that ensures its continuity and preservation [3].

Rural women play a significant role in protecting the environment from pollution. They are responsible for raising children, instilling positive environmental values, and regulating food and electricity consumption. Several studies indicate that the environmental practices of rural women are influenced by a range of social and economic factors, as well as their level of awareness and knowledge, which directly affects the efficiency of natural resource use in rural environments [4]. This is done through good management, not through their role in their daily activities with environmental elements. Unconscious behavior and practices in dealing with environmental resources, such as the poor use of water and the use of stream water for drinking, washing clothes and household items, and mismanagement of household and farm waste and waste. Animals and poultry, in addition to the use of traditional sources in energy

production, which negatively impacts, directly or indirectly, environmental pollution [5]. Many extension studies have indicated the low level of rural women's knowledge regarding environmental pollution and the importance of protecting the environment from pollution. In the study of Al-Ubaidi, it was found that 78% of rural women in Al-Hawija district in Kirkuk governorate had average knowledge with low levels in the field of environmental protection and pollution protection [6]. The study of Al-Samarrai found that 94% of farmers in Samarra district who cultivate field crops apply negative practices that have resulted in the deterioration of agricultural soil fertility, which is represented in Salah al-Din Governorate, as one of the distinguished agricultural fields, where agriculture is the primary profession for most of the families living there, and which is distinguished by the abundance of its agricultural products, in addition to its important location in the governorate, as about 16 kilometers east of the governorate center in its location, many farmers, both men and women, still engage in many negative practices that are considered causes of environmental pollution [2]. Suleiman and Yousif

also found in their study on the attitudes of citrus farmers towards using the integrated pest control method in Al-Alam district that 85% of the respondents had neutral negative attitudes towards using the integrated pest control method to eliminate agricultural pests in a safe manner, far from the use of chemical pest control and the pollution and damage it causes to the environment and to the citizen [7]. Al-Jubouri also found that more than 97% of rural women in Al-Alam district They fall into the categories of medium and low population participation, and found that the level of women's extension needs in the field of domestic poultry farming is low [8]. These indicators could be evidence of the presence of wrong practices that negatively impact the environment. Thus, the purpose of the present study was to identify improper activities that could cause environmental degradation in the studied Governorate. The goal is to address these practices in a way that ensures the adoption of sustainable agricultural practices that embrace the use of organic fertilizers and crop rotations, the application of modern irrigation technologies, the preservation of vegetation cover, and the use of thoughtful urban planning to preserve agricultural land and

ensure its sustainability for future generations. The research questions were prepared and can be used to spotlight the research problem:

What is the level of rural women's of Unsound Environmental Behaviors among the Rural Women in Al-Alam District ?- What is the level to determine the level of rural women's of Unsound Environmental Behaviors among Al-Alam District Rural Women in the governorate, in each of the following fields of research: (water, air, food, agricultural land)? What is the correlation between a number of study variables and the level of rural women's implementation of wrong environmental practices in Al-Alam District under Governorate area?

The main objectives of this study are to identify the level of unsound environmental behaviors among the study population of the current governorate under research, in general. Identify the level of rural women's implementation of unsound environmental practices in each field: (water, air, food, and agricultural land), Arrange the research fields in d in descending order depending on the weight percentage, Ascertain order according to percentage weight,

Determine the correlation between the level of rural women's implementation of unsound environmental behaviors in Al-Alam District, , and multivariable studied: age, educational level, marital status, number of family members, and exposure to information sources, Identify the regression relationship between the unsound environmental behaviors of rural women in Al-Alam District and each of the research fields mentioned in the second objective.

### **Research Hypotheses:**

Each of the studied research felid contributes to explaining the variation wrong practice in each of the four dimensions studied, individually and together. The correlation degree to which rural women in Al-Alam District that belong to Salah al-Din Governorate engage in unsound environmental practices is significantly correlated with each of the factors: age, Learning level, marital status, Family size, and exposure to information sources.

### **Research Definitions**

"Wrong practices" are what rural women in Al-Alam District are accustomed to and repeat, namely

unconscious and wrong interactions with the environment in terms of water, air, food, and agricultural land.

