

## The Relationship between Nursing Teaching Staff Transformational Leadership and Creativity among Nursing Students

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### Abstract:

**Background:** Transformational leadership fosters a supportive learning environment, motivates students to reach their full potential, and encourages active participation in their learning. **Aim:** This study aims to assess the relationship between nursing teaching staff transformational leadership and creativity among nursing students. **Research Design:** This study used descriptive correlational research design. **Setting:** the current study was conducted at Faculty of nursing, EL- Fayoum University. **Subjects:** 113 nursing teaching staff and 206 nursing students were selected. **Tools:** 2 tools were used for data collection, 1<sup>st</sup> was multifactor leadership questioner to assess transformational leadership consisted of (12) items that contain four dimensions and 2<sup>nd</sup> was creativity assessment questioner consisted of (17) items that contain two dimensions. **Results:** indicated that, more than three-quarters of the studied nursing teaching staff perceived a high level of transformational leadership. Also, the study demonstrated more than half of the studied nursing students have a high level of creativity. **Conclusion:** this study concluded that, there was a highly statistically significant positive strong correlation between nursing teaching staff's perception regarding transformational leadership and nursing student's creativity. **Recommendations:** Provide faculty members with training on creativity techniques, innovative teaching methods, and fostering a creative learning environment.

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**Key words:** Creativity, Nursing students, Nursing teaching staff, Transformational leadership.

### Introduction:

The quality of learning outcomes and teacher professional development are greatly influenced by leadership in the educational setting. Because of its capacity to inspire and encourage staff and learners, transformational leadership is gaining popularity among the different types of leadership (Khan et al., 2022). Transformational leadership is characterized by four key elements, namely ideal influence, inspiring motivation, intellectual stimulation, and individual consideration. These four factors help to create a positive work atmosphere where educators can improve their performance and students can do better academically (Estherita & Shanmugam, 2024).

The educators play a crucial role in the educational system, and their effectiveness directly affects student achievement. By offering them emotional support, professional development opportunities, and encouragement to keep coming up with new teaching strategies, effective transformational leadership can help teachers perform better (Ansari et al., 2024). (According to Balwant et al. (2019), teacher transformational leadership involves helping students reach their learning objectives, encouraging their intellectual potential, and using customized instruction to meet each student's unique needs. Teachers with a transformational leadership style raise students' interest in learning, offer support, and articulate a compelling vision to improve student learning outcomes (Li & Liu, 2022; Ogonnaya et al., 2020).

The capacity to generate original and novel concepts or solutions to issues is known as student creativity (Burayeva et al. 2020). Student motivation, school culture, and teacher support all influence how creative a student is. Creativity and innovation are closely linked to transformational leadership. Positive effects on staff and students are most closely linked to transformative leadership (Ahmed, 2023). The term "transformative leadership" describes leadership conduct and activities intended to motivate followers—teachers, staff, and students in an educational setting—to work together in groups and individually for constructive change (Al-Khazraji2022).

### Significance of the Study

The development of creativity among university students is influenced by higher education institutions; the university years are a critical time for creative development (Alsharari & Alshurideh, 2020; Matraeva et al., 2020). Creativity is a critical skill in today's society and is essential for college students' personal and professional development. It is influenced by a variety of internal and external factors, one of which is teacher leadership. (Xu, 2024). So, it's important to assess the relationship between nursing teaching staff transformational leadership and creativity among nursing students.

### Aim of the study:

This study aim is to assess the relationship between nursing teaching staff transformational leadership and creativity among nursing students.

### Research question:

- Q1. Are the nursing teaching staff utilizing transformational leadership?
- Q2. Are nursing students having creativity skills?
- Q3. Is there a relationship between nursing teaching staff transformational leadership and creativity among nursing Students?

### Subject and Methods

#### I -Technical design:

The technical design includes research design, setting, subject and tools for data collection.

#### Research design:

A descriptive correlational design was used in this study.

#### Setting:

This study was conducted at Faculty of Nursing, EL- Fayoum University.

