



The relationship between the leadership role and the cultural variables of the natural leaders in the countryside of Qena governorate, Egypt

El-Reedy G. H., Al-Ghazaly R. M. M.*

Agricultural Economic Department, Faculty of Agriculture, Minia University, Minia, Egypt

Abstract

The research aims to identify the perceptive role of natural leaders on the importance of the problem of water pollution and work to solve it by disseminating a culture of modern treatments and using nanotechnology applications to solve that problem, and the nature of the variables studied, and the field study was conducted to search in the village of Kalahin Abnud in Qena governorate, Egypt and the population of the village is 334 thousand people The descriptive analytical method was used, and the mean, iterations, percentages and simple correlation coefficient were used in the statistical analysis. The most important results of the research were as follows: 1. The majority of individuals in the study sample fall into the category of (20-39) years, although they are opinion leaders, and 36.1% are over sixty years, while 23.3% of the total sample falls in the age group (40-59 years). 2. The vast majority of the respondents are married. 3. The highest percentage of natural leaders who hold an above average qualification is 26.7%, followed by a higher qualification by 20%, the intermediate qualification 20%, and the preparatory 18.7 followed by reading and writing 13.3%, and finally the illiterate 1.3%. 4. That most of the sample population 91.3% have a high degree of understanding and awareness of the meaning of leadership and service to the people, and that only 2% who do not have an awareness of the meaning of leadership. 5. About 37.4% of the total respondents fall in the high category to educate residents about the problems of water pollution. 6. That the degree of the leadership's role in knowing and educating the people about water pollution was 37.4% of the leaders playing a highly conveyed role in communicating information to the people, and that 52.6% contribute a moderate degree, only 10% contribute a low degree and this is a satisfactory result.

Keywords: the relationship, the cultural variables, the natural leaders.

*Corresponding author: Al-Ghazaly R. M. M.,
E-mail address: rasha.elghazaly@yahoo.com

1. Introduction

Leadership is defined as the ability to influence others and direct their behavior to achieve common goals and coordinate their efforts to provide their best to achieve the goals and intended results to reach the goals set and pushing others to achieve the desired goal (Al-Fadl, 2013). It can be said that the natural leadership is the set of behaviors and actions practiced by the natural leader in the group, which is the result of an interaction between the qualities of the leader and the follower and the characteristics of the task and the social coordination and cultural context and urges individuals to achieve the goals assigned to the group with the greatest degree of effectiveness through the roles assigned to the natural leader and his awareness of the problems that are represented in Addressing problems and working to solve them (Al-Amyan, 2004). He also defined (Maher, 2014) leadership as being a person's process of persuading other people in a specific group and playing the role of role model, and his role and persuading people lies through seeking and reaching to achieve desired goals, and shows that leadership depends on having a group interacting with each other, in order to Among them is a leader who is able to influence its members, and the group delegates informal powers stemming from the group's acceptance of this leader. Sociologists' views abound in defining natural leaders and leaders, some of whom talked about natural leadership as it stems from society, it is a capacity that individuals enjoy in some of their own attitudes and have influence on members of the group and society to

achieve their goals through their cooperation and participation in work steps, and natural leaders They have a vital role in arranging and coordinating the efforts exerted so that they have a status that makes them gain appreciation and respect not from an official position but from their social position in society (Rifai, 2013). Leadership is a process of interaction between the leader and the followers in which the leader has a positive influence on their behavior and feelings and directs them to a specific direction that serves the goals of society, and successful leadership is the one that coordinates efforts and urges individuals to work and motivates them to convince and desire to achieve goals, and natural leadership appears within groups and groups It is the environment or environment in which leadership and leadership are established that includes influencing a group of individuals with a common goal and the group can be small or large (Makawi, 2013). Al-Sayed (2019) stated that leadership is an important matter in any society and in it the leader depends on the perceptual approach to thinking and therefore involves perception and processing information and understanding and knowledge and sometimes creativity and these are considered one of the most important characteristics of the leader who has the ability to make decisions in the problems of society with the help of his followers and leaders cannot Naturalists succeed without the help of its followers, and it must build and maintain the morale to follow in a continuous and desirable manner. The leadership is also defined as co-opting members of the group to

