

Tacit Knowledge and Its Relationship with Administrative Leadership among Employees

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Abstract: This study aimed to identify and apply the reality of administrative leadership performance and their tacit knowledge through the dimensions of the independent variable, tacit knowledge (experience, skill, and thinking ability), and the dependent variable, administrative leadership with its dimensions (democratic leadership, autocratic leadership, and transformational leadership), in research centers affiliated with the Ministry of Higher Education and Scientific Research. The study was grounded in a research problem articulated through a set of intellectual and applied questions related to the variables under investigation. The study was conducted on a group of faculty members and employees at the Psychological Research Center. The study population consisted of (84) faculty members and employees, while the study sample comprised (51) respondents selected from the center.

The researchers adopted a descriptive-analytical approach to analyze the data by designing a questionnaire to collect the required information. Statistical analysis was performed on the scale items to ensure that the measurement instrument met the necessary psychometric properties, namely validity and reliability. The Likert scale method was employed in constructing the questionnaire. Afterward, the final version of the instrument was administered to the study sample, and the results were obtained and discussed using scientific methods in order to achieve the research objectives.

Accordingly, the study sought to identify differences in tacit knowledge practices and leadership styles through enhancing the application of knowledge and technology as educational tools to improve employee performance and strengthen administrative empowerment. The study concluded that tacit knowledge plays a significant role in improving the performance level of administrative leadership within the organization under investigation

Keywords: (Tacit Knowledge, Administrative Leadership) .

1. Introduction:

Knowledge became a modern concept that gained popularity in the late twentieth century, and is considered a critical factor in the success of organizations and improving their performance. Organizations have established what is known as knowledge management to study the methods of using, creating and transferring knowledge among its members. This study aims to enhance the capabilities of the organization and its employees, achieve optimal performance and thus improve the use of resources. Knowledge and leadership are closely linked to the group and its leadership, which highlights the importance of the role of the leader in the process of social interaction. It is one of the main issues in the field of management, and its development keeps pace with the development of the society in which it lives, and its responsibilities increase

with the increase in the requirements and complexities of life. The leadership styles followed by administrative leaders play an effective role in motivating others, arousing their enthusiasm, and directing them to exert more effort and dedication to accomplish their tasks. Given the possibility of choosing the most appropriate and effective methods, it is an effective means of influencing others and motivating management to overcome difficulties. There are many leadership styles in the administrative field, depending on their type, circumstances of practice, type of interaction within the organization, and multiple internal circumstances.

The problem of the study:

Despite the pivotal role of tacit knowledge in achieving the organization's goals and ensuring its survival and continuity, many factors hinder organizations from benefiting from this knowledge and employing it in their various practices and functions. Therefore, it is necessary for organizations to identify the most important challenges facing employees and the restrictions imposed on their freedom to develop tacit knowledge. This requires finding modern working methods to develop this administrative aspect. Administrative leadership is therefore an essential factor in the success of institutions and research centers affiliated with the Ministry of Higher Education, as their effectiveness depends on the ability of administrative leaders to achieve organizational, social and educational goals. However, there are challenges facing administrative performance in these centers, related to weak planning, leadership skills, and the absence of effective mechanisms for follow-up and evaluation. The absence of a clear vision to evaluate the current state of administrative leadership in these centers raises questions about the level of administrative leadership performance and its efficiency in achieving the desired goals. Furthermore, these administrative challenges may lead to underutilization of available resources, which negatively affects the quality of Scouting programs. Accordingly, the research problem is determined in the following question:

1. What is the level of application of tacit knowledge and administrative leadership among workers in research centers?
2. To what extent do the dimensions of tacit knowledge influence the administrative leadership of workers and faculty members in research centers?
- 3- What is the reality of the performance of administrative leaders in the research centers affiliated with the Ministry of Higher Education and Scientific Research?
- 4- To what extent do the dimensions of tacit knowledge, with the dimensions of administrative leadership, contribute to the research center within the study population?
- 5- What is the extent of the influence and connection between tacit knowledge and administrative leadership at the level of the research sample.

Objectives of the study

The current study raises a number of questions:

1. Identify the concepts of tacit knowledge and administrative leadership prevailing in the research center.
2. Analyzing the nature and importance of tacit knowledge in enhancing administrative leadership among employees and teachers at the Center for Psychological Research.
- 3- Identifying the statistical significance of the difference in tacit knowledge among employees and teachers according to the gender variable (males and females)
- 4- Identifying the statistical difference significance in the innovative performance variable among employees and teachers according to the gender variable (males and females)
- 5- Identifying the correlation between tacit knowledge and administrative leadership among the study sample.
- 6- Determining the extent to which the tacit knowledge variable contributes to enhancing and increasing the confidence of administrative leaders in the Center Research.
7. Develop proposals aimed at enhancing the role of tacit knowledge within the organization, given its impact on administrative leaders' adoption of leadership, which contributes to the development and sustainability of the research center.