#### Subjects:

**First subject**, nursing teaching staff (faculty staff member and their assistant), purposive sample was used to select studied (n=113).

**Second subject**: Fourth year nursing students, systematic random sample was used to select studied (n =206) who were presented at the time of data collection.

#### Tools of data collection

Two tools were used to collect the necessary data for this study as the following: -

**First tool: Multifactor leadership questionnaire:** This tool to assess level of nursing teaching staff transformational leadership perception. It consisted of two parts

**Part 1:** This part is intended to collect data related to personnel characteristics data of the study subjects such as: (age, gender, marital status, scientific degree, Years of experience, Resident).

**Part 2: Multifactor leadership questionnaire;** it was adapted by researcher based on *Gabrielow, (2022)* and was modified by the researcher. The researcher was review by experts, and pilot tested. The scale consists of 12 items that contain four dimensions; the first, is the Idealized influence., was include (3) the second is the Inspirational motivation, was include, (3), the third is the Intellectual stimulation, was include (3), the fourth is the Individual consideration, was include (3), theses scales for measure the transformational leadership levels. The respondents was asked to rate the degree to which they agree with the statements regarding levels of the perception about transformational leadership.

**The scoring system for each item:** This used 5-point Likert scale that rating the studied nursing teaching staff responses as (1) strongly disagree, (2) disagree, (3) neutral, (4) agree and (5) strongly agree. Negative items are reversed.

**The total scoring system.** This tool consisted of (12 items) with a total grade (60). According to *Edrees et al., (2021)* subject responses were calculated in the scoring system and classified into:

- ✓ Low level: if the total score was less than 60%, it means less than 36 points.
- ✓ Moderate level: if the total score was equal or more 60% to less than 75%, it means less than  $\geq 36 < 45$  point.
- ✓ High level: if the total score was equal or more 75%, it means equal or more than 45 points.

### **Tool 2: Students' creativity assessment questionnaire;**

This tool to assess level of Students creativity and divided into two parts.

**Part 1:** This part is intended to collect data related to personnel characteristics data of the study subjects such as (age, gender, marital status, Pre-University education).

#### **Part 2: Creativity assessment questionnaire**

it was be adapted by researcher based on (*Andrews , 2014*) and was modified by the researcher The scale consists of (17) items that contain two dimensions; the first, was Creative Self-Efficacy, consisted of 9 items; The second was Creative Work Involvement, consisted of 8 items. These scale for measure the creativity levels. The respondents will ask to rate the degree to which they agree with the statements regarding levels of creativity.

**The scoring system for each item:** used a 5-point Likert scale that rating the studied nursing students' responses as (1) strongly disagree, (2) disagree, (3) neutral, (4) agree and (5) strongly agree.

**The total scoring system.** This tool consisted of (17 items) with a total grade (85). According to *Abd Elmoaty, (2022)*, subject responses were calculated in the scoring system and classified in to:

- ✓ Low level: if the total score was less than 60%, it means less than 51 points.
- ✓ Moderate level: if the total score was equal or more 60% to less than 75%, it means less than  $\geq 51 < 64$  point.
- ✓ High level: if the total score was equal or more 75%, it means equal or more than 64 points.

### **Validity of the tools:**

Validity of the tools were done namely face validity and content validity. It was tested by jury group consisted of five experts (Professors) in nursing administration from different faculties of nursing. Jury group members judge tools for comprehensiveness, accuracy, and clarity in language. Based on their recommendation's correction, addition and / or omission of some items were done.

### **Reliability**

Reliability for the utilized tools was tested to determine the extent to which the items of the tools are inter-correlated to each other. The Cronbach's alpha model is one of the most popular reliability statistics in use today and considered as a model of internal consistency that is used to estimate reliability of test scores. The statistical equation of Cronbach's alpha Reliability coefficient normally ranges between 0-1, (*Malkewitz et al., 2023*).The degree of alpha Cronbach for transformational leadership and creativity were (0.936 &0.967) respectively.