### **Materials and Research Methods**

The descriptive approach was used to achieve the study objectives, which is based on describing the phenomenon quantitatively and qualitatively over a period of time to arrive at results that help understand and develop reality [9]. Al-Alam District was chosen for the study due to its agricultural nature and the fact that it includes a large number of rural women who perform various agricultural and non-agricultural tasks and play a significant role in developing the local population in the district.

### **Research population and its Sample:-**

The research population included all rural women in Al-Alam district, numbering (1,200) rural women. A random sample of 10% was selected, bringing the sample size to 120 respondents.

**Research tool:** Questionnaire form was prepared, which is one of the important tools used to obtain information from respondents, given its suitability to the nature of the

research of Abdul Hafeez [10]. Therefore, after the researchers reviewed the literature and previous studies and consulted with experts and specialists, a questionnaire was administered consisting of two classes. Class I included the personal and communication variables of the respondents, while class II included a measure of the dependent variable (the level of rural women's application of wrong environmental practices in the study area). The process of developing the scale went through several steps, as follows:

**Tool validity:** This refers to the administration's ability to measure what it was designed by [11]. The face validity of the research tool was measured by presenting it in its initial form to a number of experts and specialists in the fields of agricultural extension and psychology. Content validity was achieved by presenting the questionnaire to a number of experts in soil and environmental sciences. The experts' comments were recorded. The questionnaire's sections and paragraphs were reviewed and the required amendments were made in light of their comments. They were also asked to estimate the relative importance of each field, so the final

number became four fields and 52 paragraphs. (Table 1) shows the

fields and the number of final paragraphs for each field:-

**Table 1. Paragraphs and research Fields**

|       | Fields            | Frequency | Range Fields |
|-------|-------------------|-----------|--------------|
| 1     | Water             | 13        | 0-39         |
| 2     | Air               | 14        | 0-42         |
| 3     | Food              | 13        | 0-39         |
| 4     | Agricultural land | 12        | 0-36         |
| Total |                   | 52        | 0-156        |

### **Pre-Test:**

Exploratory sample of 30 respondents among the comprehensive research outside the research sample was selected to measure the reliability and validity of the scale. The reliability of the scale was measured statistically by alpha Cronbach's method, with the reliability-coefficient reaching 0.86 and the validity coefficient reaching 0.92. A reliability coefficient of 0.7 or greater is considered satisfactory. Measuring Research Variables:

### **A-Personal and Communication Variables:**

The number of years the respondent had been alive at the time of data collection and their educational attainment through the questionnaire list were used to determine their age. Which consisted of eight levels: (illiteracy, reading and writing, primary, intermediate, preparatory, institute, college, higher education),

and the numerical value (1, 2, 3, 4, 5, 6, 7, 8) was assigned to them, respectively. Marital status was measured according to the levels (single, married, widow, divorced), and the following numerical codes were given to them: (4, 3, 2, 1), respectively. The number of family members was measured by the number of members in the respondent's family. Exposure to information sources was measured through eight information sources using a three-point scale composed of the following alternatives: (always, sometimes, rarely), and the following ratings were given to them: (3, 2, 1), respectively.

### **B-Measuring the Dependent Variable:**

The dependent variable, the Level of Unsound Environmental Behaviors among the Rural Women, was detected through the respondent's answers to the following: The scale consisted of 52

items and was designed as an indirect four-point scale with four levels using the alternatives (always, sometimes, rarely, never). The following numerical values were assigned to each item: (3, 2, 1, 0) respectively the scale range was limited to (0-156).

