

Transformational leadership and its impact on organizational creativity and patient safety in hospitals in the Kingdom of Saudi Arabia

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Abstract:

The study aimed to measure transformational leadership and its impact on organizational creativity and patient safety in hospitals in the Kingdom of Saudi Arabia, This study is a quantitative study that follow the descriptive and analytical approach depending on questionnaire that was Applied on a sample of (251) of workers at hospitals in the Kingdom of Saudi Arabia, the study reaches conclusions the most important of which there were a high rating for transformational leadership in hospitals in the Kingdom of Saudi Arabia. The study also found an association between transformational leadership and the creative behavior of workers and patient safety in hospitals in the Kingdom of Saudi Arabia. In light of the results, the research reached recommendations the most important of which that hospitals in the Kingdom of Saudi Arabia Promote transformational leadership to promote the creative behavior of workers and patient safety in hospitals in the Kingdom of Saudi Arabia.

Key word: Transformational leadership, organizational creativity, patient safety, hospitals in the Kingdom of Saudi Arabia

Introduction:

Saudi Arabia has the largest healthcare sector among the Gulf countries, where the Kingdom intends to establish medical cities for which the government has allocated a huge budget to promote this vital sector (The Arab Hospital Magazine, 2021).

Today, the world is witnessing many changes and developments that have led to a change in the form of interaction between hospitals and the environment in which they operate internally and externally, so it was necessary for effective administrative leaders to search for the appropriate structure to lead the processes of change and innovation, and to employ everything that would improve performance levels, and research Its leadership styles are different from the traditional approach to leadership (Głód, 2018).

Among the most prominent leadership styles produced by scientific progress is the transformational leadership style, which is a leadership style in which leaders encourage, inspire and motivate employees to innovate and create change that will help grow and shape the future success of the hospital (White, 2018).

According to Money (2017), the transformational leadership style appeared in 1978 by the American scientist James MacGregor Burns, in his attempts to address political leadership, as this style proved its effectiveness in administrative circles because of its effective impact on the performance of workers and achieving goals efficiently and effectively.

Peng et al (2021) indicated that transformational leadership is one of the most leadership theories that induces employees to value alignment with the organization and inspires employees to achieve at high levels, where there are four components of transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

On the other hand, Organizational creativity is considered one of the main factors for the growth of hospitals and enhancing their effectiveness, as it constitutes a key element in light of the competitiveness witnessed by hospitals today (Miraj, 2015).

Okechukwu et al (2021) showed that organizational creativity is behaviors directed towards new methods of implementing and accomplishing functional tasks to increase organizational efficiency and

effectiveness, and therefore organizational creativity is viewed as every behavior aimed at the generation or application (within a role, group, or organization) of ideas, processes, products, procedures, or new dimensions Which aims to benefit the health institution or hospital.

In addition to the above, hospitals in general, and hospitals in the Kingdom of Saudi Arabia, strive to maintain patient safety, as Busch et al (2021) indicated that patient safety is a basic standard of health care, and it is a very important component of quality management. Hence, the current study seeks to identify transformational leadership and its impact on organizational creativity and patient safety in hospitals at KSA.

Problem statement:

Many hospitals in the Kingdom of Saudi Arabia face problems related to the development of their business and the difficulty in achieving a clear vision to achieve their goals of creativity and patient safety, although these hospitals are working hard to introduce the latest technology in medical equipment and equipment, they still carry out their work in traditional ways, especially with regard to management methods and relations between superiors and employees.

In view of the importance of the leader and his leadership style, and based on the findings of the modern management work, which reached a leadership model that aligns with the goals of the organization and contributes to their achievement, the problem of the current study centers on Transformational leadership and its impact on organizational creativity and patient safety in hospitals in the Kingdom of Saudi Arabia

Study questions:

- 1) What is the availability of the elements of transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) among hospital leaders in the Kingdom of Saudi Arabia?
- 2) What is the level of creativity in hospitals in Saudi Arabia?
- 3) What is the level of patient safety in the hospitals in Saudi Arabia?
- 4) What is the impact of Transformational leadership on organizational creativity and patient safety in hospitals in the Kingdom of Saudi Arabia?

The Study Significance:

The current study has practical and scientific Significance as follows:

Practical Significance: The practical importance of the study stems from the fact that it deals with the most important element of hospital management (creativity and patient safety). The current study benefits the administrations and those in charge of Saudi Hospital in improving the creativity and the level of patient safety and lead them to the most efficiency leadership style to achieve its goals, by studying transformational leadership and its impact on organizational creativity and patient safety in hospitals in the Kingdom of Saudi Arabia.

Scientific importance: The scientific importance of the study lies in its originality, as it is (according to the knowledge of the student - researcher) one of the rare studies that deal with a topic of high importance. Due to the novelty of the topic, there is a need to conduct a study on the Transformational leadership and its impact on organizational creativity and patient safety in hospitals in the Kingdom of Saudi Arabia, which may represent a scientific base from which to conduct future studies that enrich the local and Arab scientific library.

The Study Objectives:

The study seeks to achieve the following objectives:

- Identifying the availability of the elements of transformational leadership among hospital leaders in the Kingdom of Saudi Arabia.
- Identifying the level of creativity in hospitals in Saudi Arabia.
- Identifying the level of the level of patient safety in the hospitals in Saudi Arabia.
- Measuring if there is a statistically significant relationship between Transformational leadership and organizational creativity in hospitals in the Kingdom of Saudi Arabia.
- Measuring if there is a statistically significant relationship between Transformational leadership and patient safety in hospitals in the Kingdom of Saudi Arabia.