### **Pilot study**

The pilot study was included in the main study sample, carried out on (10%) of the total sample size (11 nursing teaching staff, 21 nursing student) to test applicability and clarity of tools and time needed to complete it. No modifications were done so participants in the pilot study were included in study sample.

### **Ethical Considerations**

The research approval was obtained from the Faculty of Nursing ethical committee of Helwan University before starting the study, an approval was obtained from the dean of Faculty of Nursing EL-Fayoum University. Informed consent was obtained from each participating subject prior to data collection, they were informed about the purpose and expected outcomes of the study and they were assured that, the study was harmless and their participation was voluntary and they had the right to withdrawal from the study at any time without any reason. They also were assured that, anonymity and

confidentiality guaranteed, as well the gathered data that used for the research purpose only. Ethics, values, culture and believes were respected.

## II. Operational Design

The operational design included: - preparatory phase and field work.

### A) Preparatory phase

The researcher reviewed current and past, national and international related literature using textbooks, scientific articles, periodicals, journals and internet to prepare the tool for data collection.

### B) Field work

The purpose of the study was simply explained to the participants who agree to participate in the study prior to any data collection. Field work started actually at the beginning of December 2023 and was completed by ending of February 2024. After securing the official approval from the dean of Faculty of Nursing EL-Fayoum University for conducting the study. The data were collected from (2) subject. First subject, nursing teaching staff. The researcher presented 3 days a week to collect tool from nursing teaching staff in their department. The time consumed to answer the questionnaire sheet ranged from 20 - 30 minutes. Second subject, fourth year students. The researcher collect tool from student in their classrooms. The time consumed to answer the questionnaire sheet range from 20 - 30 minutes. The researcher collected data by himself and presented at all time during fulfilling the questionnaire / scale to answer any questions. Also, the researcher checked the completeness of each filled sheet to ensure the absence of any missing data.

## III. Administrative design:

Approval to carry out this study was obtained from the Dean of the Faculty of Nursing Helwan University and dean of Faculty of Nursing EL-Fayoum University. This letter included the aim of the study and photo copy from data collection tools in order to get the permission and help for collection of data. Individual oral consent was also obtained from each nursing teaching staff and nursing student to participate in the study

## IV. Statistical design:

Data entry and analysis were performed using SPSS statistical package version 26. Categorical variables were expressed as number and percentage while continuous variables were expressed as (mean  $\pm$  SD). In addition to weight mean, which is a type of average in which weights assign individual values to determine the relative importance of each observation. Weigh mean were used in this study to rank dimension of multifactor leadership and dimension of creativity. Chi-Square ( $\chi^2$ ) in one sample used to compare differences between levels and group cohesion among the studied sample. Chi-Square ( $\chi^2$ ) was used to test the association between row and column variable of qualitative data.

ANOVA test was used to compare mean in normally distributed quantitative variables at more than two groups. While T test was used to compare mean in normally distributed quantitative variables at two groups. Pearson correlation was done to measure correlation between quantitative variables. Linear regression analysis used to determine nursing teaching staff's multifactor leadership effect on nursing student's creativity.

For all tests, a two-tailed p-value  $\leq 0.05$  was considered statistically significant, P-value  $\leq 0.01$  was considered highly statistically significant. While p-value  $> 0.05$  was considered not significant.

## Results:

**Table (1):** Frequency distribution of personal data among the studied nursing teaching staff (n= 113)

Personal data		No	%
Age (year)	▪ 25 < 30 Yrs.	43	38.1
	▪ 30 < 35 Yrs.	44	38.9
	▪ 35 < 40 Yrs.	8	7.1
	▪ $\geq 40$ Yrs.	18	15.9
	▪ Mean $\pm$ SD	33.15 $\pm$ 7.64	
Gender	▪ Male	11	9.7