cooperate in achieving a common goal that they agree with the leader, and benefit from its importance, so they interact together in a way that ensures the cohesion of the group in its relations and its direction in the directions that "maintain the integrity of its work." It is also known, "It is the process by which a leader can influence the thinking of others, control their feelings and direct their behavior." It is also, "the behavior that the individual performs as it directs group activity towards a common goal (Thabet, 2013). From the above, it is clear from the previous presentation that natural leadership is a positive activity carried out by a person with an informal decision that has leadership characteristics and characteristics that lead a group of individuals to achieve clear goals that serve their community by means of influencing them (McEntire and Greene-Shortridge, 2011) and given the importance of the general role that leaders play in influencing other people's thoughts, feelings, behavior, and directing them towards a common collective goal, and from the point of view of achieving this goal, many researchers were interested in studying the roles of natural leaders as a source of knowledge and transmitters of them, and therefore the relative roles of natural leaders in doing The multiple publishing duties and tasks that underlie this study, which is represented by: (the carrier - the consultant - the trainer - the innovator - the defender - the mediator - the resident - the organizer) (Diop, 2006). It is clear to us from the previous presentation in the research the importance of the role of leadership and the cognitive role of

natural leaders who play in addressing the problems of the local community because of their impact on others, as well as their role in participating in development projects and solving problems facing the local community, including the problem of water pollution and the spread of treatment cultures modern, such as the applications of nanotechnology and their impact on others. The success or failure of any program that aims to bring about change in society depends heavily on the ability, cooperation and awareness of leaders of the problem, so it was necessary for us to study the actual role of natural leadership and gets to know the cognitive role and the study problem can be. Presented In answering the questions: A- What is the actual cognitive role of natural leaders in educating society in addressing the problem of water pollution? B- What is the actual role of natural leaders in rationalizing the consumption of drinking water?. The objectives of the research were to answer the previous questions; the following research objectives can be formulated: 1. Knowing the characteristics of the subjects and the level of awareness. 2. Knowing the significance of the differences, personal variables and the cognitive role of natural leaders. 3. Knowing the actual role of natural leaders in raising awareness of water problems.

2. Materials and methods

The study used the descriptive analytical approach in addition to the comprehensive social survey method in the sample and the quantitative approach to extract the results. The study sample

was chosen to be a comprehensive sample, so all natural leaders in the village were chosen based on the comprehensive statistical survey, and the number of natural leaders reached by group discussions they were confined to the village 150 respondents. All individuals who are considered natural leaders in the village were chosen through several group discussions from all over the village in youth centers and gathering places and others, and data was collected deliberately by way of studying the case in the village of Kalahin Abnoud as it is a mother village and follows the following villages (Kahlein Abnoud - Karam Omran). The respondents were identified through a group discussion with a group from the village, where the natural leaders who can be referred to at any time are identified. The questionnaire was initially tested on 30 respondents from the village of Kalahin Abnoud to ensure the validity of the questions and the respondents' understanding of them to obtain the required responses accurately.

2.1 Field of study and method of selecting a sample

Geographical area: Qena Center - Kalahin Abnoud Village. The human field: It refers to the individuals to whom the field study was applied. Time domain: means the time period during which field data was collected, as field data was collected in the period during October, November, December 2017, and January of 2018.

2.2 Sample selection method

This study was conducted on the natural

leaders who were chosen. A sample of 150 citizens was selected for adults aged 18 years who obtained an identity card without regard to gender, religion, profession or any other variable. A form was tested.

2.3 Type of study and curriculum used

This study is considered a group of descriptive and analytical studies because it was based on describing the study community and analytical by selecting causal hypotheses related to the role played by leaders and it depends on the comprehensive social survey method through codified or semi-codified interviews on the study community. It also depends on the case study methodology as it is studying the village of Kalahin Abnoud.

2.3.1 Quantitative data

The questions were set so that the response will be in a digital (quantitative) form according to specific units of measurement.

2.3.2 Qualitative data

The questions were set so that the response would be verbal (qualitative), and these responses were coded with code numbers for their scheduling.

2.4 Statistical analysis tools

In light of the objectives of the study, as well as the nature of the data (qualitative - quantitative) and the level of measurement of the variables under study

(nominal - orderly - periodical - relative), some descriptive statistical tools (percentages, repetitions, etc.) were used to describe demographic, social, economic, behavioral and educational variables in That study. Also, the "person correlation" parameter was used in the case of the variables that were measured by a measure of period (quantity) to determine the nature of the relationship between the independent variables of the subjects and the studied dependent variables.

2.5 The variables of the study and its procedural definitions and how to measure them

2.5.1 The dependent variable (The leadership role)

It refers to the role that leaders play in guiding families and contributing to learning about modern treatment and addressing pollution. This variable was measured by the following axes: A. Contribution to the degree of understanding the modern treatment of water: This variable is meant the ability to communicate the leader to understand the modern treatment of water for all audiences and the importance of using nanotechnology, and this variable was measured by asking the researcher ten questions that express the degree of the leaders' contribution to understanding modern treatment. Where I was given the responses three categories and divided into (OK) three degrees and (to some extent) two degrees and (not agree) one degree. This study was considered an indication of the contribution of natural

leaders in understanding modern treatment and the actual extent of the degree of contribution (10-30). B. Contribution to the degree of addressing water pollution: This variable means the ability to communicate to the leader how to address water pollution to the masses, and this variable was measured by asking the researcher ten questions that express the degree of the leaders' contribution to understanding modern treatment. Where I was given the responses three categories and divided into (OK) three degrees and (to some extent) two degrees and (not agree) one degree. And this study was considered as an indication of the contribution of natural leaders in addressing water pollution and the actual extent of the degree of contribution (10-30). The study considered the total sum of the degrees of the previous four axes as an indication of the degree of the leaders' roles in directing the importance of using nanotechnology applications. The overall range of the index ranged between (120-40), where the weak degree (67:40) represents, and the middle degree (94:68) degree, and the high degree represented high (95:120) degrees.

