Non-verbal communication skills of agricultural extension workers in Salah al-Din Governorate / Iraq

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Abstract

The study aimed to identify the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate in general and to determine the relationship between the level of non-verbal communication and positive variables (age, educational attainment, contact with information sources, academic specialization, specialists towards extension work skills), and the research community for all agricultural employees successfully on the number of links, so what is the work in (Salah al-Din Employment Directorate, all its affiliated sub-branches, the extension center and its affiliated extension farms), the total study community (409) subjects, A proportional random sample of (196) respondents was selected, representing 48% of the total study population. The results showed that the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate is average and tends to decline. We conclude from this that there is a deficiency in the effective use of body language, which may be due to poor training and heavy reliance on traditional verbal communication. The results also showed a significant correlation between non-verbal communication skills and independent variables. In light of the results and conclusions, the researcher recommended designing specialized training programs that focus on the importance of body language in general in agricultural extension work to ensure more effective communication of information and the inclusion of non-verbal communication skills in academic curricula in universities and colleges to qualify agricultural graduates and to be in the form of a complete subject.

Key words: Skills, Non-verbal communication, Agricultural extension workers.

Introduction and research problem :

Communication between humans is a human phenomenon that began and developed with the emergence and development of human life. Since the existence of man, he began communicating with others from the members of the family, tribe, or society existing at that time, in order to express basic needs such as the need to understand others or to express what he wants or what he feels towards others (1). Communication is the process through which two or more people exchange ideas, facts, feelings, and impressions in ways that each of them acquires a common understanding of the

meaning and intent of the message (2). Communication revolves around two main elements, which are (the sender and the receiver), whether the communication is verbal or non-verbal, as the sender sends a message to the receiver through a specific means or communication channel, and the receiver receives the message and understands it. Communication is a fundamental pillar in all areas of life (3). Non-verbal communication is one of the basic pillars of agricultural guidance operations, as it contributes in a way, It is important in enhancing farmers' understanding of extension messages, especially in rural environments where individuals may face difficulties in absorbing complex technical information through verbal language alone. Non-verbal skills such as facial expressions, body language, tone of voice and gestures play a vital role in improving the process of knowledge transfer and facilitating communication between agricultural extension workers and farmers, which increases the effectiveness of extension programmes and contributes to achieving sustainable agricultural development. (4) .

In Salah al-Din Governorate, which relies heavily on the agricultural sector as a main source of livelihood and economic development, the role of agricultural extension in improving productivity and promoting sustainable agricultural practices is prominent (5). From this standpoint, developing non-verbal communication skills among agricultural extension workers is essential to ensure that information reaches farmers clearly, especially in light of the cultural and educational diversity among rural residents. For example, some farmers may find it difficult to understand scientific terms or technical instructions provided verbally, while they are more responsive to practical explanations that rely on visual gestures and kinetic representation (6).

Rural development plays a major role in supporting the agricultural sector as it is linked to the ability of agricultural extension to provide practical solutions to farmers to help them improve production and achieve sustainability (7). Here, the role of non-verbal communication appears as an effective tool in gaining the trust of farmers, building strong relationships with them, and enhancing positive interaction between the extension worker and the farmer. The extension worker who has the ability to use visual communication and appropriate body expressions can have a greater impact on farmers' behavior and motivate them to adopt modern agricultural practices (9).

The weakness of non-verbal communication skills among agricultural extension workers may lead to misunderstanding, low level of interaction with farmers and thus reduce the effectiveness of extension programs. Therefore, improving these skills through continuous training and awareness of their importance is an essential step towards developing agricultural extension in Salah al-Din Governorate

and enhancing its role in achieving sustainable rural development. (10) The research problem lies in the existence of a clear gap in the level of use of non-verbal communication skills among agricultural extension workers, which may negatively affect the quality of communication with farmers. Despite the importance of these skills in facilitating the transfer of technical information and enhancing trust between agricultural extension workers and farmers, However, there are indications that they are not being exploited adequately or effectively. The lack of specialized training in the field of non-verbal communication increases the difficulty of dealing with farmers who may face challenges in understanding instructions. In addition, agricultural extension workers may not have sufficient awareness of the importance of body language, gestures and tone of voice in building positive relationships with farmers. This negatively affects productivity and hinders the achievement of the desired agricultural development. The current research came to answer the following question:

- What is the level of non-verbal communication skills of agricultural extension workers in Salah al-Din Governorate in general?.