Study hypotheses

The study hypotheses were formulated in light of the theoretical framework. These hypotheses represent a statement of the subject of the study, and explain the correlation and influence relationships between the dimensions of the variables. To achieve the objectives of the study and test it, a set of main and sub-hypotheses were adopted, as follows:

1. The first main hypothesis:

(There is a statistically significant correlation between tacit knowledge and its dimensions and administrative leadership and its dimensions). Three sub-hypotheses emerge from this main hypothesis: A. The first sub-hypothesis: (There is a statistically significant correlation between the dimension of experience and administrative leadership).

B. The second sub-hypothesis: (There is a statistically significant correlation between the skill dimension and administrative leadership).

C. The third sub-hypothesis: (There is a statistically significant correlation between the dimension of thinking ability and administrative leadership).

2. The second main hypothesis:

(There is a significant effect of the tacit knowledge variable and its dimensions on administrative leadership and its dimensions). Three sub-hypotheses emerge from this main hypothesis: A. The first sub-hypothesis: (There is a significant effect of the experience variable on the administrative leadership variable).

B. The second sub-hypothesis: (There is a significant effect of the skill dimension in administrative leadership).

C. The third sub-hypothesis: (There is a significant effect of the ability to think dimension on administrative leadership).

The hypothetical study chart

The hypothetical chart defines the influence correlations between the study variables, which are the independent variable (tacit knowledge) and the dependent variable (administrative leadership), as shown in the figure:

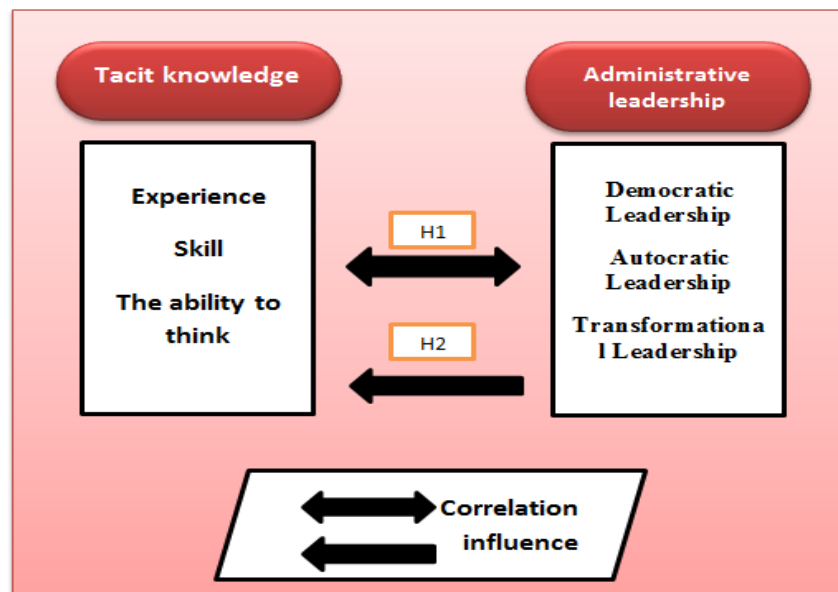


Figure (1) Hypothesis diagram for the study

Study boundaries

To clarify the limitations of the current study, it is necessary to determine the appropriate temporal and spatial boundaries, as follows: The study population was chosen, which is the Psychological Research Center affiliated with the Scientific Research Authority. The time period, with its theoretical and applied aspects, amounted to several months, represented by the preparation of the theoretical and field aspects of the study.

Research population and description of the sample

Study population

The study sample was chosen intentionally, and they are the employees and teachers at the Center for Psychological Research, who number (84) employees and faculty members. The sample size was (51) individuals, and the selection was intentional for the following reasons:

1. The employees and faculty members were chosen because they possess special knowledge and administrative leadership that we are trying to obtain and transfer to others.
2. Research centers are considered one of the important projects in our current era due to the research services they provide to various institutions.
3. Research centers are distinguished by the spirit of innovation and creativity in conducting research.

Data Collection Methods

A range of methods and approaches were used to meet the theoretical and scientific requirements of the current study, as follows:

1- Theoretical Framework

To enrich the theoretical framework in accordance with the study's objectives, the theoretical framework was built upon available sources relevant to the study topic, namely:

- a. Books, theses, and scholarly articles related to the tacit knowledge variable, published in both Arabic and foreign languages.
- b. Books, theses, and scholarly articles related to the administrative leadership variable, published in both Arabic and foreign languages.
- c. The World Wide Web (Internet).

1- Practical Framework

The primary method for collecting information and data related to the fieldwork was the questionnaire, which was used to achieve the research objectives and test its hypotheses. (80) questionnaires were distributed to avoid loss or damage, and (62) questionnaires were returned, representing a response rate of (75%). (51) questionnaires were deemed valid for statistical analysis.