## Results and Discussion

### First: Identifying Level of Unsound Environmental Behaviors among the Rural

**Table 2. Distribution of female respondents based on unsound conduct degree**

|   | Categories      | Frequency | %    | Average |
|---|-----------------|-----------|------|---------|
| 1 | Low (52-79 )    | 11        | 9.1  | 68.5    |
| 2 | Mid (80-107 )   | 75        | 62.5 | 94.3    |
| 3 | High (108-136 ) | 34        | 28.4 | 127.2   |
|   | Total           | 120       | 100  | 13.21   |

(Table 2) showed that 62.5% of the respondents fall into the medium category, which is the highest percentage of Unsound Environmental Behaviors among the Rural Women, followed by (28.4%). Thus, the level of Unsound Environmental Behaviors among the Rural Women is medium tending to increase. The result can be explained by the lack of awareness of the delegates of the seriousness of unsound behaviors and their harmful impact on humans and other living organisms, whether plants or

### Women in Al-Alam District in general:

The study's findings revealed that, with a mean of 96.66 and a standard deviation of 13.21, the lowest number representing the unsound behaviors of rural women in Al-Alam District was 52, and the highest was 135. The responses were divided into three groups using the range as shown in (Table 2).

animals, in addition to the serious damage they cause to the environment. The weakness of extension activities and the limited number of agricultural extension workers may be a reason for this result. This result is consistent with what was found by [12].

### Second:-Identifying the level of Unsound Environmental Behaviors among the Rural Women / in different fields:

### First field: Water

The study's findings revealed that, with a low mean ( $20.63 \pm 8.7$ ), the lowest number representing the unsound behaviors of rural women

in Al-Alam District in the field of water was 6, and the highest value was 39. The respondents were split into three groups using the range law., as shown in (Table 3):

**Table 3. Distribution of female respondents according to the level their unsound behaviors in felid Water**

| Squ . | Categories  | Numbers | Percentage | Average |
|-------|-------------|---------|------------|---------|
| 1     | Low (6-16)  | 9       | 7.5        | 12.6    |
| 2     | Mid (17-27) | 72      | 60         | 23.5    |
| 3     | High(28-39) | 39      | 32.5       | 25.8    |
| Total |             | 120     | 100        | 8.72    |

Table (3) shows that 60% of the respondents fell into the medium category, which is the highest percentage of wrong environmental practices among rural women in studied Governorate area. The high percentage followed at 32.5%. Therefore, the level of wrong environmental practices among rural women in Al-Alam District can be It can be defined as medium and high. This means that 91% of the respondents fell into the medium and high categories of unsound behaviors that cause water pollution, such as washing dishes and clothes in the waterway, and throwing household waste, empty pesticide containers, and sewage into the waterway. This is an indication of rural women's don't have the awareness of the dangers of these

practices and the direct or indirect changes they can cause in the composition of the water, making it less suitable for drinking and design, in addition to the deterioration of its natural, chemical, and biological properties [13].

### Second field: Air

According to the research results, the area of air had the lowest value (11) that represented the unsound behaviors of rural women in Al-Alam District, while (42) represented the maximum value, with a mean of 25.43 and a scale deviation of 5.54. The respondents were divided into three groups using the range law, and (Table 4) illustrates that the middle group had the largest percentage of respondents:

**Table 4. Distribution of female respondents based on unsound behaviors in the field**

| Squ.  | Categoreis         | No. | %    | Rate  |
|-------|--------------------|-----|------|-------|
| 1     | few (11-20)        | 13  | 11.8 | 17.30 |
| 2     | Midd( 21-30)       | 80  | 67.6 | 25.01 |
| 3     | High( More than31) | 27  | 22.6 | 33.90 |
| Total |                    | 120 | 100% |       |

From Table (4) shows that (67.6%) of the respondents fall into the medium category, which is the highest percentage of the level of their unsound behaviors of rural women in the field of air pollution, followed by the high category with a percentage of (22.6%). Therefore, the level of their unsound behaviors women in the field of air pollution can be described as average and tending to increase. This result indicates that more than 89% of the respondents apply unsound behaviors that pollute the air, such as burning household waste, garbage, and crop residues, not burying dead animals, remains of slaughtered animals and birds, and building poultry farms in fields close to villages and cities. This is an indication of rural women's lack of awareness of the danger of these

practices and the change they cause in the concentration of air- making materials in a way that makes them harmful to human health [14].

**The third field: Food:** The study results pointed out that, with an arithmetic mean of (23.83) and a scale deviation of (5.88), the lowest number representing the unsound food-related behaviors of rural women in the Alalm district was (8), while the highest value was (39). The respondents were divided into three categories using the range law, and it was discovered that the middle category had the highest percentage of respondents, followed by the high category (Table 5). This suggests that rural women's level in the field of food is average, tending towards high, and this is a good indicator of their behavior in this area.