The Study Hypotheses:

The first hypothesis:

There is a statistically significant effect of Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) on creativity in hospitals in the Kingdom of Saudi Arabia.

The first hypothesis of the study is divided into the following sub-hypotheses:

- There is a statistically significant effect of ideal influence (charisma) on creativity in hospitals in the Kingdom of Saudi Arabia.
- There is a statistically significant effect of intellectual arousal on creativity in hospitals in the Kingdom of Saudi Arabia.
- There is a statistically significant effect of Individual entity on creativity in hospitals in the Kingdom of Saudi Arabia.
- There is a statistically significant effect of motivation on creativity in hospitals in the Kingdom of Saudi Arabia.

The second hypothesis:

There is a statistically significant effect of Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) on patient safety in hospitals in the Kingdom of Saudi Arabia.

The first hypothesis of the study is divided into the following sub-hypotheses:

- There is a statistically significant effect of ideal influence (charisma) on patient safety in hospitals in the Kingdom of Saudi Arabia.
- There is a statistically significant effect of intellectual arousal on patient safety in hospitals in the Kingdom of Saudi Arabia.
- There is a statistically significant effect of Individual entity on patient safety in hospitals in the Kingdom of Saudi Arabia.
- There is a statistically significant effect of motivation on patient safety in hospitals in the Kingdom of Saudi Arabia.

The study limits:

The study includes the following limits:

- **Spatial limits:** hospitals in the Kingdom of Saudi Arabia.

- **Time limits:** the year 2022.
- **Human limits:** workers from different job positions at hospitals in the Kingdom of Saudi Arabia.
- **Objective limits:** the independent variable (Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation). the dependent variables creativity & patient safety).

Transformational leadership:

Leadership is a science and an art, with great importance in managing institutions, and it is the main driver and the most important factor in managing any project, no matter how small or large (Fatimah & Syahrani, 2022).

Gómez-Leal et al., (2022) indicated that leadership appears in the literature in three forms or meanings; As a result of the position or function held by the individual, of his personal qualities, or of a set of behavior.

According to Avolio et al (2022), organizations have been affected by the changes witnessed by the conditions of competition between those institutions, as this impact represented in changing the interaction between institutions and the environment in which they operate, whether internal or external, which required those working in the field of leadership to search for the appropriate structure to lead the change processes and employ what contributes to the advancement performance levels.

Messmann et. al. (2022) showed that current changes represent a challenge that requires effective leadership capable of leading organizations in this turbulent environment undergoing change to success, continuity and excellence. This challenge can be met by improving performance through access and implementation of an effective type of leadership.

Hence, the transformational leadership style, which is considered one of the leadership styles by the American scientist (James MacGregor Burns) in 1978 AD, appeared in his quest to address political leadership, as this style proved its effectiveness in administrative circles because of its effective role in the performance of workers and achieving goals efficiently (Wanasida et al., 2021).

The transformational leadership style is based on the principle that specific leader behaviors can encourage workers to a high level of thinking, which enhances trust between workers and leadership, encourages workers to participate in decision-making and breaks organizational and administrative boundaries between workers and leadership (Abu Qaoud and Al Raba`a, 2022).

The concept of Transformational leadership:

The concept of transformational leadership has developed over the second half of the twentieth century and is in continuous development, as it is applied and studied in different organizational contexts. Transformational leadership is linked to various variables related to workers, including creativity, productivity and organizational commitment (Wasim & Rehman, 2022).

The concept of transformational leadership refers to a leadership style in which leaders encourage, inspire and motivate employees to innovate and create change that will help grow and shape the future success of the company. This is accomplished by setting an example at the executive level through a strong sense of corporate culture, employee ownership and independence in the workplace (White, 2018).

Jiang et al (2017) showed that the concept of transformational leadership can be viewed from more than one side, as it can be seen as an activity on the one hand, or a process on the other, as well as viewed through leaders who occupy senior positions in the organization, while transformational leadership can be seen through use of managerial functions and personal skills.

In addition, transformational leadership is a leadership style with a clear vision of the need for change and an outlook for the future, which is represented in the leader's attractive and influential personality through which he can influence the behavior of employees and expand their participation, and speed in response to deal with any emergency matter (Abu-Rumman, 2016).

Transformational leadership also defined as leadership that focuses on long-term goals while making sure to build a clear vision, motivate and encourage employees to implement that vision, and work at the same time to

change and modify the systems that are established to fit this vision (Muhammad, 2022).

Transformational leadership in general is one of the effective leadership styles, whereby transformational leaders in this style are characterized by their ability to motivate, inspire, and make positive change in the work of the team, and leaders who perform the transformational style are characterized by emotional intelligence, enthusiasm, and passion, in addition to their interest in Achieving the potential of their workers In addition to achieving the goals of the organization, some research has proven the positive results of adopting the transformational leadership method, which is to improve the performance of workers, their well-being, and the existence of a state of collective satisfaction (Al-Hiyari, 2021).

The importance of transformational leadership:

The importance of transformational leadership is to face challenges by setting goals and changing towards thinking creatively and innovatively, where transformational leadership persuades subordinates to look beyond their personal interests for the sake of the organization, as well as by deepening their level of awareness and acceptance of the vision and goals of the organization (Wadi, 2017).

According to Hasan (2022), the importance of transformational leadership relates to (3) elements as follows:

1. Creating a new vision;
2. Designing a structure for the organization that meets the needs of the external environment, and allows the organization to achieve its mission effectively;
3. Human resources management, which includes reconciling employees and their resources by defining work standards for all activities of the institution.