Statistical Methods Used

To analyze and process the data and test the validity of the research hypotheses, a range of standard statistical methods were used. It should be noted that the study data is parametric in nature, and several computer programs were used, including SPSS version 23, AMOS version 23, and Microsoft Excel 2010. Among the most important tools used in the study are:

1. Descriptive statistical tools, which include:

A. Arithmetic mean: indicates the level of sample responses to the study variables, and determines the average response rate of individuals to these variables.

B. Standard deviation: It is used to determine the degree of dispersion of the sample responses from the arithmetic mean, and to measure the degree of dispersion of the response values from the arithmetic mean.

c) Relative importance: It is the percentage used to indicate the degree of importance of the study sample's responses to the questionnaire items distributed to them. It is calculated by dividing the arithmetic mean by the number of scale scores and multiplying it by 100. The percentage of responses on the scale is then compared with other levels of importance to determine the degree of importance.

Statistical analysis tools:

A group of statistical analysis tools was used, due to their frequent use in analysis, treatment, and testing of hypotheses. The most important of these tools are:

A/ Normal distribution test (Kolmogorov-Smirnov test): to distribute data and determine the normal distribution.

B/ Calculate the discriminatory power of the two scales

Previous studies

1- Studies related to tacit knowledge

1- **a study (Al-Kubaisi and Mustafa 2017)** about the tacit knowledge of auditors and its reflection on the effectiveness of the performance of some public inspectors' offices. This research aims to diagnose the extent to which tacit knowledge, in its various dimensions, reflects on the organizational performance of public inspectors' offices. The research seeks to diagnose the extent to which the management of these offices is aware of tacit knowledge and the extent of their interest in determining its levels and levels of performance. The type of study is analytical, and its dimensions are experience, skill, intuition, and the ability to think. The scope of the study includes ministries and non-ministerial bodies (Ministry of Defense, Ministry of Foreign Affairs, Ministry of Communications, Ministry of Health, Ministry of Culture, Ministry of Social Affairs, and others). The study population consists of the offices of general inspectors in Iraq, and the sample size was 57 employees.

2- **Ali et al. (2020) study**, The impact of tacit knowledge on strategic performance. The study focused on identifying knowledge as well as on determining the role of entrepreneurial orientation in the relationship between tacit knowledge and strategic performance as a mediating

variable, by applying it to Sudanese telecommunications companies. The study measured tacit knowledge as an independent variable through its dimensions: experience, skill, and thinking. The study used a descriptive methodology and used a comprehensive survey to collect data via the questionnaire. The sample size was (62) out of (65) respondents. The study was used Statistical Package for the Social Sciences (SPSS) To analyze the data, several statistical methods, including Cauenbach's alpha test, exploratory and confirmatory factor analysis, path analysis and structural equation modeling were used to test the hypotheses.

3- Studies related to the administrative leadership variable

Study (Zaghdoudi 2019) The role of administrative leadership in developing organizational culture) This study aimed to clarify the role of administrative leadership in activating and developing organizational culture. By providing a clear picture of organizational culture, determining the type of organizational culture prevailing in the local administration, and highlighting its importance within the directorate. This is achieved by understanding the nature of the organizational climate within the directorate and the role of leadership in building it. This study will enrich the university library with a valuable resource about the role of administrative leadership in developing organizational culture. It is the first study of its kind at the university level. The sample size was (40) individuals, and statistical programs were used to extract the results.

Theoretical framework for the study

Tacit knowledge:

The origin of tacit knowledge is derived from the Latin word *tacitus*, which means silence. It relates to calm, silence, tranquility, the unfamiliar, the non-verbal, and the unnoticed. When talking about tacit knowledge, terms such as silent, hidden, and tacit knowledge are used alongside the practices that are manifested in humans comprehensively. They also refer to the skills of the hands, knowledge, and the deep layers of the brain (Puusa). & Eerikainen, 2010: 309. It is personal knowledge that is not specific or formulated, resulting from human activity and experience, and most importantly, it is difficult to transfer to others. (Novitasari, et al, 2021: 142) refers to the skills and assumptions developed by individuals, which relate to a specific and subjective context. This type of knowledge exists primarily in the minds of individuals, and is manifested in the form of actions Human such as attitudes and obligations.

The importance of tacit knowledge

Many organizations are searching for the best ways to manage their knowledge and get the most out of it. In fact, individuals only fully exploit knowledge when they understand how to define, express and manage it. Therefore, tacit knowledge was used to stimulate hidden knowledge and transfer it to others (Wang, et al 2012: 326). (Matthew & Sternberg, 2009:531) pointed out that implicitness is difficult to express verbally, but it is not impossible, and it appears in its

ability to solve certain problems in practical fields. Its importance lies in the ability to acquire knowledge implicitly through experience, and through communication between a pattern of stimuli or events and experience. (Al-Saleh, 2012: 5) added that the importance of tacit knowledge stems from the fact that the knowledge possessed by the organization loses its value once it is encoded or stored. Therefore, the organization strives to preserve the secrets and essence of the knowledge it has produced and created, and to encode a small part of it in a way that does not threaten the interests of the organization.