	▪ Female	102	<b>90.3</b>
	▪ <b>Male to Female Ratio</b>	<b>0.1:1</b>	
<b>Marital status</b>	▪ Married	85	<b>75.2</b>
	▪ Un- married	28	24.8
<b>Scientific degree</b>	▪ Professor	5	4.4
	▪ Assistant professor	17	15.0
	▪ Lecturer	20	17.7
	▪ Assistant lecturer	40	<b>35.4</b>
	▪ Instructor	31	27.4
<b>Years of Experience in nursing</b>	▪ 1 < 6 Yrs.	53	<b>46.9</b>
	▪ 6 < 10 Yrs.	26	23.0
	▪ 10 < 14 Yrs.	16	14.2
	▪ ≥ 14 years.	18	15.9
	▪ <b>Mean ± SD</b>	<b>8.98 ± 5.59</b>	
<b>Residence</b>	▪ Rural	49	43.4
	▪ Urban	64	<b>56.6</b>

**Table (1)** shows that more than three-quarters (77%) of the age of the studied nursing teaching staff was ranged from 25 < 35 years old, with a mean ± SD age of (33.15 ± 7.64). Additionally, the majority (90.3%) of them were female and more than three quarters (75.2%) of them were married with Male to Female Ratio is 0.1:1. Considering scientific degree, more than one-third (35.4%) of the studied nursing teaching staff were assistant lecturer while the minority (4.4%) of them were professor. Regarding years of experience in nursing, near to half (46.9%) of them were had experience in nursing field ranged from 1 < 6years with a total mean ± SD (8.98 ± 5.59). Finally, concerning place of residence, more than half (56.6%) of the studied nursing teaching staff were from urban area.

**Table (2):** Frequency distribution of personal data among the studied nursing students (n= 206)

<b>Personal data</b>		<b>No</b>	<b>%</b>
<b>Age (year)</b>	▪ 21 < 23 Yrs.	129	<b>62.6</b>
	▪ 23 < 25 Yrs.	76	36.9
	▪ ≥ 25 Yrs.	1	0.5
	▪ <b>Mean ± SD</b>	<b>22.08 ± 0.83</b>	
<b>Gender</b>	▪ Male	59	28.6
	▪ Female	147	<b>71.4</b>
	▪ <b>Male to Female Ratio</b>	<b>0.4:1</b>	
<b>Marital status</b>	▪ Married	49	23.8
	▪ Un- married	157	<b>76.2</b>
<b>Pre-university education</b>	▪ Secondary school	120	<b>58.3</b>
	▪ Nursing school	86	41.7

**Table (2)** shows that nearly two-thirds (62.6%) of the age of the studied nursing students was ranged from 21 < 23 years old, with a mean ± SD age of 22.08 ± 0.83. Additionally, more than two-thirds (71.4%) of them were female, Male to Female Ratio = 0.4:1 and more than three quarter (76.2%) were un- married. Moreover, more than half (58.3%) of the studied nursing students were had secondary school certificate before joining at university education.

**Table (3):** Total mean score of the studied nursing teaching staff’ perception regarding transformational leadership (n= 113)

Transformational leadership:	Min	Max	$\bar{x} \pm SD$	$\bar{x}_w \pm SD$	Degree	Rank	F Test	P value
Idealized influence	6	15	12.77 ± 1.9	4.25 ± 0.66	5	2 <sup>nd</sup>		
Inspirational motivation	6	15	12.80 ± 2.01	4.26 ± 0.67	5	1 <sup>st</sup>		
Intellectual stimulation	6	15	11.81 ± 2.50	3.93 ± 0.83	4	4 <sup>th</sup>		
Individual consideration	6	15	12.57 ± 2.37	4.18 ± 0.79	4	3 <sup>rd</sup>		
<b>Total</b>	<b>24</b>	<b>60</b>	<b>49.94±8.7</b>	<b>4.16±0.73</b>	<b>4</b>	<b>-</b>	<b>4.87</b>	<b>0.002**</b>