2.5.2 The independent variables

2.5.2.1 The level of general culture

This variable was measured based on the respondent's question about the level of his culture and is defined by the expressions related to that.

2.5.2.2 The nanotechnology culture level

This variable was measured based on the

researcher's question about his knowledge of modern technologies and the use of modern technology.

2.5.2.3 The cultural sources

This variable was measured based on the respondent's question about the confiscation from which he obtained the information and represents him (Question No. 20) in the questionnaire.

2.6 Hypotheses of the study

2.6.1 The first hypotheses

There is a relationship between the following leadership variables (degree of trust in the people - degree of confidence in the government - degree of leadership intelligence - degree of ambition and aspiration - the degree of intellectual analysis) and the degree to which leaders print their cultural roles and guidance for the importance of using nanotechnology applications.

2.6.2 The second hypotheses

There is a relationship between the following leadership (the degree of trust in the people - the degree of confidence in the government - the degree of leadership intelligence - the degree of ambition and aspiration - the degree of intellectual analysis) the degree of contribution to knowledge of water pollution.

3. Results and Discussion

3.1 Cultural characteristics

3.1.1 General culture level

The results of Table (1) showed that most of the respondents (44%) are concerned with the problems specific to the whole country and consequently the general culture is high. Also, 32% of the respondents said the general culture is very high.

Table (1): Distribution of respondents according to the level of general culture.

NO	Categories	Number	%
1	Interested in news of the whole world.	48	32
2	Interested in political and economic news.	27	18
3	Take care of the problems of the whole country.	66	44
4	I only care about my village problems.	13	6
Total		150	100

Source: The study samples.

3.1.2 Nanotechnology culture

The data presented in Table (2) indicate that most of the respondents do not have a culture on the subject of nanotechnology

and its use in water purification in their country where the proportion of those who have a culture was (87.7%), and that 21.3% are those who do not have a culture about nanotechnology.

3.1.3 The concept of nanotechnology for the respondents

The results of Table (3) showed that most of the respondents (58.7%) understood their concept of nanotechnology is the use of modern technology in development, because they are not specialized, and there are 27.3% of the respondents indicated that it is purifying water and most of them may be related to the project. Who works in the village using nanotechnology?

3.1.4 Culture sources

The data of Table (4) related to information sources about nanotechnology, showed that the source of information on nanotechnology is obtained by the leader from the following sources where the percentage of those who obtained his information from the project workers in the village was 33.3% of the sample individuals, and the data indicated that 23.4% obtained information from their attendance at the private seminars in the village and related to the project, and the data also indicated that 22% are working on the project itself, and a very small percentage were searching in the internet.

Table (2): Distribution of the respondents according to the nanotechnology culture.

NO	Nano culture	Number	%
1	Known	118	87.7
2	He do not know	32	21.3
Total		150	100

Source: The study samples.

Table (3) Distribution of respondents according to their concept of Nano.

NO	Nano culture	Number	%
1	New technology	21	14
2	Water Purification	41	27.3
3	The use of technology in development	88	58.7
Total		150	100

Source: The study samples.

Table (4): Distribution of the respondents according to the sources of their culture.

NO	Categories	Number	%
1	Search on the Internet.	15	10
2	Projects that work in this topic.	13	22
3	My work in the project.	17	11.3
4	The project of workers.	50	33.3
5	Attending seminars.	35	23.4
Total		150	100

Source: The study samples.

3.2 With regard to testing the significance of statistical assumption

3.2.1 The relationship between the degree of leadership role of contributing to addressing water pollution and cultural changes

From the first research hypothesis, which states that there is a correlation between the degrees of leadership role in contributing to and addressing water pollution and cultural variables under

study, four hypotheses were statistically derived. To test the significance of the relationship between the degree of contribution in dealing with water pollution and cultural variables, each separately, statistical assumptions were used. The simple correlation coefficient was used for Pearson. The results of Table (5) indicated the significance of the relationship between the degree of contribution in dealing with water pollution and cultural sources, at the level of significance 0.01 where the correlation coefficient value was (0,238).