Elements of Tacit Knowledge

Tacit knowledge exists in the minds and minds of individuals, embodied in equipment or processed within the system, organizational structure, management methods, and culture of the organization. It cannot be clearly proven using systematic, coded language. According to this, tacit knowledge mainly consists of the following elements (Liu & Cui, 2012:2073).

1- The technical element: One of the main features of the work of any organization is the practical application of technology, which forms the basis of its production and an essential part of its research and innovation. Therefore, the implicit technical component includes talent, craftsmanship, techniques and skills that can be realized in the context of production or services due to their high reliance on knowledge.

2- The cognitive element: It refers to the thinking patterns of the organization's employees, and includes the structure of individual knowledge, the ability to absorb new knowledge and visions, judgment skills, and the ability to identify and solve problems. Any problem requires a solution and requires the combination of perception, memory, learning, and reasoning within the organization's activities.

3- The experience element: It includes the cognitive, mental, and physical experience of individuals in the organization's activities. It consists of internal and external experience. Internal experience refers to the individual's experience within the organization's activities, while external experience refers to the communication, social interaction, and social network that surrounds the organization's activities.

4- The emotional component: Emotions clearly affect cognitive processes. The emotional component includes employees' feelings of likes, dislikes, intuitions and preferences, in addition to the feelings inherent in human nature, which are closely related to learning and continuing education, and is an important component of good employee qualities.

5- Faith element: This refers to individuals' belief in knowledge as the basis for the value of organizational activities. This includes belief in and judgment of values, and the goal of perseverance in organizational activities, which are fundamentally shaped by life experience and learning acquired

Second: Administrative leadership

The concept of administrative leadership: Leadership is defined as: “The manager’s ability to control his subordinates and direct them in a way that gains their obedience, respect, and loyalty, motivates them, and enhances cooperation between them to achieve a specific goal (Saal and Somiya, 2023, 24). Leadership is derived from the verb “to lead,” meaning to do something to achieve the desired goal. It is a relationship between the leader and his followers. The leader issues orders, and the followers implement them to carry out the work that leads them to this goal. Objectives (Kanaan, 2002: 84) Which characterizes the leadership process, which is represented by the process of influencing and administrative processes such as planning, organizing, and coordinating the efforts of employees to achieve the desired goal.

The importance of administrative leadership

Administrative leadership today is gaining great importance in institutions, due to intense competition, the complexities of the external environment, globalization, ambiguity, risks, and the difficulty of prediction. All of this makes it necessary for organizations to be led by a special type of leader - a leader with a strong, clear vision and credibility that influences his subordinates. This allows him to easily meet the diverse needs of his subordinates, face crises, and possess the ability to learn and teach. All of these qualities are present in the administrative leader (Lahloub, 2012: 64). Al-Saadi, 2023: 588 added: The administrative leader plays an important role in the process of change within institutions, which aims to achieve success and organizational goals. This is achieved by influencing the psychology and behavior of subordinates. Therefore, the process of change enables institutions to keep pace with internal and external environmental challenges, and move them forward towards achieving their goals and increasing their productivity. He added (Al-Karimi and Al-Halawani, 2023: 257) that leadership in our world is the most important factor affecting the survival and continuity of any organization. Therefore, it is necessary to develop management by building and providing leaders capable of following appropriate methods and methods with the required efficiency. This includes studying administrative leadership behaviors, understanding administrative leadership theories (classical and modern), and their impact on the administrative leadership style, in addition to the importance of choosing the prevailing leadership style within the organization.

(Abriam & Samia, 2019: 562) indicated that leadership is of great importance, and its importance lies in the following:

- It is the link between employees and the organization’s plans and future vision.
- It enhances the positive aspects within the organization and reduces the negative aspects as much as possible.
- It manages and solves work problems, adjudicates conflicts, and evaluates different opinions.

- It develops, trains, and cares for individuals, considering them the organization's most valuable resource, and individuals look to the leader as a role model. For them.
- Keep pace with the surrounding changes and exploit them for the benefit of the organization.
- Make it easier for the organization to achieve its specific goals.

Qualities and skills of the administrative leader:

(Khadroush et al., 2017: 65-64) indicated that the leader is a person who has a professional or social relationship with the group, and plays an important role in influencing the behavior of his subordinates and directing them willingly and voluntarily. The following are the most important qualities that make a person a skilled leader:

1. The ability to motivate others: The leader is able to inspire others to cooperate in achieving goals and instill a spirit of loyalty in them.
2. Intellectual ability: The ability to think clearly about organizational issues and this is one of the most important characteristics of a leader.
3. Integrity: The leader is morally sound, honest, and upright, setting a good example for his subordinates in terms of consistency and adherence to high ethical standards.
4. Vitality: A leader takes initiative, starts quickly, works hard, and inspires others.
5. Fairness or justice: This means avoiding favoritism, discrimination, and favoritism, and listening to the opinions and complaints of subordinates.
6. Work knowledge: The leader must be as knowledgeable about the work as the lowest employee, and must be familiar with all organizational units.
7. Ideal behavior and temperament: The leader takes pride in his work, is able to exercise self-control and control situations, and is well-groomed and well-dressed.