The importance of transformational leadership is also represented in its endeavor to advance the feelings of followers by appealing to moral ideas and values such as freedom, justice, equality, peace and humanity. The behavior of transformational leadership starts from the personal values and beliefs of the leader and not on the exchange of interests with subordinates (Valckx et al, 2020).

Dimensions of Transformational Leadership:

These day, there is a need for a major change that only transformational leaders can manage, by highlighting their personal energies, creative skills, and persuasive style to others, so it is necessary to know the important dimensions or characteristics of transformational leaders (Ajina & Badr El-Din, 2021).

According to Zhang (2016), there are four main dimensions of transformational leadership:

1. The ideal effect (charisma): where transformational leaders can be role models by workers to emulate the ideas of transformational leaders;
2. Individual entity: Transformational leaders pay special attention to their followers to meet their individual needs and assist with individual professional training;
3. Intellectual arousal: where transformational leaders use intellectual stimulation to enhance creativity in followers and encourage intellectual learning;
4. Motivation: Transformational leadership provides inspiring motivation to inspire and motivate followers to achieve higher organizational goals.

Waer (2015) also mentioned that two basic aspects must be taken into account in order to understand the dimensions of transformational leadership, and these two aspects are the changing environment that requires leadership capable of responding to development in its environment, and that leadership that can respond to its environment needs to match its behavior and trends with the behavior and attitudes of workers, including It makes the vision of leadership the vision of everyone in the organization, so transformational leadership does the work for change and creativity that allows the generation of new ideas.

Organizational Creativity:

Organizational creativity is an essential element in enhancing the economic and social conditions of all small and large countries. Therefore, various recent research and studies have focused on the issue of

organizational creativity, being the most prominent factor to ensure the long-term success of various types of institutions (Kršlak & Ljevo, 2021).

According to Umukoro et al (2021), organizational creativity has a prominent role in the survival and development of institutions, as it is the tool of these institutions in adapting to economic, social, technological, political and cultural challenges. Organizational creativity helps institutions face current and future challenges, by means of the solutions presented to it in order to deal with these challenges.

The Concept of Organizational Creativity:

The concept of organizational creativity identifies a relatively unexplored area in organizational change and innovation. Organizational creativity is the creation of a valuable, useful new product, service, idea, procedure, or process by individuals working together in a complex social system (Woodman et al, 1993).

de Vasconcellos et al (2019) defined organizational creativity as creativity that employs as much as possible its individual and collective energies in order to find ideas and creative solutions that help it adapt to the requirements of change or the circumstances in which it is living.

In addition, organizational creativity refers to creating a new value or idea, whether related to the production of a good or service, or related to methods, procedures and processes, or related to organizational strategies, policies and programs, through people working together in a complex social system.” It is also meant as “a single intellectual system that combines brilliant knowledge Creative work touches various areas of life, deals with reality and strives for excellence, in addition to the fact that creativity is the result of the interaction of subjective, objective, personal, environmental or behavioral variables, which are controlled by distinguished people (Jeong & Shin, 2019).

In general, organizational creativity is the creativity that is reached through the institution as a whole. There are institutions that are distinguished in the level of their performance and work, and the work of these institutions is often typical and ideal for other institutions, and for institutions to reach creativity, personal and collective creativity must be available in the institution (Ben Khaznaji, 2021).

The Importance of Organizational Creativity:

Most organizations today are facing various changing challenges; It has to search for important ways and methods that help it to renew its activity and make appropriate use of its capabilities. Therefore, any institution that does not work on innovation and makes it a priority will result in decline and bankruptcy. One of the most important reasons why institutions need organizational creativity is that the creative personality is of great importance, as it helps to provide distinguished services to the institution and raise its efficiency, quality and productivity. It also works on developing and renewing institutions and providing them with modern methods (Ghayat & Zidori, 2015).

In addition, the importance of organizational creativity lies in the constant need for innovative administrative methods and methods stemming from their privacy and requirements without going behind methods transferred from others and free from addition, creativity and adaptation (Olszak et al, 2018).

Juma'a (2020) summarized the importance of organizational creativity in the following points:

- Creativity is based on strengthening institutions and enabling them to respond to the challenges and major developments in the surrounding body and adapt to them in a flexible manner, which makes them in a stable position so that they are able and ready to confront expected or sudden challenges and developments in a way that does not affect the course of their current and future business and projects.
- Creativity contributes to enhancing and developing the capabilities and capabilities of people by providing opportunities for them by exploiting creative methods that keep pace with new changes and developments, exploiting creative people and investing in their abilities and ideas in scientific research and practical experiences in the field of work and developing them continuously.
- Meeting the requirements of customers, as the workers' awareness of the civilization achievements drives them strongly to insist on obtaining services easily and with better quality than it is.

The Features of organizational creativity:

Organizational creativity is characterized by different Features, the most prominent of which are (Kršlak & Ljevo, 2021):

- view the bureaucratic method as a primary enemy of achievement;
- Promoting organizational values that give an element of strength to support the organization and correspond to the values of change and creativity;
- Giving a distinct precedence to developing the capabilities of employees and motivating them for outstanding performance and creativity in it;
- Motivating all employees to experiment;
- Availability of a quantity of creative people who have the internal motivation to give creative ideas and complete the effort in order to solve the problems of the organization;
- Establishing work teams and providing an appropriate climate for creative thinking; Finally, the communication and centralization process is flexible and open

Ibrahim (2022) also summarized the features and characteristics of organizational creativity in the following points:

1. Creativity is a human phenomenon; That is, its existence is general for all people, but it is in varying proportions. It is not limited to a certain group of people, or those with talent and high intelligence only.
2. Organizational creativity is a healthy phenomenon; That is, it contributes to enhancing the positive energy of people when they realize that they have accomplished certain tasks.
3. Creativity is a complex phenomenon; That is, there are various factors involved.