Table (5): Results of the relationship between the degree of leadership role of contribution to confrontation and cultural changes.

NO	Cultural variables	Correlation coefficient	Level of significance
1	General culture level	0.036	--
2	Nano culture level	0.086	--
3	Cultural sources	0.238 **	0.01

Source: The study samples. P = 3,246. R2 = 0.250.

Based on the previous results, the statistical assumptions related to the variable reject cultural sources, and alternative assumptions are accepted and the rest of the statistical assumptions cannot be rejected. As for the relationship between the degree of contribution in addressing water pollution and cultural variables combined, and by testing the relationship significance, the multiple regression model was used, where the significance of the model was established at the level of significance 0.01 where the calculated value of (P) was 3,246. The coefficient of determination indicated that personal variables account for 25% of Total variance in the dependent variable, the degree of contribution to addressing

water pollution, where the coefficient of determination was 00.250.

3.2.2 The relationship between the degree of leadership role in guiding to understand the importance of using modern treatments to address the problem of water pollution and cultural variables

From the second research hypothesis, which states that there is a correlation between the degree of leadership's role in guidance to understand the importance of using nanotechnology applications and cultural variables under study, they all share one saying that there is no

correlation between the degree of leaders' role in their guidance to understand the importance of using Nano applications Technological and cultural variables under study. To test the significance of the relationship between the degree of leadership's role in directing to understand the importance of using nanotechnology applications and cultural variables, separately, a simple correlation coefficient was used for Pearson, and the results of Table (6) indicated the significance of the relationship between

the degree of leaders' role in their guidance in order to understand the importance of using applications nanotechnology and the Nano scale culture level, at the level of significance 0.01 where the value of the correlation coefficient (0.213). The relationship between the degree of leadership's role in directing to understand the importance of using nanotechnology applications, and the level of general culture at the level of significance 0.05, was correlated with the correlation coefficient value (0,177).

Table (6): Results of the relationship between the degree of leadership role in directing an understanding of the importance of using nanotechnology applications to address the problem of water pollution and cultural variables.

NO	Cultural variables	Correlation coefficient	Level of significance
1	General culture level.	0.177 *	0.05
2	Nano culture level.	0.213 **	0.01
3	Cultural sources.	0.040	--

Source: The study samples. P = 6,017. R2 = 0.199.

Based on the previous results, the statistical assumptions related to the variable are rejected. The Nano scale culture level and the general level of culture. Alternative assumptions are accepted and the rest of the statistical assumptions cannot be rejected. As for the relationship between the degree of leadership's role in directing to understand the importance of using nanotechnology applications and cultural variables combined, and by examining the relationship significance, the multiple regression model was used, where the significance of the model was established at the level of significance 0.01 where the calculated value of (q) was 6,017. The coefficient of determination indicated that the personal variables explain 19% of the

variance in the dependent variable, the degree to which the leaders perform their roles in directing an understanding of the importance of using nanotechnology applications, where the value of the coefficient of determination was 0.199. Based on the findings of the research, a group of these can be proposed, as follows:

- 1- Attention to knowledge of medical leaders assigned in each society.
- 2- Holding training courses for natural leaders by water companies or irrigation departments to spread the cultures of modern treatments as natural leaders realize from their position their leadership role in

- addressing water pollution problems and other problems.
- 3- Preparing media materials (brochures - short films) that explain the importance of water conservation in all audio, visual and print media.
 - 4- Conducting more studies on the rationalization of water use to uncover more social and cultural aspects associated with it.

References

- Al-Amyan, M. S. (2004), *Organizational Behavior in Business Organizations*, Al-Awael Publishing House, Amman, Jordan.
- Al-Fadl, M. A. (2013), *Decision Theories*, First Edition, Dar Al Manhal, Oman.
- Al-Sayed, A. (2019), *Leadership*, First Edition, Arab Group for Training and Publishing, Cairo, Egypt.
- Diop, A. (2006), *Problems and Roles of NGOs*, Dialogue Urbanization No. 4, 1667, International Information Network, New York, USA.
- Maher, A. (2014), *Organizational Behavior*, University House, Alexandria, Egypt.
- Makkawi, A. A. (2013), *Administrative Leadership*, First Edition, Thebes Institution for Publishing and Distribution, Cairo, Egypt.
- McEntire, L. E. and Greene-Shortridge, T. M. (2011), "Recruiting and selecting leaders for Innovation: How to find the right leader", *Advances in Developing Human Resources*, Vol. 13 No. 3, pp. 266–278.
- Rifai, A. (2013), *Preparing Trainers in Human Development*, Faculty of Education, Al-Azhar University, Cairo, Egypt.
- Thabet, T. (2013), *Leadership*, Fourth International College of Sharia Conference, University of Oum El Bouaghi, Algeria.