The third axis: The practical aspect

Methodology and research procedures

Study methodology: This study was conducted using the descriptive, correlational approach, using two approaches:

The first is a theoretical study: It included a desk survey, access to relevant Arabic and foreign references via the Internet, and the development of a theoretical framework. The second was a field study, which was used to achieve the objectives of the study and test its hypotheses. This

included collecting data using a questionnaire and using appropriate statistical methods for analysis.

- The study tool and its scale: The questionnaire was used as the main tool for collecting data, and it consisted of three sections:

1- The first section was devoted to collecting data related to job characteristics, including gender, educational qualifications, age, and years of service.

2- The second section included a measure of tacit knowledge, consisting of three dimensions: (17) statements distributed among the dimensions.

3- The third section dealt with the administrative leadership measure, Which included (16) questions distributed on the variable dimension. Responses to each statement were measured using a five-point Likert scale, as shown in Table 1.

Table (1) Distribution of grades on a five-point Likert scale

Answer	Completely agree	Agree	Neutral	Disagree	Completely disagree
Score	5	4	3	2	1

Study population and sample: The study population consisted of employees and professors of the Center for Psychological Research, who numbered (84) employees and teachers, and the sample number was (51) individuals. The study used purposive sampling.

Analysis of personal data for the study

Sample characteristics:

Using statistical methods, some descriptive characteristics were determined, such as frequencies and percentages. The table below displays the personal and occupational data of the study sample members. There were (51) individuals from the sample who responded to the questionnaire. The following table presents statistics related to personal information.

Table (2) Descriptive statistics for respondents' information

Statistics					
		Gender	Educational qualification	Age	Years of service
N	Valid	51	51	51	51
	Missing	0	0	0	0
Mean		1.76	2.67	3.31	2.35
Media		2.00	3.00	3.00	1.00
Standard deviation		.428	.864	1.049	1.683

1- Distribution of the sample according to gender

Table (3) Gender

Gender	Number	Percentage
Male	12	23.5
Female	39	76.5
Total	51	100%

Table (3) shows that the percentage of participants by gender for females was higher than the percentage for males, as males constituted (23.5%), meaning a total of (12) individuals, while females constituted a percentage of (76.5%), equivalent to (39) females. The total number of participants in the study sample was (81). It is clear from the table that the majority of the sample was female.

2- . Distribution of the sample according to age

Table (4) Age

Age	Number	Percentage
25-18	1	2.0
30-26	10	19.6
31-40	21	41.2
41-50	10	19.6
51- and above	9	17.6
Total	51	100.0

Table (4) shows the distribution of the sample according to the age group, consisting of (51) Participants, in five age groups. It was found that the age group (31-40) represents the largest percentage in the sample, as the number of participants reached (21) participants, representing (41.2%). This indicates that the majority of the sample belongs to this middle age group, which is often at the peak of its professional and social activity. As for the age group (26-30) and (41-50), it was the second time, and it is a percentage equal to two categories, and was represented by (10) participants, with a percentage of 19.6%, which is a moderate percentage compared to the age groups. As for the third category, the age group 51 years and over, this category included (9) participants, representing (17.6%), which reflects a relatively good representation of the older age groups. Finally, the age group came (18-25). This category includes only one participant,

representing (2%) of the total sample, which indicates limited representation of the younger participants in the study.

3- Sample by academic qualification

Table (5) By academic qualification

Years of Service	Number	Percentage
5 years or less	28	54.9
6-10	3	5.9
15-11	5	9.8
20-16	4	7.8
21 years or more	11	21.6
Total	51	100.0

Table (5) shows the distribution of the sample members according to their level of education, The following is explained: The number of participants according to the middle school study was (3) participants, with a percentage of (5.9%), which is a low percentage that reflects the limited representation of this group in the study. As for the distribution of the sample according to academic level, diploma and higher diploma, there is no such certificate, at a rate of (0%), which means that this category is completely absent from the sample. As for the bachelor's degree, this category was the most represented in the sample, as it included (21) participants, at a rate of (41.2%), which indicates that the majority of the sample members hold a bachelor's degree. As for the master's degree, this category includes (17) participants, at a rate of (33.3%), which is a relatively high percentage of representation, which indicates that a large percentage of the sample holds a bachelor's degree. Postgraduate degrees. Finally, the doctoral degree, where the number of participants holding a doctorate degree reached (10), with a percentage of (19.6%), This is a good percentage, which indicates the presence of a specialized scientific category within the sample. It is clear that most of the participants have high levels of education. There is also a clear absence of holders of diploma and higher diplomas, and a weak representation of holders of middle school certificates.

