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# Transformational leadership impact on innovative behaviour as perceived by healthcare workers in private hospitals in Jordan

Atef Raoush[1*]

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*Corresponding author: Atef Raoush, Hospital Management Department, Faculty of Business, Philadelphia University, Amman, Jordan
E-mail: aalraoush@philadelphia.edu.jo

Reviewing editor:
Mazhar Abbas, Department of Business Administration, Cholistan University of Veterinary and Animal Sciences Bahawalpur, Pakistan

Additional information is available at the end of the article

**Abstract:** Because of globalization and the ever-changing nature of businesses, particularly healthcare organizations, leaders need to determine the most effective method for bringing change that will help the organization achieve its objectives. Understanding how to encourage followers to reach organizational goals through leadership techniques adequately has become a concern for the healthcare business. Consequently, the significance of transformational leadership can be observed in bringing about that type of change in any business and understanding how to motivate followers to reach corporate goals effectively. As a result, the main objective of this study is to determine the influence of transformational leadership on healthcare workers' innovative behavior in Jordan's private hospitals as perceived by healthcare workers. This research employs a cross-sectional study design involving a quantitative method of data collection. In total, 412 healthcare workers from Jordanian private hospitals were included in the sample. Using simple linear regression analysis, the research findings revealed a significant transformational leadership impact on healthcare workers' innovative behavior; the findings highlight

Atef Raoush

## ABOUT THE AUTHOR

Atef Raoush is an Associate Professor, Hospital Management Department at the Faculty of Business, Philadelphia University in Jordan. With a Ph.D. in Hospital Management and a subspecialty in TQM in Healthcare, he possesses a wealth of knowledge and expertise in the field. With nine years of experience in teaching and research, and 15 years in healthcare quality and hospital management. His key research interests include Total Quality Management, Financial Management, Performance Improvement, Leadership and governance, Human Resources Management, and Accreditation in the Healthcare Sector. Through his research activities, he aims to contribute to the advancement of these critical areas and improve healthcare services in Jordan and beyond. His work on leadership and governance aligns well with his ongoing commitment to enhancing organizational performance and fostering a culture of quality and innovation in the healthcare industry.

## PUBLIC INTEREST STATEMENT

In this paper, the author focus on the crucial role of leadership in the success of organizations, with a particular emphasis on healthcare workers in Jordan. The study investigates the influence of transformational leadership on the innovative behaviour of these healthcare workers, an aspect that deserves more attention from healthcare decision-makers. By choosing private hospitals as the study's context, which are integral to Jordan's healthcare system, the author shed light on the impact of transformational leadership on innovation. The findings highlight that transformational leadership significantly affects innovation among healthcare workers. The potential implications of this research are valuable, as it contributes to a deeper understanding of how hospital leaders can positively influence their subordinates' innovative behaviour from the perspective of the healthcare workers themselves.

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the importance of hospital leaders adopting a transformational leadership style, which is crucial for motivating healthcare employees to engage in innovative behavior, In addition, Hospital leaders should focus on fostering a workplace that encourages innovation, motivates staff to gain new knowledge and skills and gives them chances to transfer their knowledge and skills into practice.

**Subjects: Thinking, Reasoning & Problem Solving; Leadership; Work Motivation; Personnel Selection, Assessment, and Human Resource Management; Organizational Change; Innovation Management; Leadership; Healthcare Administration and Management**

**Keywords: transformational leadership; leadership style; innovative behavior; private hospitals; healthcare; Jordan**

## 1. Introduction

Leadership communication is vital for any institution, particularly when the external environment is continuously changing. As a result of these changes, managers must recognize how to encourage subordinates to achieve institutional goals through different leadership styles while also forming an atmosphere where subordinates work proficiently and pursue innovative thoughts (Iskandarani, 2017). When one individual persuades others to meet the basic standards for their employment gladly, this is referred to as leadership (Best et al., 2020). Leadership can also be defined as persuading people and creating an environment that allows them to achieve team or corporate objectives and goals. Because good leaders can inspire, encourage, and identify with their people in order to urge them to complete their jobs and meet the required goals (Harlianto & Afandy, 2018). Hence, possessing competent and skillful leaders gives a company a competitive advantage (Raoush, 2022).