Research objectives:

First: Identify the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate in general.

Second: Determine the correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and the following independent variables (age, academic achievement, specialization, contact with information sources, and attitude towards extension work).

The importance of the research:

The importance of this study comes from its addressing one of the contemporary and important topics in light of the interest directed to it by the countries of the world with the differences in objectives, which must require the creation of specific applications and ethical frameworks based on the principle of acceptable changes and modifications in human behavior. In addition to the importance of agricultural guidance in bringing about the desired behavioral changes in knowledge, skills and attitudes among farmers and to contribute to changing the behavior of individuals, their concepts and customs. This change is necessary for rural communities to grow. The agricultural guidance apparatus also transfers new knowledge and experiences so that local communities can keep pace with the processes of continuous change in advanced societies, and thus raise the economic level of rural society by encouraging the adoption of modern agricultural ideas by farmers.

Defining the research community and sample:

The research area included agricultural employees who hold a preparatory certificate or above working in (the headquarters of the Salah al-Din Agriculture Directorate and all its affiliated agricultural departments and the extension center and its affiliated farms, Al-Dour Farm and Balad Farm), so that the total study community became (409) respondents (according to the official records of the Agriculture Directorate and the extension center). A research sample consisting of (196) respondents was selected based on the sample identification table of Krejcie (1970: 608), as this sample represents 48% of the total study community. The sample was drawn from the districts randomly, taking into account the proportionality in distribution to the various districts included in the research.

Measurement of independent factors:

1- Age: The variable was measured by the number of years of the respondent's age at the time of data collection.

2- Educational attainment: This variable was measured at the following levels (Agriculture Preparatory, Agriculture Institute, Bachelor of Agriculture, Higher Diploma in Agriculture, Master of Agriculture, PhD in Agriculture) and the following weights were given (1, 2, 3, 4, 5, 6) respectively.

3- Contact with information sources: This variable was measured by identifying (8) sources for obtaining information and placing the following alternatives in front of them (often, sometimes, rarely, I do not contact) and the following values were given (3, 2, 1, 0) respectively, thus the level of contact ranges between (0-24) degrees.

4 - Academic specialization: This variable was measured at the following levels (guidance, non-guidance) and the following weights were given (2, 1) respectively.

5 - Attitude towards guidance work: This variable was measured by identifying (6) paragraphs in front of which the following alternatives were placed (agree, neutral, disagree). The weights (3, 2, 1) were given to the positive paragraphs and the weights (1, 2, 3) to the negative paragraphs and the values ranged between (6 - 18) degrees.

Measuring the level of non-verbal communication skills:

Non-verbal communication skills were measured through (65) paragraphs, where each paragraph represents information related to this type of skills according to its own field. The scores were distributed to the specified fields with five alternatives for the answer being presented: (always happens, often happens, sometimes happens, rarely happens, does not happen) and the weights

were given (5, 4, 3, 2, 1) respectively, so the total score for the answer ranges between (65 - 325) points, as shown in Table (1) below:

Table No. (1) shows the theoretical range of the fields.

Domain	Number of paragraphs	Domain score
Domain of eye contact skills	14 paragraphs	14 – 70
Domain of hand and body movement skills	24 paragraphs	24 – 120
Domain of facial expression skills	11 paragraphs	11 – 55
Domain of personal distance skills	7 paragraphs	7 – 35
Domain of vocal tone skills	9 paragraphs	9 – 45
Total	65 paragraphs	65 – 325

Statistical methods:

In order to achieve the study objectives, it is necessary to classify and analyze the data and reach the results and display them in their final form. The following statistical methods were used (range, category length, frequency distribution, arithmetic mean, standard deviation, Pearson correlation coefficient, Spearman correlation coefficient, t-test).