Second: Validity and reliability tests for the study measures

Introduction

Validity and reliability tests are essential to ensure the accuracy of the questionnaire items and their ability to measure the main dimensions and variables, and achieve their purpose. These tests relate to the extent to which the theoretical framework of the measures is consistent with the responses of a sample of faculty members and employees in the center for the study. This step paves the way for the process of describing and analyzing the study variables. The current study includes two variables: The study axes, which consist of (33) items distributed over two main axes:

The first axis: Tacit knowledge, which includes:

1. Experience: It includes 6 items.
2. Skill: It includes 6 items
3. The ability to think: It includes 5 items.

The second axis: Administrative leadership, which includes 16 items. It includes:

- 1- Democratic leadership, which includes 5 items.
- 2- Autocratic leadership, which includes 5 items.
- 3- Transformational leadership, which includes 6 items.

Validity and reliability of the instrument:

The face validity of a behavior scale is defined as the level of agreement of the raters and the specific degree of the number and content of the items of the evaluation instrument according to the objectives of the construct and the intended evaluation (Yusoff, 2019: 55). A valid measure is one that has the ability to measure the characteristic for which it was developed, based on its ability to measure what it was developed for or the characteristic to be measured (Devriendt et al., 2012: 329). To determine the level of apparent validity, a preliminary model of the measurement tool (questionnaire form) was prepared. The questionnaire was presented to a group of arbitrators specialized in the field of administration to review it and verify the veracity of its paragraphs. The arbitrators approved it after making some modifications. Validity and reliability tests were also conducted on the questionnaire to determine the extent of the possibility of relying on the results of the field study to generalize the results, and to verify the quality indicators of the measures according to the reliability coefficient (Cronbach's alpha) and self-honesty, as follows, as in Table (7):

Table (7) Results of the reliability and self-validity test for the variables of the study

Variable	Number of items	Cronbach's coefficient	Self-honesty
Tacit knowledge	17 items	0.173	0.124
Administrative	16 items	0.278	0.012

Table (7) shows that the Cronbach's alpha coefficients for the study variables and the self-reliability coefficients are high. Therefore, this scale is valid for measuring what it was designed to do. It also has a degree of reliability compared to the acceptable level (0.75), which is the minimum acceptable level for the reliability of any measure in management sciences. Therefore,

the questionnaire can be relied upon in field application, and it is considered an appropriate tool for collecting the data necessary for the study.

Normal Distribution Test

The normal distribution test is an important test that allows the use of parametric methods in testing and analysis when data show a high degree of normal distribution. If the normal distribution is low, non-parametric methods need to be used for the same purpose (Kim & Park, 2019:332). Therefore, the distribution of the data determines whether parametric or non-parametric analysis methods should be used. A normal distribution allows the use of parametric analysis techniques, while a non-normal distribution requires the use of non-parametric analysis tools. The Kolmogorov-Smirnov test, compatible with IBM SPSS, is one of the most common methods for testing normal distribution. This test requires determining the significance level, calculating the test statistic, calculating the probability of significance, and drawing a final conclusion about the distribution of the data (Kwak & Park, 2019: 7), as shown below:

1- Distribution moderation test for the tacit knowledge variable

Table (8) shows that the test result for the main variable (tacit knowledge) was 0.056, while the significance level was 0.200. This value exceeds its standard deviation of 0.05, confirming that the data follows a normal distribution. This supports the use of parametric tools in data analysis

Table (8): Kolmogorov-Smirnov test for the tacit knowledge variable

One-Sample Kolmogorov-Smirnov Test		
Parameters	Variables	Tacit knowledge
N		51
Normal Parameters ^{a,b}	Mean	1.47
	Std. Deviation	.731
Most Extreme Differences	Absolute	.348
	Positive	.348
	Negative	-.260
Test Statistic		.348
Asymp. Sig. (2-tailed)		.000 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Table (8) shows the results of the Kolmogorov-Smirnov test for a sample to determine whether the tacit knowledge variable follows a normal distribution. The sample size was (N) 51, the mean was 1.47, and the standard deviation was 0.731. The test results showed that the value of the test statistic was 0.348, while the value of statistical significance (Asymp. Sig. (2-tailed)) was equal to 0.000, which is less than the required level of significance (0.05). Accordingly, the null

hypothesis that the data for the implicit knowledge variable is rejected is rejected. It follows a normal distribution, which indicates that the data of the variable does not follow a normal distribution. Therefore, this indicates the necessity of using nonparametric statistical tests to analyze this variable instead of parametric tests.