Literature Review:

The study of Setiawan et al (2021) aimed to solve the research gap that occurs in transformational leadership towards organizational innovation. The study gap also resolved by combining employee creativity and internal social capital variables. The approach used in this study is

quantitative with a purposive sampling technique. The study involved (125) respondents in the context of a properties company in Indonesia. The study results showed that transformational leadership has no significant effect on organizational innovation. Transformational leadership has no significant effect on employee creativity.

The study of Chandika Karunasekara et al (2021) aimed to focus on the moderating role of personal initiative in projecting employees' creativity through transformational leadership in five-star hotels in Sri Lanka. The data was collected from a sample of (312) employees and their immediate supervisors were collected and analyzed. The study results reveal that the transformational leadership style enhances creativity among their followers. Besides, a significant moderating role of the personal initiative was found in the association between transformational leadership and employee creativity.

The study of Tangatarova & Gao (2021) aimed to examine Transformational leadership (TL) and patient safety (PS) in hospital. Using a cross-sectional sample consisting of 240 nurses in the hospitals of Uzbekistan and a structural model, with a random sampling technique by employing explanatory, and causal design was used to test the developed framework. Quantitative data was collected using questionnaires, the survey instruments were distributed by hand among the private and public sector, we find that nurses' perceived safety culture (SC) and decision-making capacity (DMC) act as important mechanisms linking Transformational leadership to patient safety. Meanwhile, nurses' perceived locus of control (LC) moderates the effect of TL on SC and DMC in such way that this effect is more salient for nurses with internal LC than for nurses with external LC. This paper examines the contribution, that individuals with high internal LC are more affected by TL, generate and can better develop SC and DMC. The study findings demonstrated the significant role of transformational leadership played in order to improve working conditions and the environment, which helps nurses to create good conditions, relationships with patients and increase patient safety.

The study of Hussain & Khayat (2021) aimed to examine the impact of transformational leadership on job satisfaction and organisational commitment among hospital staff. Peer-reviewed empirical studies using a quantitative design examining the relationship between transformational

leadership, job satisfaction, and organizational commitment among hospital staff were included. Studies were evaluated using the Quality Assessment Tool, and a data extraction and analysis schedule was completed in all included studies. A total of (367) titles and abstracts are screened, yielding (26) studies that are included in this review. The collected variables were analysed to determine the effect of transformational leadership style on job satisfaction and organisational commitment. A total of 19 studies examining the relationship between transformational leadership and job satisfaction (n = 15) are found to have a positive relationship, while 13 studies examining the relationship between transformational leadership and organisational commitment (n = 11) are found to have a positive relationship.

The study of Boamah (2018) aimed to test a model examining relationships among transformational leadership, structural empowerment, staff nurse clinical leadership, and nurse-assessed adverse patient outcomes. A cross-sectional survey was conducted with a randomly selected sample of (378) registered nurses working in direct patient care in acute care hospitals across Ontario, Canada. Structural equation modeling was used to test the hypothesized model. The study results showed that the model had an acceptable fit, and all paths were significant. Transformational leadership was significantly associated with decreased adverse patient outcomes through structural empowerment and staff nurse clinical leadership

Study of Hillen et al (2017) aimed to assess how transformational leadership behavior relates to patient safety culture in a hospital context. The study used a questionnaire as a data collection tool distributed to a sample of (507) medical directors in German acute care hospitals. The study results revealed that transformational leadership in hospitals was a significant predictor of the frequency of reporting of safety events, as seen by medical directors. The study results highlighted the critical role that executive behavior plays in employee participation in patient safety initiatives. Preventing patients from unintended harm can then be traced to the organizational level farthest from direct interaction with the patient.

The study of Alotaibi et al (2015) aimed to investigate the mediation effect of organizational climate on the relationship between Transformational Leadership and perceived patient safety in Saudi Hospitals from the nurses perspective. A quantitative research design was employed to collect data from nurses in Saudi hospitals to examine the hypothesized

model. Out of (254) questionnaires distributed only (217) questionnaires were usable for analysis. The Partial Least Squares Structural Equation Modeling (PLS-SEM) method was used to test the hypotheses. The study results showed that this study supported the relationship between Transformational Leadership and organizational climate and the relationship between organizational climate and perception of patient safety. The study confirmed the full mediating effect of organizational climate on the relationship between Transformational Leadership and perception of patient safety.

Methodology:

This study is a quantitative study that follow the descriptive and analytical approach. The descriptive and analytical approach will be employed in the study as follows:

1. Describe the reality of the independent study variable Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) and the independent variables creativity and patient safety in hospitals in the Kingdom of Saudi Arabia
2. The analytical approach in order to analyze the impact of Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) on creativity and patient safety in hospitals in the Kingdom of Saudi Arabia.

The Study Population and Sample:

The study population consisted of workers at hospitals in the Kingdom of Saudi Arabia, where a random sample of (260) employees of the administrative and medical staff will be drawn.

The study tool was distributed to members of the community electronically, and (251) responses were collected for statistical analysis.