\*Significant  $p \leq 0.05$

F: ANOVA Test

\*\*Highly significant  $p \leq 0.01$

1: Strongly Disagree

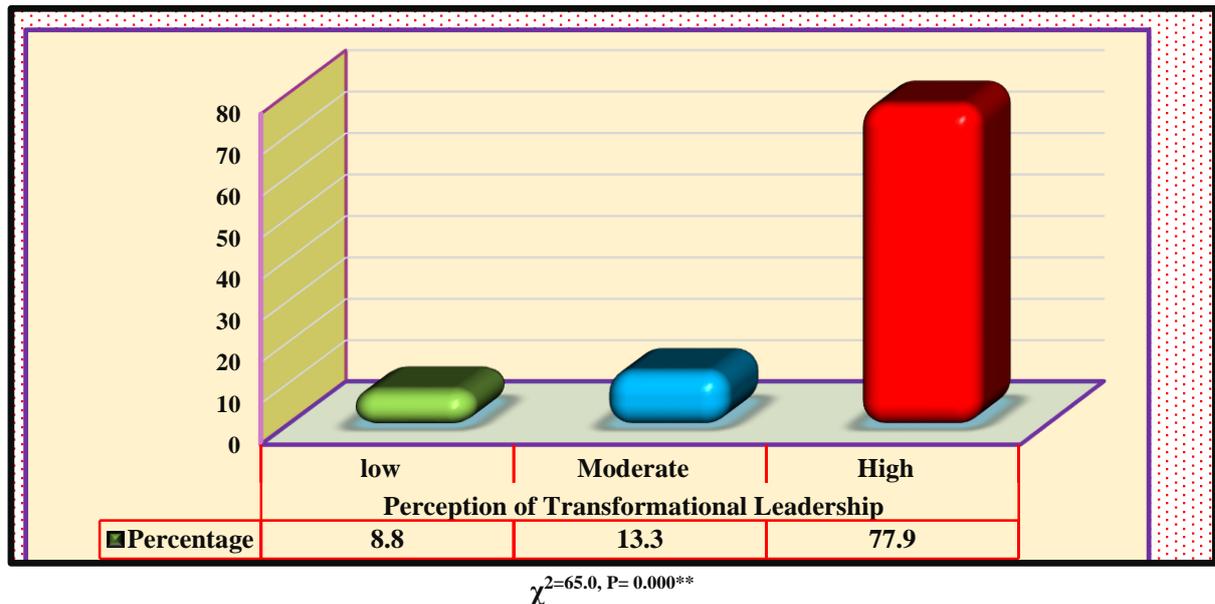
2: Disagree

3: Neutral

4: Agree

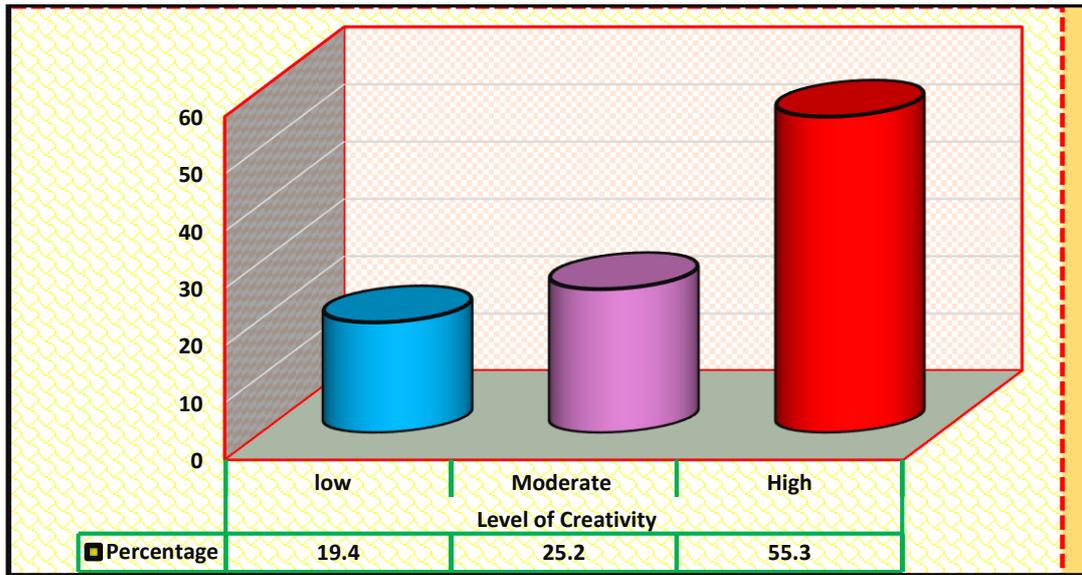
5: Strongly Agree

**Table (3):** represents that the total mean score of studied nursing teaching staff’ perception regarding transformational leadership is  $\bar{x} \pm SD = 49.94 \pm 8.7$  (Total score is 60 ). Additionally, inspirational motivation and idealized influence gained the higher weight mean ( $4.26 \pm 0.67$  &  $4.25 \pm 0.66$ ) respectively and ranked as the first and the second dimensions of transformational leadership. While the intellectual stimulation gained the lower weight mean ( $3.93 \pm 0.83$ ) and ranked as the last dimensions of transformational leadership.



**Figure (1):** Percentage distribution of the studied nursing teaching staff ’ total perception regarding transformational leadership (n= 113)

**Fig (1)** illustrates that more than three-quarters (77.9%) of the studied nursing teaching staff perceived a high level of transformational leadership. While the minority (8.8% & 13.3%) of them perceived a low and moderate level respectively.



$$\chi^2=45.9, P= 0.000^{**}$$

**Figure (2):** Percentage distribution of level of creativity among the studied nursing students (n= 206)

**Fig (2)** illustrates that more than half (55.3%) of the studied nursing student have a high level of creativity, followed by one-quarter (25.2%) of the studied nursing students have a moderated level. While the minority (19.4%) of them have low level. In addition to, presence of a highly statistically significant difference between levels of creativity.



**Figure (3):** Scatterplot between nursing teaching staff's transformational leadership and nursing student's creativity

**Fig (3):** illustrates that there was a highly statistically significant positive strong correlation between nursing teaching staff's perception regarding transformational leadership and nursing student's creativity at  $r = 0.953$  &  $P = 0.000$ .

**Table (4):** Linear regression analysis of nursing teaching staff’s perception regarding transformational leadership effect on nursing student’s creativity

Model	Unstandardized coefficients		Standardized coefficients	T Test	P Value	R	r Square	F	P Value