2- Administrative leadership

Table (9) shows the results of the Kolmogorov-Smirnov sample test, which aims to verify the extent to which various natural data follow the administrative leadership of distribution. The sample size (N) was 51 individuals, with an arithmetic mean of 2.12, and a standard deviation of (1.013), which indicates the presence of relative variation in the responses of the sample members. The test result showed that the absolute interval value (maximum differences) reached 0.272, which is the absolute statistical value, and the statistical significance value (Asymp. Sig. (2-tailed)) reached 0.000, which is less than the qualifying significance level. (0.05). Accordingly, the null hypothesis is rejected, which states that the data for the administrative leadership variable follow a normal distribution, which indicates that the data for this variable does not fully follow the distribution. This requires relying on group nonparametric statistical tests when analyzing this variable in the study.

Table (9): Kolmogorov-Smirnov test for the administrative leadership variable

One-Sample Kolmogorov-Smirnov Test		
Parameters	Variables	administrative leadership
N	51	
Normal Parameters ^{a,b}	Mean	2.12
	Std. Deviation	1.013
Most Extreme Differences	Absolute	.272
	Positive	.272
	Negative	-.160-
Test Statistic		.272
Asymp. Sig. (2-tailed)		.000 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Analysis of the items

• **The method of calculating the discriminatory power of the two scales**

The discriminating power means the ability to distinguish between individuals with higher abilities and individuals with lower abilities in order to link the trait or characteristic that the test measures (Ahmed, 1981, p. 293).

To calculate the discriminatory power of the two scales of tacit knowledge and administrative leadership, the researchers arranged all the two scales from highest to lowest. 27% of the sample (51 individuals) succeeded in reaching a cut-off point, which led to the identification of the upper (20) and lower (20) groups. After statistical analysis, all items of the tacit knowledge scale showed statistical significance for administrative leadership at a significance level of 0.05.

1- The discriminating power of the variable tacit knowledge

Table (10) The discriminating power of tacit knowledge

T	Arithmetic Mean		Standard Deviation		T-value
	Upper Group	Lower Group	Upper Group	Lower Group	
1	1.52	1.42	.893	.504	.493
2	1.89	1.79	.751	.721	.470
3	2.11	2.25	.847	.737	-.621
4	2.37	2.29	1.043	1.122	.260
5	2.33	2.13	.920	1.035	.761
6	2.00	2.13	.961	1.076	-.438-
7	2.07	1.79	.917	.833	1.146
8	2.41	2.21	1.047	.932	.713
9	2.33	2.33	1.000	.963	.000
10	2.19	2.33	.879	.868	-.604
11	2.37	2.46	1.043	.884	-.323
12	2.37	2.46	1.006	1.062	-.304
13	2.44	2.13	.974	1.076	1.113
14	1.85	2.04	.907	1.197	-.642
15	2.07	2.13	.958	.947	-.191
16	2.33	2.25	.961	.794	.335
17	2.56	2.13	.934	.947	1.633

The tabular value is at a significance level of (0.05) and a degree of freedom (49)

Table (10) displays the statistical results on the discriminatory power of the items of the implicit knowledge variable by comparing the averages of the upper and lower groups, along with the standard deviation values and the T-value for each item. The discriminatory power aims to verify the ability of the items to distinguish between individuals with high and low levels of implicit knowledge. The results indicate that most items have adequate discriminatory power; The

differences between the averages of the two groups were in favor of the senior group in the majority of items, which reflects the effectiveness of the items in measuring the level of implicit knowledge. As for the T-values, they appeared to vary between the items, but a good number of them approached or exceeded the tabulated value at a significance level (0.05) and with a degree of freedom (49), which supports the significance of the differences. It also appears that the standard deviations are within acceptable limits, which reflects the homogeneity of the sample members' responses and the absence of abnormal variation in the answers.

In general, the results show that the scale items perform an acceptable discriminatory function, and are considered valid for continuity within the measurement tool for the tacit knowledge variable.

Internal consistency of the scale items

To ensure that the scale items are consistent with the dimension they were designed to measure, the simple Pearson correlation coefficient was used to determine the nature of the relationship between each item and the total scale scores. The correlation coefficient is one of the most important indicators of internal validity, as it reveals the extent to which the item agrees with the theoretical framework of the concept being measured. The results of the analysis showed that the majority of items showed positive correlation coefficients with the total scores, which indicates their consistency with the general dimension of the scale and their ability to measure the same trait. Furthermore, correlation coefficients ranged between acceptable and good psychometric levels, reflecting general consistency in item performance. In contrast, some items showed low or statistically insignificant correlation coefficients, which may indicate a weak correlation with the total scores or the possibility that they measure a content different from the general content of the scale. Accordingly, these items must be reviewed for clarity of wording, consistency with the theoretical framework, or possibility of being excluded if their weakness continues after modification. Overall, the internal consistency results confirm that the scale has a good level of correlation between its items, which enhances its construct validity and its ability to measure the target trait with an acceptable degree of accuracy.