One aspect of leadership is working together with people, teams, and other resources to achieve a company's goals. It may also be defined as the actions performed by a leader to guide and persuade staff members to embrace novel work practices (Alkahtani, 2015). Consequently, individual innovation in the workplace is highly influenced by transformational leadership. By definition, transformational leaders strive to improve follower performance to effect positive organizational change. They can achieve this goal by focusing on the needs of their followers and encouraging individual intellectual and creative stimulation. Al Dhanhani and Hazana Abdullah (2020) found that employee work performance is strongly linked to organizational culture and transformational leadership. Jiang (2017) also claims that the use of a transformational style significantly impacts worker behavior.

Companies continuously strive for unique products and services to stand out from the competition and gain a competitive edge in today's fast-paced global business climate. Organizations need to foster employee innovation in order for this to happen. Additionally, organizational leaders must collaborate with employees to guide and assist them as they develop new products and services. Therefore, Innovation, defined as the creation of new procedures and practices, is critical for a company's long-term competitive advantage (Jia et al., 2018). Correspondingly, a corporate climate that encourages (or discourages) individual innovation can significantly impact its personnel (Iskandarani, 2017). Son et al. (2020); Al Dhanhani and Hazana Abdullah (2020); Le and Lei (2019); Dappa et al. (2019); Zhang et al. (2018) studied the effect of transformational leadership on innovation culture they reached the conclusion that transformational leadership significantly affects organizational performance and the culture of innovation. Other research has discovered a strong link between transformational leadership and team effectiveness (Abudaqa et al., 2020; Tang et al., 2020).

Leadership plays an essential role in the healthcare industry since it leads to achieving many hospitals' and health organizations' goals. Most healthcare leaders' actions worldwide are centered on improving health quality and developing innovative methods to address the complicated

factors in the business setup (Gopee & Galloway, 2017). It is becoming increasingly challenging for a single healthcare leader to address all problems to create the best outcome for healthcare procedures (Barr & Dowding, 2019). Nonetheless, utilizing transformational leadership, soliciting input from all stakeholders without overlooking anyone, has proven beneficial in the healthcare business (Besieux et al., 2015; Hansen & Pihl-Thingvad, 2018).

## 2. Literature review and hypotheses development

### *2.1. Transformational leadership*

Most academics are fascinated by the topic of leadership, which is important to the success of organizations irrespective of their industry. There is evidence in the literature that organizational leadership is a crucial element in stimulating, supporting, facilitating, supporting, and enhancing workers' performance (Lee et al., 2021). According to Gill and Benatar (2016), tackling global health concerns requires strong leadership. In any corporation, leadership plays a prominent role in achieving various corporate objectives (Grint et al., 2016).

A leader's leadership style, defined as how he or she provides direction, implements plans, and motivates employees, is an important aspect of corporate management (Bonau, 2017). According to Chaimongkonrojna and Steane (2015), numerous leadership theories exist. One of these is the full-range leadership theory, which divides leadership practices into three kinds: transformational, transactional, and passive-avoidant; it is a typical theory used to detect distinctions in leadership styles. In 1978, Burns coined the phrase "transformational leadership (Burns, 1978). Gill et al. (2010) defined transformational leadership as exerting inspiration over subordinates with the intention of producing dramatic shifts in their views and establishing commitment to the organization's mission, vision, and objectives. In addition, Northouse (2016) defines it as the process by which one individual affects a group of persons to reach an expected result. He explains transformational leadership as a method that combines charismatic and visionary leadership to influence, transform, and change people by identifying their needs, motivating them to meet those needs, and taking into account their feelings, emotions, values, and ethics to help them achieve long-term goals. It is a process in which the leader and followers cooperate to help each other develop moral character and drive (Northouse, 2016).

Organizations throughout the world have employed transformational leadership over the last few years. This is because previous research has shown that it improves employee performance (Ullah et al., 2018), Enhancing employee commitment (Allen et al., 2017), organizational success, work satisfaction (Muterera et al., 2016), employee creativity (Jyoti & Dev, 2015), and overall job outcomes (Asgari et al., 2020; Kim & Yoon, 2015). There is also clear evidence of a link between transformational leadership and innovation (Al Dhanhani & Hazana Abdullah, 2020; Dappa et al., 2019; Le & Lei, 2019; Son et al., 2020; Zhang et al., 2018). Myricks (2021) analyzes the link between transformative leadership and employee results as seen by employees. The information was gathered from 107 local government employees in the southern United States. The findings supported the existence of a significant correlation between transformational leadership and organizational outcomes. According to the findings, employers should apply transformational leadership behavior to improve employees' perceptions of their leaders' transformational leadership behavior, core self-evaluations, and job results. Le and Lei (2019) investigate the role of perceived organizational support as a moderating mechanism and knowledge sharing as a mediating function of the effect of transformational leadership in innovation. A total of 394 people from 88 Chinese businesses were polled. The findings revealed that transformational leadership influences innovation via a knowledge-sharing mediator. Through perceived organizational support, the results also demonstrated that transformational leadership and knowledge exchange impacted innovation capabilities. In order to improve innovation culture capabilities, the report emphasizes how important it is for Chinese managers to use knowledge-sharing and transformational leadership techniques.