Description of the study sample (demographic characteristics):

The study dealt with some demographic characteristics including “Gender, Age, Educational qualification, and Experience”, where the study sample was described, through frequencies and percentages, as follows:

Table 1 Description of the study sample

Demographic Characteristics	Category	Frequencies	Percentages
Gender	Male	241	96.0
	Female	10	4.0
	Total	251	100
Age	21-30 years	18	7.2
	31-40 years	125	49.8
	41-50 years	78	31.1
	More than 50 years	30	12.0
	Total	251	100
Educational qualification	Diploma or less	101	40.2
	Bachelor	97	38.6
	Higher Diploma	21	8.4
	Master	32	12.7
	Phd	0	0.0
	Total	251	100
Experience	Less than 5 years	16	6.4
	5-10 years	65	25.9
	11-15 years	73	29.1
	More than 15 years	97	38.6
	Total	251	100

Table 1 indicates that the majority of the study sample members were males with percentage of (96%), while the percentage of females was (4%) only of the sample members, which indicates that the largest percentage of workers in hospitals in the Kingdom of Saudi Arabia is males. The above table also indicates that (49.8%) of the study sample members were aged (31-40 years), followed by those aged (41-50 years) with a percentage of (31.1%), and then came the age group (more than 50 years). by (12%). Finally, the age group was (21-30 years) by (7.2%) of the study sample.

In the Educational qualification, the table indicates that the largest percentage was for (diploma or less holders), with a percentage of (40.2%) of the sample, followed by (bachelor's holders) with a percentage of (38.6%), and then (master's holders) with a percentage of (12.7%). Finally (higher diploma holders) was lower class with (8.4%) of the sample working in hospitals in the Kingdom of Saudi Arabia.

The table indicates that the highest percentage of the study sample was those with experience (more than 15 years) with a percentage of (38.6%), followed by people with experience (11-15 years) with (29.1%),

followed by people with experience (5-10 years) with a percentage of (25.9). %). Then finally came people with experience (less than 5 years) by (6.4%) of the study sample.

Data Collection:

Primary sources: The primary data collection will be relied upon through a questionnaire that will be built in light of the study's hypothesis, questions and objectives.

Secondary sources: The researcher relies on the secondary sources available in the field of study, in order to address the theoretical framework in them, and these sources are Arab and foreign books related to the subject of the study, as well as periodicals, research, and scientific theses.

The Study Tool:

The study is based on a questionnaire will be prepared by the researcher based on relevant previous studies. The study tool includes the following parts:

- Part one: demographic factors, including (gender, age, educational qualification, and job location).
- Part Two: This part contains paragraphs related to o Transformational leadership dimensions (ideal influence (charisma), intellectual arousal, Individual entity, motivation).
- Part Three: This part contains paragraphs related to creativity in hospitals in the Kingdom of Saudi Arabia
- Part four: this part contains paragraphs related to patient safety in hospitals in the Kingdom of Saudi Arabia

Validity and reliability test of the study instrument:

Two types of test will be relied upon as follows:

- Apparent honesty: by presenting the study tool to a group of arbitrators from the professors and taking their observations about the study tool.
- Using the Cronbach alpha test: The Cronbach alpha coefficient test will be used to measure the stability of the measuring tool, its internal consistency, and its ability to measure the dimensions and axes of the study.

Table 2-3 indicates the results:

Table 2 Cronbach alpha coefficients for each variable of the study tool

Variable	number of paragraphs	Cronbach alpha
The independent variable, transformational leadership	20	
Ideal Influence (Charisma)	5	%91.9
Intellectual Arousal	5	%90.1
Individual Entity	5	%93.4
Motivation	5	%94.9
The dependent variable organizational creativity	11	%82.8

Table No. 2 noted that the reliability coefficients for all study axes were greater than (60%), which indicates that there is internal consistency between the paragraphs of each of the fields, which confirms the validity and significance of the questionnaire. As these percentages show in a way that the paragraphs of the study questionnaire were clear and understandable to the members of the study sample and they have specific answers about them, as these percentages refer to logical answers far from random and approaching the greatest possible degree of accuracy.

The Statistical Methods:

- Arithmetic mean and standard deviation.
- Multi regression test to test the study hypotheses.

Results:

The study sample views were analyzed to assess the degree to which they appreciated the statements of Transformational leadership and its impact on organizational creativity and patient safety in hospitals in the Kingdom of Saudi Arabia. The arithmetic means and standard deviations were calculated for the paragraphs of each study Variable, as follows:

The Independent Variable, Transformational Leadership:

The independent variable includes four variables (ideal influence (charisma), intellectual arousal, Individual entity, motivation).

Table No. 3 refers to the transformational leadership variables, where the arithmetic means were calculated for each variable of

transformational leadership, and they were arranged in descending order according to the degree of appreciation, and the results were as follows:

Table 3 Transformational leadership variables are arranged in descending order according to the degree of appreciation

Variables	Arithmetic Mean	Standard Deviations	Rank
Ideal Influence (Charisma)	4.096	0.997	1
Motivation	3.789	1.113	2
Individual Entity	3.767	1.105	3
Intellectual Arousal	3.661	1.175	4
Total	3.828	1.098	

Table 3 indicates the arithmetic mean, standard deviations, and rank of the transformational leadership variables. The table indicates a high degree of transformational leadership; with an arithmetic mean reach (3.828).

The table indicates that Ideal Influence (Charisma) was in the first place with arithmetic mean reach (4.096) and a standard deviation of (0.997) and at a high level of appreciation. In the second place was Motivation with arithmetic mean reach (3.789) and a standard deviation of (1.113), and at a high level of appreciation. In the third place was Individual Entity, with arithmetic mean reach (3.767) and a standard deviation of (1.105), and at a high level of appreciation. In the fourth and last place was Intellectual Arousal with arithmetic mean reach (3.661) and a standard deviation (1.175) and at an medium level of appreciation.