	$\beta$	Std. Error	Beta						
Transformational leadership	1.5	0.047	0.953	33.2	0.000	0.953	0.909	1106	0.000**
<b>a. Dependent variable: Total score of nursing student’s creativity</b>									
<b>b. predictors (constant): Total score of nursing teaching staff’s transformational leadership</b>									

**Table (4)** linear regression analysis was conducted to empirically determine whether nursing teaching staff’s perception regarding transformational leadership was a significant determinant of nursing student’s creativity. Regression results indicate the goodness of fit for the regression between of nursing teaching staff’s perception regarding transformational leadership and nursing student’s creativity, was excellence. Additionally, F statistic of (1106) indicated that the overall regression model was highly significant (P = 0.000). Moreover, regression coefficients, revealed that independent variable (Total score of transformational leadership) is a positive predictor factor of nursing student’s creativity. As  $\beta = (1.5)$  indicates that the increase in nursing teaching staff’s perception regarding transformational leadership by one standardized point score is associated with an increase in nursing student’s creativity (1.5) standardized point score.

**Discussion:**

While productivity is achieved through the efficient use of existing resources, leadership in education is essential to guaranteeing the achievement of the stated goals and objectives of education ( **Chiroma and Muriuki, 2022**). One of the most important elements affecting creativity is transformational leadership since it influences the development of a creative culture and guides students toward moral principles and high levels of motivation ( **AL-Awamleh.,2020** ). The current study conducted to assess the relationship between nursing teaching staff transformational leadership and creativity among nursing students.