Results and Discussion

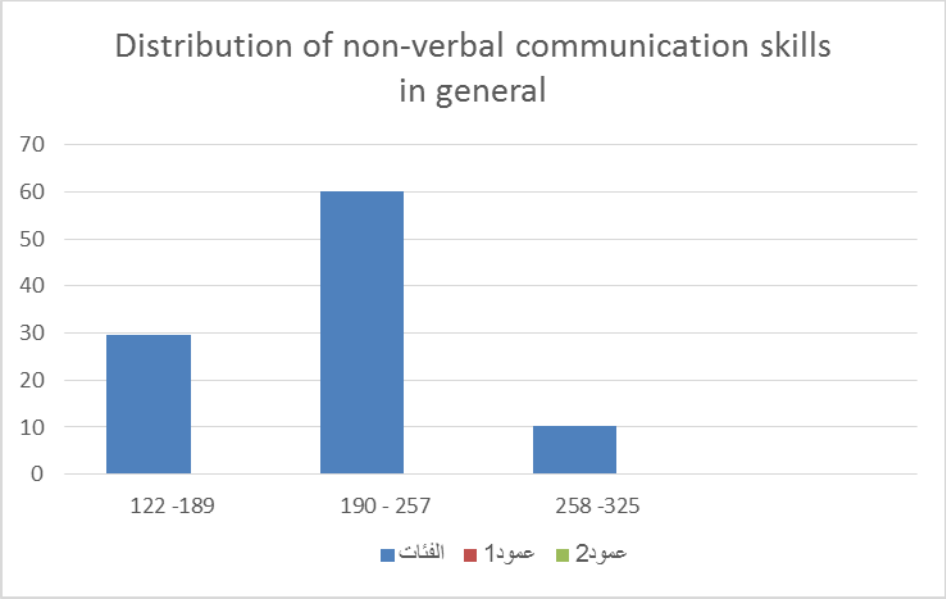
First objective: To identify the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate in general.

The results showed that the levels of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate in general ranged between (112-325) degrees. With a general average of (223.71). And a standard deviation of (22.53). The respondents were divided according to the range law into three categories as in Table No. 2:

Table (2) shows the distribution of respondents according to the categories of non-verbal communication skills level in general.

Categories	Number	Percentage ratio	Average skill	Overall average	S.d
Low (122 – 189)	58	29.60	155.2	223.71	22.53
Medium (190 – 257)	118	60.20	225.70		
High (258 – 325)	20	10.20	288.64		
Total	196	100%			

Table No. (2) shows that the high level of communication skills category reached 10.20%, while the medium category reached 60.20%, while the low category reached 29.60%. The result indicates that the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate is average and tends to decline, which reflects a limitation in the effective use of gestures, facial expressions and body language in general while communicating with farmers. This may be due to poor training and lack of awareness of the importance of non-verbal communication or excessive reliance on traditional verbal communication. This deficiency affects the quality of knowledge transfer and persuasion, which may limit the adoption of modern agricultural practices. Therefore, improving these skills through specialized training programs can enhance the efficiency of agricultural extension and increase its positive impact on the agricultural sector. Figure No. (1) shows the result of this goal:



The second objective: To identify the correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and the following independent variables:

1- Age: The results showed that the youngest age of the respondents was (22) years and the oldest age was (59). The respondents were divided into three categories according to the range law as shown in Table No. (3).

Table No. (3): Distribution of respondents according to age groups

Categories	Number	Percentage ratio	Average skill	Value r	Value t
Young age(22 – 34)	76	38.77	220.73	0.040	*Apparent

Middle aged (35 – 47)	101	51.53	227.38		relationship
Old aged (48 –over)	19	9.70	236.05		
Total	196	100%			N.S

* Indicates that the relationship is not significant at the 0.05 probability level.

Table (3) shows that 51.53% of the respondents were in the middle-aged category, which is the highest percentage, followed by the young age category with a percentage of 38.77%, while the elderly category had the lowest number with a percentage of 9.70%. To find the correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and age, Pearson's correlation coefficient was used, which had a value of 0.040. This indicates that there is no significant correlation at a probability level of 0.05. Thus, we accept the null hypothesis that states (there is no correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and age). The reason may be that these skills do not develop automatically with age, but rather depend on professional experience and direct interaction with farmers. In addition, the nature of work in agricultural extension sometimes imposes on everyone, regardless of age, to use similar non-verbal communication methods. In addition, workers of different ages may have been exposed to the same training methods or practical environments, which reduced the impact of age differences on these skills.