The dependent variables organizational creativity & patient safety: Table 3 indicates the arithmetic mean and standard deviations of the questionnaire items related to the dependent variable organizational creativity& patient safety:

Table 3 organizational creativity& patient safety variables arranged in descending order according to the degree of appreciation

Variables	Arithmetic Mean	Standard Deviations	Rank
organizational creativity	4.096	0.997	1
patient safety	3.789	1.113	2

Table 4 indicates the arithmetic mean, standard deviations, and rank of the organizational creativity& patient safety. The table indicates a high

degree of organizational creativity; with an arithmetic mean reach (4.096) and a standard deviation of (0.997) at a high level of appreciation.

The table indicates that **patient safety** arithmetic mean reach (3.789) and a standard deviation of (0.113) and at a high level of appreciation.

The Results of first Hypotheses:

First Hypotheses:

There is a statistically significant effect of Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) on creativity in hospitals in the Kingdom of Saudi Arabia.

To test the hypothesis of the study, a multiple regression test was conducted to show the extent of a significant effect of Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) on creativity in hospitals in the Kingdom of Saudi Arabia.

Table 5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.523a	.273	.261	.46423

Table 5 indicates that the value of the correlation coefficient (R) between the independent variable and the dependent variable is (0.523). The value of the coefficient of determination (R Square) was (0.273). Accordingly, the independent variable was able to explain (27.3%) of the changes that occurred in the dependent variable.

ANOVA For Regression:

Table 6 shows the results of ANOVA to test the significance of the regression model:

Table 6 ANOVA FOR REGRESSION

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	19.937	4	4.984	23.128	.000 ^b
	Residual	53.015	246	.216		
	Total	72.952	250			

Table 6 shows the analysis of variance, which aims to identify the explanatory power of the model and the independent variable “transformational leadership” on “organizational creativity” through a statistical analysis (F).

Table 6 shows that there is a high significance of the (F) test estimated at (23.128) higher than its tabular value (2.39), and with the

significance level estimated at (Sig = 0.000) less than the significance level ($\alpha \leq 0.05$). Thus, the regression model has an appropriate significant relationship to measure the relationship between the independent variable and the dependent variable.

From this point of view, the null hypothesis is rejected while accepting the alternative hypothesis, which states that the regression model is significant (there is an effect of the independent variables on the dependent variables), as the independent variables explained (27.3%) of the dependent variable.

i.e. there is a statistically significant effect of Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) on creativity in hospitals in the Kingdom of Saudi Arabia.

Multiple Regression test:

Table 7 shows the values of regression coefficients for estimators and statistical tests of effect of Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) on creativity in hospitals in the Kingdom of Saudi Arabia.

Table 7 Correlation coefficients between independent variables and organizational creativity

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.841	.142		20.004	.000
Ideal Influence (Charisma)	.257	.062	.413	4.154	.000
Intellectual Arousal	-.066	.065	-.122	-1.027	.305
Individual Entity	.057	.075	.104	.766	.445
Motivation	.075	.076	.140	.980	.328

The first sub-hypothesis:

There is a statistically significant effect of ideal influence (charisma) on creativity in hospitals in the Kingdom of Saudi Arabia.

Table 7 shows that there is a statistically significant effect of ideal influence (charisma) on creativity in hospitals in the Kingdom of Saudi Arabia, where the calculated (T) value reached (4.154), which is higher than its tabular value, and at the level of statistical significance reached (0.00) which is less than the specified value (0.05).

Thus, we accept the alternative hypothesis and reject the null hypothesis: **i.e.** There is a statistically significant effect of ideal influence (charisma) on creativity in hospitals in the Kingdom of Saudi Arabia.

The second sub-hypothesis:

There is a statistically significant effect of intellectual arousal on creativity in hospitals in the Kingdom of Saudi Arabia.

Table 7 shows that there is no statistically significant effect of intellectual arousal on creativity in hospitals in the Kingdom of Saudi Arabia, where the calculated (T) value reached (1.027) at the level of statistical significance reached (0.305) which is higher than the specified value (0.05).

Thus, we accept the null hypothesis and reject the alternative hypothesis: **i.e.** There is no statistically significant effect of intellectual arousal on creativity in hospitals in the Kingdom of Saudi Arabia.

The third sub-hypothesis:

There is a statistically significant effect of Individual entity on creativity in hospitals in the Kingdom of Saudi Arabia.

Table 7 shows that there is no statistically significant effect of Individual entity on creativity in hospitals in the Kingdom of Saudi Arabia, where the calculated (T) value reached (0.766) at the level of statistical significance reached (0.445) which is higher than the specified value (0.05). Thus, we accept the null hypothesis and reject the alternative hypothesis: **i.e.** There is no statistically significant effect of Individual entity on creativity in hospitals in the Kingdom of Saudi Arabia.

The fourth sub-hypothesis:

There is a statistically significant effect of motivation on creativity in hospitals in the Kingdom of Saudi Arabia.

Table 7 shows that there is no statistically significant effect of motivation on creativity in hospitals in the Kingdom of Saudi Arabia, where the calculated (T) value reached (0.980) and at the level of statistical significance reached (0.328) which is higher than the specified value (0.05).

Thus, we accept the null hypothesis and reject the alternative hypothesis: **i.e.** There is no statistically significant effect of motivation on creativity in hospitals in the Kingdom of Saudi Arabia.

The Results of second Hypotheses:

First Hypotheses:

There is a statistically significant effect of Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) on patient safety in hospitals in the Kingdom of Saudi Arabia. To test the hypothesis of the study, a multiple regression test was conducted to show the extent of a significant effect of Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) on Patient Safety in hospitals in the Kingdom of Saudi Arabia.