**Table 5. Female respondents based on unsound behaviors level in felid of Food**

| sq<br>u | Categories    | Freq. | %    | Avarege |
|---------|---------------|-------|------|---------|
| 1       | Low (8-17 )   | 6     | 6    | 11.32   |
| 2       | Midd (18-27 ) | 63    | 52.5 | 23.22   |
| 3       | High (28-39 ) | 51    | 42.5 | 36.95   |
| Total   |               | 120   | 100  |         |

**Fourth Felid: Agricultural Land**

Table (6) appears the distribution of rural women across agricultural land under statistical analysis.

Table (6) shows that (49.1%) of the respondents fall into the medium

category in the field agricultural land, which is the highest percentage of the level of their unsound behavior in Al-Alam District in Salah al-Din Governorate.

**Table 6. Distribution of female respondents based on unsound behaviors in agricultural land felid**

| squ | Categories         | Freq | %    | Average |
|-----|--------------------|------|------|---------|
| 1   | Low (10-17 )       | 15   | 12.5 | 13.8    |
| 2   | Mid (18-25 )       | 59   | 49.1 | 22.3    |
| 3   | High (More THAN26) | 46   | 38.4 | 34.5    |
|     | Total              | 120  | 100  |         |

This was followed by the high category at (38.4%). Therefore, the level of their unsound behavior among rural women in Al-Alam District in the field of agricultural land can be described as average, tending to increase. This result indicates that more than 87% of the respondents apply unsound behaviors on agricultural land, such as the excessive and soil-stressing use of fertilizers and chemical

pesticides, and the failure to implement a crop rotation system. This is in addition to the ill-considered urban expansion witnessed in the district at the expense of agricultural land, which constitutes an overuse of agricultural land [2].

**Third Objective-Descending order of study fields according to weight percentage.**

As indicated in (Table 7), investigation disciplines were sorted

by weight percentage in descending order.

**Table 7. Ranking of research fields in descending order of importance**

| Squ. | Felids           | Average | Maximum Grade | Weight percent | Ranking |
|------|------------------|---------|---------------|----------------|---------|
| 1    | Agriculture Land | 23.53   | 36            | 65.36          | 1       |
| 2    | food             | 23.83   | 39            | 61.10          | 2       |
| 3    | Air              | 25.43   | 42            | 60.54          | 3       |
| 4    | Water            | 20.63   | 39            | 52.89          | 4       |

Table (7) shows that the agricultural land sector, in terms of the unsound behaviors applied by rural women in Al-Alam District, ranked first in terms of importance of the sectors, with a percentage weight of (63.36). This may be due to the fact that most of the rural women's activities are domestic, farm work, and raising animals and poultry, while the field of dealing with agricultural land and construction is carried out by men. Therefore, the opinions of rural women came in terms of the importance of having a role in this sector. The water sector came in last place with a percentage weight of (52.89). This may be due to the fact that rural women, as a result of their use of water for drinking, cleaning, and swimming, have acquired experience in avoiding unsound behaviors, which made this sector rank last.

**Fourth Objective:-Detect the association between Application Levels of Unsound Environmental Behaviors in Rural Women Al-Alam District/Salah Al-Din province as well as all the following variables:**

**1-Age:** The results showed that the youngest age of the respondents was 18 years, and the oldest was 65 years. The respondents were divided into three categories using the range rule, with the highest percentage (60%) of the respondents falling within the younger age group, as shown in Table (8). Pearson's correlation analysis has been applied to find the association between levels of rural women's application of unsound behaviors and age variable, with a value of (-0.202), this is an inverse relationship according to the statistical confidence level of one percent. According of t value of (-2.81). This

was compared with its tabular value, thus rejecting the null hypothesis and accepting the research hypothesis that confirms this relationship. This relationship can be explained by the fact that the younger age groups of the respondents are more open to information sources and social media, which made them aware of the seriousness of unsound behaviors.

## **2-Information sources:**

Table (8) displayed the values of expressing information sources, where the results revealed that the highest and lowest values of expressing information sources were (22 and 9, respectively).