2- Educational attainment: The results showed that the smallest category of respondents were those with a preparatory certificate, as their percentage reached 3.57%, and the largest category of respondents were those with a bachelor's degree, as their percentage reached 46.43%. The respondents were divided into categories as shown in Table No. (4).

Table No. (4): Distribution of respondents according to academic achievement categories

Categories	Number	Percentage ratio	Average skill	Value r	Value t
Agriculture Secondary	7	3.57	207.28		
Agricultural Institute	8	4.09	218		
Bachelor's	91	46.43	222.93		**3.141
Higher Diploma	15	7.65	229.2	0.22	
Master's	56	28.57	244.85		
PhD	19	9.69	260		Morale
Total	196	100%			0.01

** Indicates that the relationship is significant at the 0.01 probability level.

Table No. (4) shows that 46.43% of the respondents are bachelor's degree holders, which is the highest percentage, followed by master's degree holders with 28.57%, while the doctorate degree holders reached 9.69%, followed by higher diploma holders with 7.65%, followed by institute certificate holders with 4.09%, while the lowest percentage is middle school certificate holders with 3.57%. To find the correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and academic achievement, Spearman's correlation coefficient was used, which had a value of 0.22. To ensure the significance of the relationship, the (t) test was used, and its value was 3.141**, which is greater than the tabular t value. This indicates the existence of a significant correlation at a probability level of 0.01. Therefore, we reject the null hypothesis that states (there is no correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and academic achievement) and accept the alternative hypothesis. This may be because higher education fosters a deeper understanding of the importance of communication and gives individuals greater opportunities to acquire and develop these skills through training, research, and academic interaction. Academic achievement also gives individuals greater confidence in communication, which is reflected positively in their use of body language, facial expressions, and personal distance more effectively.

3 - Contact with information sources: The results showed that the highest score obtained by the respondents in the variable of contact with information sources was (24) points, and the lowest score obtained by the respondents was (9) points. The respondents were divided according to the range law into three categories, as shown in Table No. (5).

Table No. (5): Distribution of respondents according to categories of contact with information sources

Categories	Number	Percentage ratio	Average skill	Value r	Value t
Low (9 – 14)	61	31.13	215.5	0.488	**7.787
Middle (15 – 20)	111	56.63	222.92		
High (21 – over)	24	12.24	275.22		Morale 0.01
Total	196	100%			

** Indicates that the relationship is not significant at the 0.01 probability level.

Table No. (5) shows that 56.63% of the respondents were in the medium communication category, which is the highest percentage, followed by the low category with 31.13%, while the high category is the lowest category with 12.24%. To find the correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and

communication with information sources, Pearson's correlation coefficient was used, which had a value of 0.488. To ensure the significance of the relationship, the (t) test was used, and its value was 7.787**, which is greater than the tabular t value. This indicates the existence of a significant correlation at a probability level of 0.01. Thus, we reject the null hypothesis that states (there is no correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and communication with information sources) and accept the alternative hypothesis. The result indicates that communication with information sources enhances the non-verbal communication skills of agricultural extension workers, as obtaining correct and effective information requires continuous communication with experts and various sources. The more the agricultural extension worker interacts with These sources increase his chances of acquiring knowledge and techniques that help him improve his ability in non-verbal expression. Also, interaction with multiple sources enhances awareness of the diversity of communication methods, which reflects a positive impact on his ability to use hand and body movements and facial expressions effectively while dealing with farmers.