2- The discriminating power of the administrative leadership variable

Table (11) The discriminating power of administrative leadership

T	Arithmetic Mean		Standard Deviation		T-value
	Upper Group	Lower Group	Upper Group	Lower Group	
1	2.30	2.33	1.068	1.274	-.113-
2	2.37	2.33	1.214	.816	.126
3	2.19	1.88	.921	.741	1.314
4	2.41	2.33	1.010	1.204	.239

5	2.56	2.13	.847	.680	1.985
6	2.15	1.96	.770	.806	.859
7	2.11	2.04	1.086	.908	.246
8	1.96	1.92	.980	1.060	.162
9	2.26	2.25	.984	1.073	.032
10	2.22	2.29	1.050	1.083	-.232-
11	2.19	1.83	1.145	.917	1.201
12	2.33	1.88	.784	.900	1.944
13	2.81	2.08	1.001	1.018	2.584
14	2.11	2.13	.801	1.227	-.048-
15	.974	1.076	.187	.220	-.048-
16	1.023	1.103	.197	.225	.949

The tabular value is at a significance level of (0.05) and a degree of freedom (49)

- Table (11) shows the discriminatory power of the items of the Administrative Leadership Scale by comparing the means of the two groups (highest and lowest), in addition to the standard deviation and T-value for each item. Discriminatory power reflects the ability of the item to distinguish between respondents with high and low levels of the variable.

The results showed that almost all of the items had acceptable discriminatory power, as most of the T-values were positive and statistically significant compared to the critical value at the 0.05 level and a degree of freedom of 49. This indicates statistically significant differences between the highest and lowest groups. This confirms that the items are valid for measuring administrative leadership, and can distinguish between levels of respondents. It was also noted that the averages of the highest group were higher than the averages of the lowest group in all paragraphs, which reinforces the positive trend of discriminatory power and indicates that the paragraphs are working correctly. Hence, it can be concluded that the administrative leadership scale items have good psychometric properties and are suitable for use in this study.

Conclusions

- The study results showed that the level of tacit knowledge among employees at the Psychological Research Center was (medium to high), indicating that employees possess experiences, skills, and thinking abilities that contribute to their effective performance.
- The results also showed that the level of administrative leadership was (medium/good), reflecting the presence of acceptable leadership practices, although these require further development and improvement.

- Statistical analysis revealed a statistically significant positive correlation between tacit knowledge and administrative leadership, indicating that an increase in the level of tacit knowledge among employees positively impacts the efficiency of administrative leadership.
- The results demonstrated a significant impact of tacit knowledge, in its dimensions (experience, skill, and thinking ability), on enhancing administrative leadership, emphasizing the importance of investing in individuals' non-explicit knowledge.
- The results of the analysis showed that tacit knowledge plays an important role in improving the level of performance of administrative leaders within the studied organization, as its dimensions achieved a positive and statistically significant correlation with the administrative leadership variable.
- The answers of the study sample confirmed that management in the studied organizations possesses tacit knowledge, which is manifested in skills, experience, and the ability to think, and seeks to transfer this knowledge from administrative leaders to human resources, which helps them perform the tasks and duties assigned to them in the best possible way.
- It became clear from The results of the analysis are that the management of the organization under study was keen to keep pace with all new developments in its field of work, which would help in achieving the organization's goals through its thinking processes.
- The study shows the influence of the leader on the decision-making process within the organization, as administrative leadership is what motivates subordinates to achieve the desired goals.
- The results of the study showed that a successful leader is one who cares about work and employees alike, because this creates an atmosphere of cooperation and cohesion within the organization and greatly affects performance.

Recommendations

- The need to enhance tacit knowledge within the organization through the exchange of experiences among employees and by holding workshops and discussion sessions.

Encouraging management to document tacit knowledge and transform it into explicit knowledge that can be utilized by all employees.

Working to develop the skills of administrative leaders through specialized training programs that focus on modern leadership and innovation.

Supporting a work environment that promotes continuous organizational learning and encourages creativity and individual initiative.

Attention to new employees (those with limited experience) through qualification and training programs that contribute to raising their level of expertise and capabilities.

Adopting modern leadership styles such as transformational and democratic leadership, given their role in fostering positive interaction within the organization.

The necessity of leveraging experienced staff to transfer tacit knowledge to new employees to ensure the sustainability of knowledge within the organization.

- Raising the level of awareness among all employees in various business organizations, increasing their knowledge and understanding of the importance of tacit knowledge and its applications within organizations, and creating a knowledge base that uses the latest methods and technologies in the field of tacit knowledge and its applications.
- The leader or manager must be a source of inspiration and interaction for all employees by promoting organizational values within the organization and opening the door to discussion and presenting employees' ideas and suggestions regarding setting work goals.
- Listening to employees' suggestions and encouraging them, and granting them independence in performing their work.

Suggestions

- Conducting a study of implicit knowledge sharing and its relationship to some administrative variables and methods
- Conducting research or study related to administrative leaders and their relationship to the ability to think
- Preparing programs to develop and develop administrative leaders based on different types of learning.
- Conducting future studies linking tacit knowledge with other variables such as (innovative performance, organizational culture, job satisfaction).

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