At two public universities in Texas (PUS) and Qatar, Al-Mansoori and Koç (2019) examine the effects of transformational leadership on the growth of engineering colleges' innovation capabilities (PQA). The research examines transformational leadership's impact on faculty innovation through technical publications, patents, and courses on sustainable development. The survey form was completed by 39 faculty members from both colleges, and the results were analyzed. The findings were also compared to Hofstede's Cultural Dimensions Framework, which is constructed on data collected from huge multinational corporations in 40 countries and has five work-related values. The results showed that both universities' leaders had some transformative leadership influences. Respondents stressed the importance of government contribution in fostering innovation. Academic staff also emphasized the importance of acknowledgment and a measurable incentive structure that facilitate faculty efforts on assignments rather than technical articles. Naguib and Naem (2018) look at the correlation between transformational leadership and innovation. The support of upper management arbitrates the association between using a transformational leadership style and subordinates' innovation, while materials supply arbitrates the correlation between transformational leadership and subordinates' innovation results, according to the findings. Khalili (2016) looks at how transformative leadership affects employee creativity and innovation. A transformational leadership instrument was used to survey the opinions of 1,172 workforces from various businesses in Khalili (2016). The findings show that transformative leadership, employee creativity, and innovation are linked in a favorable and meaningful way. According to the survey, Iranian business leaders should learn to be transformational leaders and practice them. Additionally, they should support and foster employee innovation and creativity in order to enhance corporate success.

Bass and Avolio (1995) divided transformational leadership into four categories. It has gotten a lot of attention in the management literature, and it is still being researched:

#### *2.1.1. Idealized influence*

This is the amount to which an organizational leader may win the admiration, trust, confidence, and respect of his or her followers, thereby making them role models (Bass, 1985). This is a personality trait that the followers give to the leader. The transformational leader's behavior creates a sense of authority and pride among the team and goes above and above for the benefit of the followers, which is referred to as a charismatic influence (Avolio & Bass, 2004; Mittal, 2015). Influential leaders are approachable, self-assured, and intent on achieving great objectives (Elche et al., 2020).

#### *2.1.2. Intellectual stimulation*

The degree to which an organizational leader can inspire his or her followers' intelligent and critical thinking by raising their knowledge of the organization's concerns and pushing them to come up with new solutions to any challenges they confront. (Walumbwa et al., 2005). While focusing on the desired vision and taking into account the ethical consequences of their activities (Avolio & Bass, 2004).

#### *2.1.3. Inspirational motivation*

This refers to a leader's capacity to communicate a vision to his or her people that is both engaging and motivating (Bass, 1985). Organizational leaders that inspire enthusiasm have high expectations for their subordinates, are optimistic about the future, and give purpose to the assigned tasks (Bass, 1985). By bringing meaning to their work, the leader inspires and motivates followers as well as other people. (Avolio & Bass, 2004; Bass, 1985; Jauhar et al., 2017; Northouse, 2016).

#### *2.1.4. Individualized consideration*

This is how an organizational leader focuses on the essentials of his or her subordinates, listens to their concerns, and acts as a mentor, coach, and friend to them (Bass, 1985). This attribute is

exhibited by a leader who cares about an individual's strengths, ambitions, and goals to boost followers' self-confidence in addressing any difficulties the organization can face (Avolio et al., 2004), along with preserving a justification for the undertaking and the goals that must be encountered (Mokhber et al., 2015).

Transformational leaders strive to improve organizational culture affecting positive change in individuals and social systems, which benefits both the team and the organization (Ashfaque, 2020). Moreover, Transformational leaders inspire followers to take on more tasks to help them reach their greatest potential (Paulienė, 2012). This leadership style increases followers' psychological empowerment and promotes inventiveness (Sinha et al., 2016). According to Kim and Yoon (2015), Transformational leaders inspire their staff to do their best work, which results in organizations that are innovation-focused.