Table 5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.624 ^a	.389	.379	.45244

Table 5 indicates that the value of the correlation coefficient (R) between the independent variable and the dependent variable is (0.624). The value of the coefficient of determination (R Square) was (0.389). Accordingly, the independent variable was able to explain (%38.9) of the changes that occurred in the dependent variable.

ANOVA For Regression:

Table 6 shows the results of ANOVA to test the significance of the regression model:

Table 6 ANOVA FOR REGRESSION

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	32.060	4	8.015	39.154	.000 ^b
	Residual	50.357	246	.205		
	Total	82.417	250			

Table 6 shows the analysis of variance, which aims to identify the explanatory power of the model and the independent variable “transformational leadership” on “Patient Safety ” through a statistical analysis (F).

Table 6 shows that there is a high significance of the (F) test estimated at (39.154) higher than its tabular value (2.39), and with the significance level estimated at (Sig = 0.000) less than the significance level ($\alpha \leq 0.05$). Thus, the regression model has an appropriate significant relationship to measure the relationship between the independent variable and the dependent variable.

From this point of view, the null hypothesis is rejected while accepting the alternative hypothesis, which states that the regression model is significant (there is an effect of the independent variables on the dependent variables), as the independent variables explained (%38.9) of the dependent variable.

i.e. there is a statistically significant effect of Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) on Patient Safety in hospitals in the Kingdom of Saudi Arabia.

Multiple Regression test:

Table 7 shows the values of regression coefficients for estimators and statistical tests of effect of Transformational leadership (ideal influence (charisma), intellectual arousal, Individual entity, motivation) on Patient Safety in hospitals in the Kingdom of Saudi Arabia.

Table 7 Correlation coefficients between independent variables and Patient Safety

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.057	.138		14.859	.000
Ideal Influence (Charisma)	.178	.060	.270	2.955	.003
Intellectual Arousal	.094	.063	.164	1.501	.135
Individual Entity	.028	.073	.047	.379	.705
Motivation	.105	.074	.185	1.412	.159

The first sub-hypothesis:

There is a statistically significant effect of ideal influence (charisma) on Patient Safety in hospitals in the Kingdom of Saudi Arabia.

Table 7 shows that there is a statistically significant effect of ideal influence (charisma) on Patient Safety in hospitals in the Kingdom of Saudi Arabia, where the calculated (T) value reached (2.955) at the level of statistical significance (0.00) which is less than the specified value (0.05).

Thus, we accept the alternative hypothesis and reject the null hypothesis: i.e. There is a statistically significant effect of ideal influence (charisma) on Patient Safety in hospitals in the Kingdom of Saudi Arabia.

The second sub-hypothesis:

There is a statistically significant effect of intellectual arousal on Patient Safety in hospitals in the Kingdom of Saudi Arabia.

Table 7 shows that there is no statistically significant effect of intellectual arousal on Patient Safety in hospitals in the Kingdom of Saudi Arabia, where the calculated (T) value reached (1.027), and at the level of statistical significance reached (0.305) which is higher than the specified value (0.05).

Thus, we accept the null hypothesis and reject the alternative hypothesis: i.e. There is no statistically significant effect of intellectual arousal on Patient Safety in hospitals in the Kingdom of Saudi Arabia.

The third sub-hypothesis:

There is a statistically significant effect of Individual entity on Patient Safety in hospitals in the Kingdom of Saudi Arabia.

Table 7 shows that there is no statistically significant effect of Individual entity on Patient Safety in hospitals in the Kingdom of Saudi Arabia, where the calculated (T) value reached (0.766) at the level of statistical significance reached (0.445) which is higher than the specified value (0.05).

Thus, we accept the null hypothesis and reject the alternative hypothesis: i.e. There is no statistically significant effect of Individual entity on Patient Safety in hospitals in the Kingdom of Saudi Arabia.

The fourth sub-hypothesis:

There is a statistically significant effect of motivation on Patient Safety in hospitals in the Kingdom of Saudi Arabia.

Table 7 shows that there is no statistically significant effect of motivation on Patient Safety in hospitals in the Kingdom of Saudi Arabia, where the calculated (T) value reached (0.980) at the level of statistical significance reached (0.328) which is higher than the specified value (0.05).

Thus, we accept the null hypothesis and reject the alternative hypothesis: i.e. There is no statistically significant effect of motivation on Patient Safety in hospitals in the Kingdom of Saudi Arabia.

Discussions:

The results indicated a high rating for transformational leadership in hospitals in the Kingdom of Saudi Arabia. It has been found that the most prevalent dimensions are (ideal influence (charisma)) at a high level of appreciation, followed by (motivation) and at a high level of appreciation, and then (intellectual arousal) at a high level of appreciation. Finally, in the fourth rank (individual legal entity) and at an average level of appreciation. In ideal influence (charisma), it was found that hospitals in the Kingdom of Saudi Arabia achieve their organizational goals and those of employees through commitment, effort and a high degree of appreciation.

While hospitals in the Kingdom of Saudi Arabia have sought to make a fundamental change in the behavior and understanding of employees, they have been the least in the field of exemplary influence (charisma), however, it was highly appreciated.

In the field of Individualized Consideration, it was at an average level. It was found that allowing hospitals in the Kingdom of Saudi Arabia to develop procedures to increase the effectiveness of work was the most practiced practice in the field of individual legality and was highly appreciated. Whereas, in hospitals in the Kingdom of Saudi Arabia, recruitment of personnel according to competence without any favoritism was the lowest, and moderately rated.