4- Academic specialization: The results showed that the smallest category of researchers were those specializing in agricultural extension, which amounted to 33 researchers, and the highest category of researchers was those specializing in non-extension, which amounted to 153 researchers, as shown in Table (6):

Table No. (6): Distribution of respondents according to specialization categories

Categories	Number	Percentage ratio	Average skill	Value r	Value t
Non guidance major	163	83.17	205.83		**8.699
Counseling Specialist	33	16.83	269.73	0.53	Morale
Total	196	100%			0.01

** Indicates that the relationship is significant at the 0.01 probability level.

Table No. (6) shows that 83.17% of the respondents are not academically specialized in agricultural extension and that only 16.83% of the respondents are graduates specialized in agricultural extension. To find the correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and the specialization, Spearman's correlation coefficient was used, which had a value of 0.53. To ensure the significance of the relationship, the (t) test was used, and its value was 8.699**, which is greater than the tabular t value. This indicates the existence of a significant correlation at a probability level of 0.01. Thus, we

reject the null hypothesis that states (there is no correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and academic specialization) and accept the alternative hypothesis. This may be due to the fact that the academic studies of extension specialists include theoretical and practical subjects that focus on effective communication with farmers, which gives them a deeper understanding of the importance of body language and develops their awareness of its importance. Academic training also provides them with greater opportunities to practice these skills, which enhances their ability to communicate information effectively and achieve extension objectives more efficiently.

5- The trend towards guidance work: The results showed that the highest score obtained by the respondents in the variable of the trend towards guidance work was (18) points and the lowest score obtained by the respondents was (9) points. The respondents were divided according to the range law into three categories as shown in Table No. (7).

Table No. (7): Distribution of respondents according to categories of attitudes towards guidance work

Categories	Number	Percentage ratio	Average skill	Value r	Value t
Low (9 – 12)	39	19.90	201.16	0.306	**4.476
Medium (13 – 16)	141	71.94	221.01		
High (17 – over)	16	8.16	261.03		Morale 0.01
Total	196	100%			

** Indicates that the relationship is not significant at the 0.01 probability level.

Table No. (7) shows that 71.94% of the respondents were in the medium category of the trend towards extension work, which is the highest percentage, followed by the low category with a percentage of 19.90%, while the high category is the lowest percentage of 8.16%. To find the correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and the trend towards extension work, Pearson's correlation coefficient was used, which had a value of 0.306. To ensure the significance of the relationship, the (t) test was used, and its value was 4.476**, which is greater than the tabular t value. This indicates the existence of a significant correlation at a probability level of 0.01. Thus, we reject the null hypothesis that states (there is no correlation between the level of non-verbal communication skills among agricultural extension workers in Salah al-Din Governorate and the trend towards extension work) and accept the alternative hypothesis. The result indicates that the positive trend towards extension work enhances the non-verbal communication skills of agricultural extension workers.

When the employee has a great motivation and interest in extension work, they They develop non-verbal communication skills naturally because they focus on improving their interaction with farmers and this positive trend motivates them to use body expressions more effectively to achieve agricultural extension goals and thus the level of non-verbal skills increases in parallel with their motivation to work in this field.

Conclusions:

1- The results of the study showed that the level of non-verbal communication skills among agricultural extension workers is average and tends to decline. We conclude from this that there is a deficiency in the effective use of body language, which may be due to poor training and heavy reliance on traditional verbal communication. Therefore, enhancing these skills through specialized training programs will contribute to improving the quality of extension and increasing the adoption of modern agricultural practices more effectively.

2- The results of the study showed that the level of non-verbal communication skills among agricultural extension workers is affected by multiple factors, as it is positively related to academic specialization, educational level, contact with information sources, and the trend towards extension work. We conclude from this that education, experience, and interaction enhance the efficiency of non-verbal communication, which confirms the importance of developing these factors to raise the quality of agricultural extension and improve employee communication with farmers more effectively.

3- The results showed that the level of non-verbal communication skills is not affected by age. We conclude from this that non-verbal skills do not develop automatically with age or based on personal characteristics, but rather require continuous education and training. This confirms that the development of non-verbal communication depends on practice and experience gained in the work environment and not only on individual or innate factors.

Recommendations:

1- Design specialized training programs: The Salah al-Din Agriculture Directorate should develop training courses to enhance non-verbal communication skills among agricultural extension workers, focusing on facial expressions and body language in general to ensure more effective communication of information.

2- Incorporate non-verbal communication skills into academic curricula: Include study materials on non-verbal communication techniques within agricultural extension programs in universities and colleges to qualify graduates and to be in the form of a complete course.

3- Activate practical workshops in the work environment: The Agriculture Directorate should organize practical workshops in the field to train agricultural extension workers on effective communication methods with farmers and provide direct feedback to improve their performance.

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