In the healthcare sector, a major role is played by leadership. In the current healthcare environment, it is no longer acceptable for healthcare professionals to underestimate the necessity for effective leadership (Raoush, 2022); leaders have been making noticeable moves over the recent years toward a more customer-focused approach when delivering their services (Edmunds, 2019). Such efforts may need to be more adequate to meet the needs of an ever-growing population dealing with a range of health-related challenges, given today's healthcare service standards. Healthcare leaders have personalities that create a vision, are anticipatory and proactive, and promote sound communication across the organization (Gopee & Galloway, 2017). Future healthcare leadership entails creating consumer-focused healthcare organizations as well as rational reasoning that focuses on major areas that contribute to the continuous change of organizations. Transparency regarding service pricing and data quality, a technology employed in patient monitoring and involvement, and individualized care delivery are only a few (O'Brien & Mattison, 2016).

### *2.2. Innovative behaviour*

Due to changing environmental and economic dynamics, customer wants, and rising organizational competitiveness, innovative behavior is becoming increasingly vital (Škerlavaj et al., 2017). The innovative behavior of employees is considered to be a key factor in achieving sustainable growth and competitive advantage (Lee et al., 2021). Innovative work practices by employees are essential to the competitiveness and survival of organizations (Ashfaque, 2020). The first step in innovative behavior is recognizing a problem and coming up with a solution for it (Dhar, 2016). Bonacci et al. (2020) defined innovative behavior as addressing an issue, offering an answer through knowledge or fresh thoughts from practice, and achieving the idea to promote the institution's benefits. Many characteristics, such as creativity, independence, risk-taking, decision-making, subordinates involvement, and flexibility, have been identified as cultural values fostering innovation (Naranjo-Valencia et al., 2016). Beswick et al. (2016) explain innovation as the successful employment of a novel or unconventional idea that is cost-effective, reachable, and adds worth to the consumer by resolving an existent problem and initiatives progression for the inventor; he stated that any leader should be asked the following three questions when forming a leadership group for innovation: 1) Are you ready to make innovation a priority for the upper group? If the innovation plan is to succeed, upper management support is necessary to guarantee that leadership team member embraces it. 2) Are you willing to develop a plan that aligns with the company's desire for innovation? The plan for innovation should be pragmatic, realistic, reasonable, and feasible. 3) Are you willing to shift from a hierarchical leadership style to another that promotes empowerment and leadership over control and management? Building a leadership team with cohesion, cooperation, and ownership may demand specific leadership development in order to develop the capability to lead and control innovation.

Many organizational leaders need help managing innovation since scholars generally describe it as random, non-linear, and complicated (Kahn et al., 2012). The majority of study on creativity has focused on how leaders influence their teams' creativity rather than innovative work practices,

leaving the role of employees in the formulation and implementation of ideas largely untapped and unexplored (Hughes et al., 2018). Management innovation has been demonstrated to support policy diffusion in association with leadership (Yi et al., 2018) and promote innovative behavior at work (Karatepe et al., 2020).

In the healthcare setting, innovation can be defined as an intellectual process represented in specific behaviors by an individual or a group. Healthcare employees need to be able to accomplish activities that go beyond the established protocols of a team, group, or organization. They could look for new technology or recommend new approaches to achieve objectives. According to Afsar and Masood (2017), innovative work behaviors are described as an individual's deliberate introduction and implementation of new ideas, methods, and procedures inside a work function in order to boost performance. Hence, Future healthcare leadership entails the construction of consumer-centered healthcare organizations that emphasize the zones that contribute to an organization's transformation now and in the future. This will be accomplished through active employee involvement and an environment of innovation (O'Brien & Mattison, 2016). Consequently, rather than seeing innovation as a deviant and troubling habit, people will see it as a desirable and socially appreciated method (Odoardi et al., 2019). In addition to concentrating on long-term objectives and motivating others to go beyond their immediate interests in order to pursue higher-order goals, transformational leaders must articulate the need for change, generate innovative thinking, and seek support for those ideas (Chang et al., 2020).

### *2.3. Hypotheses development*

Leadership plays an essential role in the healthcare industry since it leads to achieving hospitals' and health organizations' goals. Most healthcare leaders' actions worldwide are centered on improving health quality and developing innovative methods to address the complicated factors in the business setup (Gopee & Galloway, 2017). According to the previous literature review, more study of the underlying mechanism connecting transformational leadership with innovative behavior in the workplace has been suggested to be essential. For this reason, this study aims to examine the transformational leadership impact on healthcare workers' innovative behavior; the researcher has developed the hypotheses as follows:

**H1:** There is a significant impact of transformational leadership on workers' innovative behavior as perceived by healthcare professionals at private hospitals in Jordan at ($p \leq 0.05$).