Pearson's correlation analysis revealed an inversely significant correlation (with a value of -0.28) between levels of rural women's application of unsound behaviors and the variable of exposure to information sources. At probability level (0.01) according to the calculated (t) value of (-3.46) and comparing it with its tabular value of (3.358), thus null hypothesis has been rejected and research hypothesis has been accepted. This relationship can be explained by the fact that the respondents who access multiple sources of information made them aware of the seriousness

of unsound behaviors. This result is consistent with what was found by [12]; conversely current study disagrees with findings of [15].

**4-Marital status:** This variable involved four categories, which are clearly illustrated in Table 8. Spearman's correlation analysis has been applied to test if the level of rural women's application of unsound behaviors is correlated with marital status variable, this test showed insignificant positive correlation between the two variables (at value of (0.11), because the calculated value (t) (2.57) when compared with tabular value., the research hypotheses are rejected, and the null hypothesis, which is accepted.

## **5-Size of family:**

Table (8) showed that the least number of size family was (4) and the most was (20). The respondents were divided into three categories by used range law. To investigate the association between level of rural women's application of unsound behaviors and the variable of the number of size family, Pearson's correlation was used, which reached a value of (-0.117), which is an inverse significant relationship at the level probability of 0.05 according to the calculated (t) value of (-2.457) and compared with value tabular of

(1.658), thus we accepted research hypothesis; such relationship can be interpreted as the greater the number of family members of the respondents, the greater their awareness of the danger of these

practices on the environment. This result is consistent with what was found by [12], and Table No. (8) shows the details of these variables and their relationships with the dependent variable.

**Table 8. Distribution of Rural Women according to the correlation between theirs Level of Unsound Environmental Behaviors and the research variables**

| Factors studied     | Categories       | frequency | %     | average | r value | t value | sig   |
|---------------------|------------------|-----------|-------|---------|---------|---------|-------|
| Age                 | Small (18-33 )   | 72        | 60    | 96.37   | 0.202   | 2.81-   | 0.01* |
|                     | Mid (34-49 )     | 36        | 30    | 115.35  |         |         |       |
|                     | Large (50-65 )   | 12        | 10    | 109.38  |         |         |       |
| Information sources | Low 9-13         | 12        | 10    | 51.86   | 0.28-   | 3.46-   | 0.01* |
|                     | Mid 14-18        | 47        | 39.16 | 66.68   |         |         |       |
|                     | High 19 and more | 61        | 50.84 | 72.33   |         |         |       |
|                     | Illiteracy       | 12        | 10.2  | 90.31   |         |         |       |
|                     | Read and Write   | 7         | 5.4   | 94.3    |         |         |       |
| Level Education     | Elementary       | 22        | 17.4  | 93.6    | 0.194   | 3.76-   | 0.01* |
|                     | Middle           | 14        | 11.3  | 95.14   |         |         |       |
|                     | Preparatory      | 15        | 13.4  | 94.4    |         |         |       |
|                     | Institute        | 21        | 17.3  | 111.88  |         |         |       |
|                     | College          | 22        | 18.4  | 118.65  |         |         |       |
|                     | High School      | 7         | 5.8   | 127.00  |         |         |       |
| Marital status      | Single           | 41        | 34    | 47.98   | 0.11    | 0.2     | n.s   |
|                     | Married          | 60        | 50    | 49.69   |         |         |       |
|                     | Widowed          | 12        | 10    | 47.15   |         |         |       |
|                     | Divorced         | 7         | 6     | 46.8    |         |         |       |
| Size of family      | Small (8-4)      | 30        | 25    | 50.49   | 0.177   | 2.457-  | 0.05* |
|                     | Mid( 9-13 )      | 50        | 41.6  | 54.10   |         |         |       |
|                     | Large (14-18)    | 40        | 33.4  | 53.4    |         |         |       |

**5- Identifying the regression relationship between rural women's unsound behaviors in Al-**

**Alam district and each of the four research fields mentioned in the second objective:**

Regression analysis was used to determine the regression association among levels of rural women's application of unsound behaviors with totality of the four domains

studied in the second research objective, as well as with each of those domains individually. (Table 9) illustrates this -:

**Table 9. The regression relationship between the unsound behaviors of rural women in ALam districts and each field of research**

| Factors studied     | r    | R <sup>2</sup> | Adj R <sup>2</sup> | M.SE  | b                          | F            | Sg        |
|---------------------|------|----------------|--------------------|-------|----------------------------|--------------|-----------|
| Agriculture land    | 0.38 | 0.14           | 0.14               | 79.61 | 71.96<br>0.87**            | 45.67*<br>*  | **        |
| Constant food       | 0.47 | 0.22           | .0.22              | 72.23 | 54.56<br>**1.767<br>0.73** | 39.51*<br>*  | **        |
| Constant Air        | 0.51 | 0.26           | 0.25               | 69.07 | 50.77<br>0.60**<br>0.61**  | 32.25*<br>*  | **        |
| Constant Water      | 0.55 | 0.30           | 0.29               | 65.69 | 49.36<br>0.59**<br>0.58**  | 29..21*<br>* | **        |
| Constant All fields | %100 | %100           | %100               | 000   | -----                      | -----        | mo<br>ral |

When the variable of applying unsound environmental practices in the food sector is added, this variable explains 22% of the variation in respondents' unsound environmental practices. The coefficient of determination (R<sup>2</sup>) was 0.22, significance of model (f), the equation below illustrates this:-

$$\hat{Y}=71.6 + 0.87$$

When the variable of applying unsound environmental practices in the **field of food** was included, it explained (22. %) of the changes in

the respondents' unsound environmental practices. The R<sup>2</sup> value reached (0.22) and importance of F-model seen in equation below:

$$\hat{Y}=54.56 + 0.73$$

When the unsound environmental practices of rural women were included in the field of air, it explained.0.26% of the respondents' unsound behaviors. The R<sup>2</sup> value reached (0.25), significance of F-model (f) as illustrated in equation below:-

$$\hat{Y}=50.77 + 0.60$$

When the variable of applying unsound environmental practices in the field of water was included, it explained (0.30%) of the changes in unsound environmental practices. The R<sup>2</sup> value for the respondents reached 0.59, revealed importance of F-model; as illustrated in equation below:

$$\hat{Y}=49.36 + 0.59$$

When all fields inclusive in this analysis were included, it had been demonstrated that they elucidated 100% of alterations in rural women's application of unsound environmental behaviors. This is a positive indicator of the researchers' sound selection of fields that include unsound environmental behaviors and their comprehensive coverage of all of them. The fields varied in their relative importance.

### Conclusions

1. The present findings demonstrated that level of applying the unsound environmental behaviors by rural women at Al-Alam district of Salah al-Din province was generally average. Therefore, it can be concluded that there is an urgent need in the region to address this deficiency.
2. There is a need to intensify guidance and educational activities in the field of agricultural land

protection from environmental pollution.

3- The results showed a clear inverse relationship between unhealthy behaviors and the variables of age, educational level, sources of information, and family size. Consequently, it has been concluded that the studied variables play a significant positive role in diminishing the practice of unhealthy behaviors among rural women.

4. There is a weakness in extension and educational activities directed at rural women and a small number of female extension workers in the research area.

5. Outcomes of regression analysis demonstrated that research areas covered by this study explained 100% of the variations in the application unsound environmental behaviors among rural women in the study area. This provides clear evidence of the study's accuracy and its comprehensive coverage of all the unsound environmental behaviors investigated.

### Recommendations

1. Agricultural extension organizations and entities providing services to women in Salah al-Din Governorate should implement guidance and awareness campaigns to reduce the incorrect

environmental behaviors revealed by the study.

2. The need to focus on agricultural extension directed at rural women and allocate a sufficient number of female extension workers for this purpose.

3. The agricultural authorities in Salah al-Din province should employ the fields and areas identified in present study as a

reference framework, regarding them as a practical guide to address to address and avoid those behaviors in the future.

4-Agricultural training center at this province must organize various teaching courses for rural women, emphasizing the importance of addressing incorrect environmental practices and explaining their current and future dangers to everyone.

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