In the field of Intellectual Stimulation, hospitals in the Kingdom of Saudi Arabia seek to empower individuals, develop their skills and self-esteem. where it was highly appreciated, The results indicated that hospitals in the Kingdom of Saudi Arabia rarely assist workers in emergency situations, where the paragraphs were the least appreciated according to the study sample.

In the field of motivation, it was found that hospitals in the Kingdom of Saudi Arabia direct employees to work in a team spirit,

It has also been shown that hospitals are working to provide a collective sense of administrative tasks.

As for the creative behavior of workers, the results indicated that there is a high degree of appreciation for the creative behavior of workers in hospitals in the Kingdom of Saudi Arabia. It turns out that when workers face a problem, they try to find the best solution to it, it has also been found that the fear of failure is a little which makes workers reluctance sometimes

to suggest new ideas to develop work in hospitals in the Kingdom of Saudi Arabia.

The study also found an association between transformational leadership and the creative behavior of workers and patient safety in hospitals in the Kingdom of Saudi Arabia.

The results indicated a statistically significant effect of transformational leadership in its dimensions (ideal influence (charisma), intellectual arousal, individual morality, motivation) on the creative behavior of workers in hospitals in the Kingdom of Saudi Arabia.

The results indicated a statistically significant effect of transformational leadership in its dimensions (ideal influence (charisma), intellectual arousal, individual morality, motivation) on patient safety in hospitals in the Kingdom of Saudi Arabia

The results concluded that there is a statistically significant effect of one dimension of transformational leadership (ideal influence (charisma)) on the creative behavior of workers in hospitals in the Kingdom of Saudi Arabia.

The results concluded that there is a statistically significant effect of one dimension of transformational leadership (ideal influence (charisma)) on patient safety in hospitals in the Kingdom of Saudi Arabia.

Recommendations:

In light of the results, the research recommends the following:

- 1) That hospitals in the Kingdom of Saudi Arabia assign tasks to people according to their capabilities and practical experience.
- 2) That career progression is carried out with fairness and transparency according to scientific systems in hospitals in the Kingdom of Saudi Arabia.
- 3) That the employees are appointed according to efficiency without any favoritism.
- 4) That hospitals in the Kingdom of Saudi Arabia assist workers in emergency situations.
- 5) Disseminate the results of the study and work on conducting studies related to the current study.

References:

- Alotaibi, E. A., ZienYusoff, R., Al-Swidi, A. K., Al-Matari, E. M., & AlSharqi, O. Z. (2015). The mediating effect of organizational climate on the relationship between transformational leadership and patient safety: A study on Saudi hospitals. *Mediterranean Journal of Social Sciences*, 6(2 S1), 117-117.
- Boamah, S. (2018). Linking nurses' clinical leadership to patient care quality: The role of transformational leadership and workplace empowerment. *Canadian journal of nursing research*, 50(1), 9-19.
- Busch, I. M., Saxena, A., & Wu, A. W. (2021). Putting the patient in patient safety investigations: barriers and strategies for involvement. *Journal of patient safety*, 17(5), 358-362.
- Chandika Karunasekara, D. S. P., Karunarathne, R. A. I. C., & Wickramsinghe, C. N. (2021). Transformational Leadership on Employee Creativity in Five-Star Hotels in Sri Lanka: Moderating Role of Personal Initiatives. *South Asian Journal of Tourism and Hospitality* 1(1), 117-137.
- Głód, W. (2018). Transformational leadership style in the relationship between innovation and efficiency of healthcare units in Poland. *Oeconomia copernicana*, 9(4), 731-753.
- Hillen, H., Pfaff, H., & Hammer, A. (2017). The association between transformational leadership in German hospitals and the frequency of events reported as perceived by medical directors. *Journal of risk research*, 20(4), 499-515.
- Hussain, M. K., & Khayat, R. A. M. (2021). The Impact of Transformational Leadership on Job Satisfaction and Organisational Commitment Among Hospital Staff: A Systematic Review. *Journal of Health Management*, 23(4), 614-630.
- Miraj, Q. A. (2015). The impact of administrative empowerment on organizational creativity. Ma Thesis, University of Biskra, Algeria.
- Money, V. (2017). Effectiveness of Transformational Leadership Style in Secondary Schools in Nigeria. *Journal of Education and Practice*, 8(9), 135-140.
- Okechukwu, R. N., Joe-Akunne, C. O., & Etodike, C. E. (2021). Work Resilience, Core Self-Evaluation and Organizational Creativity as Predictors of Thriving at Work among Bank Employees in Owerri Municipal. *Practicum Psychologia*, 11(1).
- Peng, J., Li, M., Wang, Z., & Lin, Y. (2021). Transformational leadership and employees' reactions to organizational change: Evidence from a meta-analysis. *The Journal of applied behavioral science*, 57(3), 369-397.
- Setiawan, R., Eliyana, A., Suryani, T., & Pratama, A. (2021). The Effect Of Transformational Leadership On Organizational Innovation Through Employee Creativity And Internal Social Capital In The Pandemic Time Of Covid-19. *Academy of strategic Management Journal* 20(3), 1-21.
- Tangatarova, S., & Gao, Y. (2021). Transformational leadership and patient safety in hospital: The roles of safety culture, decision-making capacity, and locus of control. *International Journal of Research in Business and Social Science* 10(2), 106-122.
- The Arab Hospital Magazine (2021). *The health sector in Saudi Arabia: a huge budget to build advanced hospitals and medical cities*. From the website <https://www.thearabhospital.com/> (Retrieved in 23/1/2022).
- White, S. (2018). *What is transformational leadership? A model for motivating innovation*. From the website <https://www.cio.com/> (Retrieved in 23/1/2022).