**H2:** There is a significant impact of Idealized Influence on innovative behavior, as perceived by healthcare professionals at private hospitals in Jordan at ($p \leq 0.05$).

**H3:** There is a significant impact of Intellectual Stimulation on innovative behavior, as perceived by healthcare professionals at private hospitals in Jordan at ($p \leq 0.05$).

**H4:** There is a significant impact on Inspirational Motivation on innovative behavior, as perceived by healthcare professionals at private hospitals in Jordan at ($p \leq 0.05$).

**H5:** There is a significant impact of Individualized Consideration on innovative behavior, as perceived by healthcare professionals at private hospitals in Jordan at ($p \leq 0.05$).

**H6:** There is a statistically significant relationship between participants' general characteristics and innovative behavior at $p \leq 0.05$.

## 3. Methodology

### *3.1. Study design and sample*

This research used a quantitative data-gathering method and a cross-sectional study design. The researcher chose a quantitative method since it is used to make inferences from the data (Rahi, 2017), and the cross-sectional design highlighted the characteristics of a certain population regarding what was happening in that population (Wang & Cheng, 2020). All healthcare workers in Jordan's private hospitals were included in the study; healthcare workers are defined as professionals who provide preventive, curative, rehabilitative and promoting health services (WHO, 2007).

According to Jordan's Ministry of Health's annual report for 2019, the private sector operates 69 hospitals, accounting for approximately one-third of the country's hospital beds (5334) (about 36.3 percent of total beds). Healthcare workers included in the report consist of Physicians, Dentists, Pharmacists, Registered Nurses, and Midwives, with a total of 52,329 working in private hospitals and clinics (MOH Annual Report, 2019), our population in this research was the health workers in the private hospital only. However, no official report specified the total number of health professionals working in this sector exclusively at the time this study was conducted. The participants in the research were chosen from healthcare workers who met the study's inclusion criteria. To be eligible for the study, participants had to be healthcare personnel working in private hospitals in Jordan

Hair et al. (2013) highlighted that the sample has to be representative of the population and have a sufficient number of participants. Sekaran and Bougie (2016) state that researchers can choose the sample size based on the population as follow: If the population size is 50,000, the sample should be 381, and if the population size is 100,000, the sample should be 383, based on that, A random sample of 500 surveys was sent to private hospitals in Jordan; however, only 412 of those surveys were returned, yielding an 82.4% response rate. The sample size considers enough to represent the study population (Sekaran & Bougie, 2016). Potential participants were given the study questionnaire and information regarding consent and how to participate at nine private hospitals. They were informed about the study's purpose and nature. Participants were instructed not to include any identifying information and to send the completed questionnaire to the researcher because participation was anonymous. Furthermore, the researcher avoided any action construed as advocating or encouraging unethical behavior, such as violating the confidentiality of survey respondents, falsifying study results, misleading respondents, and avoiding legal culpability.

### *3.2. Survey instrument*

The research questionnaire was divided into two parts: the first part collected information about the participants' baseline characteristics, such as sex, age, job title, and experience, while the second part gathered information about transformational leadership's impact on innovative behavior. There were 28 items in the questionnaire to test hypotheses. The following Likert five-point scale was used to score all questionnaire items: Strongly Agree equal 5, Agree equal 4, Neutral equal 3, Disagree equal 2, and Strongly Disagree equal 1.

The initial 16 questions dealt with transformational leadership, chosen and adapted from The Multifactor Leadership Questionnaire (MLQ), which was developed and amended based on research by Bass and Avolio (2000), Bass and Riggio (2006), Khalili (2016), Alahmad (2016), Albandari (2020), and Iskandarani (2017). Additionally, items 17 to 28 were chosen to assess innovation behaviors. They were created and adapted from the study of Scott and Bruce (1994), Beswick et al. (2016), DeGraff and Quinn (2007), Goffin and Mitchell (2010), Schneider (2017), Albandari (2020), and Robinson (2020).

Independent expert translators translated the questionnaire from English to Arabic and backward from Arabic to English to confirm that the Arabic version was appropriately interpreted. To ensure the validity and suitability of the survey, six pre-tests conducted by interviewing three

academics from different Jordanian universities and three clinical managers from private and public hospitals. Pre-tests participants were requested to assess the clarity of the survey questions and assist in validating the questionnaire. The content validity ratio (CVR) was calculated for each item using Lawshe's (1975) method; the CVR result for each item was 1. Therefore, all items successfully passed the accepted value. Also, to ensure simplicity and remove any vagueness. The questionnaire's final edition took into account each modification. A pilot study was conducted for (20) healthcare workers from a different hospital, which was not part of the study sample, to determine the degree of clarity and understanding of the questionnaire items from the respondent's perspective, as well as to identify any potential flaws in the study's design and instrument.

### *3.3. Data analysis*

The data were investigated using the Statistical Package for Social Scientists (SPSS) program version 25. In advance, the data analysis. Before data analysis, the study's data were subjected to a reliability examination. The analysis reveals an alpha (0.968), and the split-half reliability coefficient for the entire scale, according to the Spearman-Brown formula, was found to be 0.909. The questionnaire's alpha and split-half results for each dimension are shown in (Table 1). Alpha is interpreted as confidence-acceptable alpha coefficient values (especially in social sciences) are 0.6 and above (George & Mallery, 2003), and the Spearman coefficient more than or equal to 0.70 was reflected as an acceptable outcome (Hyrkäs et al., 2003). Therefore, the result of Cronbach's alpha and split-half reliability coefficient was acceptable for the study tool. The categorical variable was evaluated using the descriptive statistical approach. On the other hand, multiple regression analysis was employed to investigate the association between the questionnaire questions, with a significance value of $p < 0.05$.

## 4. Results

The study's descriptive statistics include frequency and percentages based on demographic statistics. As shown in Table (2), female respondents comprised the bulk of the sample; 58.3% and 41.7% were males. The majority of the respondents, 50.7%, were aged between 36–50 years, while 6.1% of staff were above 50. A total of 56.1 of the respondents had work experience of more than 15 years, and 17.7% of them had experience of above ten years. According to the participants' professions, 11.2% were Physicians, 3.2% were Dentists, 5.6% were Pharmacists, 49.3% were Nurses, and 30.8% were Midwives.

To test the study hypotheses, multiple regression analysis was used. As presented in Table (3), there was a significant correlation between transformational leadership and innovative behaviors

**Table 1. Reliability statistics**

| **Total Questionnaire Cronbach's Alpha** | | **28** | **0.968** |
|---|---|---|---|
| **Variables** | | **# of Items** | **Cronbach's Alpha** |
| **Independent Variable: Transformational Leadership items** | | 16 | **0.952** |
| - Idealized Influence | | 4 | 0.894 |
| - Intellectual Stimulation | | 4 | 0.903 |
| - Inspirational Motivation | | 4 | 0.936 |
| - Individualized Consideration | | 4 | 0.828 |
| **Dependent Variable: Innovative behavior items** | | 12 | **0.934** |
| Spearman-Brown Coefficient | Equal Length | 0.909 | |
| | Unequal Length | 0.909 | |
| | Guttman Split-Half Coefficient | 0.909 | |

**Table 2. Descriptive statistics**

| Demographics | | Frequency | Percentage |
|---|---|---|---|
| Gender | | | |
| | Male | 172 | 41.7 |
| | Female | 240 | 58.3 |
| Age | | | |
| | 20–35 years | 178 | 43.2 |
| | Between 36–50 years | 209 | 50.7 |
| | Above 50 years | 25 | 6.1 |
| Education | | | |
| | Diploma | 122 | 29.6 |
| | Bachelor | 267 | 64.8 |
| | Higher Education | 23 | 5.6 |
| Experience Level | | | |
| | Less than 5 years | 108 | 26.2 |
| | Between 6–10 years | 231 | 56.1 |
| | Above 10 years | 73 | 17.7 |
| Profession | | | |
| | Physicians | 46 | 11.2 |
| | Dentists | 13 | 3.2 |
| | Pharmacists | 23 | 5.6 |
| | Registered Nurses | 203 | 49.3 |
| | Midwives | 127 | 30.8 |

(B = 0.805, t = 30.280, R = 0.8312, $R^2$ = 0.6909, *p* value = 0.000) significantly impacted employee behavior; therefore, H1 is accepted. Additionally, the value of R2 in this study is 0.691, which indicates that the regression equation predicted almost 69% contribution of transformational leadership to innovative behaviors in the private hospitals in Jordan. In addition, Idealized Influence (p = 0.000), Intellectual Stimulation (p = 0.000), Inspirational Motivation (p = 0.000), and Individualized Consideration (p = 0.000) significantly impacted employee innovative behavior, correspondingly, and therefore accepts H2, H3, H4, and H5. These results indicate a significant impact of transformational leadership on innovative behaviors. Furthermore, inspirational motivation had the highest impact on employee innovation (Beta = 0.321), followed by idealized influence (Beta = 0. 257), then individualized consideration (Beta = 0.187), and the least impact was on Intellectual Stimulation (Beta = 0. 180).

To test the sixth hypothesis (H6), the influence of general participant characteristics on innovative behavior, the hypothesis was tested using one-way ANOVA. As seen in Table (4), the innovative behaviors not be influenced by gender (*p* = 0.229), age (*p* = 0.492), education (*p* = 0.853), profession (*p* = 0.894), and experience (*p* = 0.372). Consequently, H6 is rejected.

## 5. Discussion

The study results show that transformational leadership statistically impacts healthcare workers' innovative behavior in Jordan's private hospitals. The study's findings revealed that transformational leadership is essential in how healthcare leaders may motivate subordinates and encourage them to change. A hospital leader should inspire employees to implement innovative ideas and improved methods for doing things efficiently. The findings support Dugan's (2017) conclusion that transformative leadership encompasses all aspects of leadership; furthermore, the results are

**Table 3. Multiple regression analysis**

| Model | | R** | $R^2$ | Adjusted R Square | Std. Error of the Estimate | B | Beta | t | Sig. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Constant | . 8312a | .6909 | .69 | .36689 | .805 | .83 | 30.280 | .000 |
| | 1. Idealized Influence | | | | | .206 | .257 | 4.970 | .000 |
| | 2. Intellectual Stimulation | | | | | .161 | .180 | 4.120 | .000 |
| | 3. Inspirational Motivation | | | | | .242 | .321 | 6.884 | .000 |
| | 4. Individualized Consideration | | | | | .183 | .187 | 4.846 | .000 |

a Predictors: (Constant), 1, 2, 3, and 4.

**Table 4. ANOVA test**

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| GENDER | Between Groups | 10.435 | 37 | .282 | 1.175 | 0.229 |
| | Within Groups | 89.760 | 374 | .240 | | |
| | Total | 100.194 | 411 | | | |
| AGE | Between Groups | 13.026 | 37 | .352 | .989 | 0.492 |
| | Within Groups | 133.156 | 374 | .356 | | |
| | Total | 146.182 | 411 | | | |
| EDUCATIONAL | Between Groups | 8.408 | 37 | .227 | .753 | 0.853 |
| | Within Groups | 112.803 | 374 | .302 | | |
| | Total | 121.211 | 411 | | | |
| PROFESSION | Between Groups | 40.076 | 37 | 1.083 | .714 | 0.894 |
| | Within Groups | 567.186 | 374 | 1.517 | | |
| | Total | 607.262 | 411 | | | |
| EXPERIENCE | Between Groups | 16.970 | 37 | .459 | 1.065 | 0.372 |
| | Within Groups | 161.057 | 374 | .431 | | |
| | Total | 178.027 | 411 | | | |

consistent with Aboramadan's (2020) study that concluded transformational leadership impacts both individual and corporate innovation.

The leader looks after the followers by safeguarding their communication against bias and offering assistance to improve subordinates' innovative behaviors. In addition, the results are consistent with a study by İşcan et al. (2014), which examined the influence of transformational leadership on innovation and performance, revealing a positive impact. Furthermore, the results were consistent with research conducted in the region, as the research conducted by Elrehail et al. (2018) looked at the perspectives of 173 academic staff at private universities in northern Jordan. The results show that transformational leadership has a positive influence on the process and product innovation. These results are in line with those of research that Al-Husseini and Elbeltagi (2014) did on higher education in Iraq. The findings support previous research by Son et al. (2020); Al Dhanhani and Hazana Abdullah (2020); Le and Lei (2019); Dappa et al. (2019); Zhang et al. (2018), and Vaccaro et al. (2012), which found that transformational leadership has an impact on employee innovation and creativity, as well as the ability to foster product and process innovation while enhancing organizational culture. In addition, the results agreed with Ma and Jiang (2018); they argued that innovative work practices are therefore promoted in organizational contexts by transformational leaders who foster employees' openness, experimentation, and risk-taking behavior, also transformational leadership fosters an environment where workers are motivated to take on difficult and unconventional duties, increasing the interest and enjoyment of their work (Golden & Shriner, 2017).

As suggested by researchers, more study of the underlying mechanism connecting transformational leadership with creative workplace behavior has been argued to be necessary; the current

study focuses on employees' perceptions of leadership style and behavior, which provides a clear picture of what is critical to improving organizational performance. The findings are consistent with Notgrass's (2014) research, which found that employees' perceptions of top management behaviors are statistically linked and predict, for example, a certain level of extra effort by the subordinates. According to the author, more research studies on small-group leadership are needed. Cheung and Wong (2011) investigated the link between transformational leadership and the level of creativity among followers. They discovered that transformational leadership and followers' creativity had a beneficial link. When leaders provide significant task and interpersonal help, this relationship is strengthened. They found that there is a positive correlation. A transformational leader ensures that the institution, groups, and persons are all inspired to develop and innovate (Iskandarani, 2017). To develop reciprocal healthcare institutions, it is apparent that transformational leadership must be incorporated. A healthcare leader must clearly express all relevant justifications for the intended change, a team-based work strategy must be implemented, and key goals must be set (Yang & Chen, 2015). For healthcare success, a transformational leader is expected to be able to reason as well as preserve high individual values and organizational commitment (Bradd et al., 2017).

This paper made a contribution to the literature on leadership and innovation and offered suggestions on how healthcare managers could encourage innovative work behavior within their workers through the deployment of a suitable leadership style. Human well-being requires competent healthcare executives. Improving one's health through various techniques is referred to as healthcare, which entails novel approaches to treating accidents, infections, and mental disorders in individuals. Failure of healthcare leaders to address these issues will result in poor healthcare delivery in hospitals and throughout the country.

## 6. Conclusion

Previous researchers and authors have looked into the transformational leadership impact on innovation. This research focuses on the importance of transformational leadership and its significant impact on employee innovation in healthcare organizations. These organizations are responsible for people's lives, and any inattention in healthcare work can devastate people seeking medical help. The investigation of the influence of transformational leadership on employees' innovative work behavior allowed for the advancement of knowledge regarding the interaction impacts of innovative work behavior from a multi-level perspective instead of concentrating strictly on creative outputs.

Innovative work behavior in healthcare organizations can be understood as a cognitive process expressed in specific behaviors, such as looking for new technologies or suggesting new ways of achieving organizational aims and objectives. Similar actions can be achieved through innovative work behaviors. However, handling innovative behaviors can pose a challenge for leaders. However, the findings of this study propose that innovativeness will be enhanced through transformational leadership as a management style, which will improve hospital outcomes and overall effectiveness.

### *6.1. Theoretical and practical implications*

By presenting empirical data on the impact of transformational leadership on workers' innovative work behavior, this study added to the body of knowledge in the field that transformational leadership, as perceived by healthcare workers, had a significant positive impact on innovative behavior in Jordan's private hospitals. This study's findings have crucial implications for healthcare leaders who want to increase employee performance using the four aspects of leadership. A transformational healthcare leader needs to improve a sound knowledge of individual diversity and encourage innovation in the organization, despite the fact that healthcare workers with diverse personality traits and kinds react differently. Furthermore, hospital leaders should foster an environment that encourages employee innovation. Individuals react to the organizational climate in different ways, but an environment that supports innovation is expected to have

a favorable impact on individual innovativeness. As a result, future healthcare leadership entails the development of patient-centered care organizations as well as critical thinking that focuses on the ways that lead current and future organizational change.

### *6.2. Limitations and areas for future research*

The study only included healthcare workers from private Jordanian hospitals. Although all hospital employees, including clinical staff, administrative staff, and support services staff, as well as hospital patients, can be included because they may have different perspectives on hospital leadership styles and their impact on patient care than healthcare professionals.

While this study was limited to private hospitals in Jordan, a comparable study might be conducted across all healthcare sectors (government, military, and private) to learn more about transformational leadership's impact on innovative behavior on a national level. Furthermore, a comparative study of different hospitals can be conducted to learn more about the disparities in leadership style implementation levels that influence staff innovation. Finally, a full comparative study of different professions and departments can be done.

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**Author details**
Atef Raoush[1]
E-mail: aalraoush@philadelphia.edu.jo
ORCID ID: http://orcid.org/0000-0002-6033-3750
[1] Hospital Management Department, Faculty of Business, Philadelphia University, Amman, Jordan.

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