**Regarding to personal characteristic of the nursing teaching staff**, the current study revealed more than three-quarters of the nursing teaching staff age were ranged between twenty five to thirty five years. Additionally, majority of them were female and more than three quarters of them were married. .More than one-third of the studied nursing teaching staff were assistant lecture while the minority of them were professor. More than two-fifths of them were had experience in nursing field ranged from one to five years. Finally, concerning place of residence, more than half of the studied nursing teaching staff were from urban area.

This result is agreement with ( **Jastrow, 2019; Qayyum et al., 2021**) who reported majority of nursing faculty were female, and more than two-fifths of them had experience in nursing field ranged from one to five years and more than three quarters are married. In the same line ( **Liyuan et al., 2024; Zulkifly et al., 2022**) who reported majority of nursing faculty were female. A large group of them are working in the University as senior lecturers, while minorities of them are professors.

This results contradicted with ( **Baba, 2019**) who reported about two third of academic faculty were male and less than one quarter ranged between twenty five to thirty five years and about one third were assistant professor. Also, ( **Ali & Banks, 2019**) who showed the majority of the instructors are in the thirty to forty years old and the majority of the instructors have doctoral degrees.

**Regarding to personal characteristic of the studied nursing student**, the current study revealed nearly two-thirds of the studied nursing students age was ranged from twenty one to twenty three years old. Additionally, more than two-

thirds of them were female and were un-married. More than half of nursing students were holding secondary school certificate before gaining at university education.

This result agreement with (Tehranireshat, & Rakhshan, 2018) who reported more than two third of students were female. Also Liu et al., (2024) who reported more than two third of students were female.

**Regarding to ranking of dimension of transformational leadership the study represents**, inspirational motivation and idealized influence gained the higher weight mean respectively and ranked as the first and the second dimensions of transformational leadership. While the intellectual stimulation gained the lower weight mean and ranked as the last dimensions of transformational leadership. This result is agreement with (Duggar, 2017) who reported inspirational motivation dimension ranked as the first and intellectual Stimulation ranked as the fourth dimension.

In the same line (Murdock, 2019) who showed the intellectual Stimulation ranked as the fourth dimension and reported faculty participants readily acknowledged that their work as instructors should naturally encompass behaviors that lead to intellectual stimulation. However, the faculty participants admitted they had not thought about these behaviors through the lens of leadership. In the same line (AL-Awamleh, 2020) who reported Idealized influence dimension came at the first rank, followed by inspirational motivation, then the individualized consideration, then the intellectual stimulation, they were all at a high level, and the total degree was high. This result consistent with (Aung & Vinitwatanakhun, 2021) who concluded inspirational motivation and idealized influence gained the higher weight mean respectively and ranked as the first and the second dimensions. While Intellectual stimulation and Individual consideration dimensions ranked as the third and fourth dimensions.

In the same line (Alsadaan, et al., 2023) who noted the highest mean reported subscale was the inspirational motivation. This result in agreement with (Tabine, 2024) who reported the inspirational motivation dimension ranked as the first and intellectual Stimulation ranked as the fourth dimension.

This result contradicted with (Gelzlichter, 2020) who showed that individual Consideration and intellectual Stimulation ranked as the first and the second dimensions while idealized influence and inspirational motivation ranked as the third and the fourth dimensions, in looking at the subscales of transformational leadership, candidates ranked inspirational motivation as the lowest. The highest mean was individual consideration. In the same line (Alagam, & Ebrahm, 2021) that showed the dimension of ideal impact was ranked first, followed by intellectual stimulation. The dimensions of inspirational motivation and individual consideration were ranked third and fourth respectively. The study recommends that more attention should be given to transformational leadership due to its positive impact on creativity.

**Regarding to total perception of transformational leadership the current finding** revealed that more than three-quarters of the studied nursing teaching staff perceived a high level of transformational leadership, while more than one-fifth have a moderated level and minority of them perceived low level. This result is agreement with (AL-Awamleh, 2020) who reported perception to all dimensions of transformational leadership at a high level, and the total degree was high. This dimension represents a coherent frame of features and characteristics in the transformational leader, which makes its availability very important.

In the same line (Cai, & Vinitwatanakhun, 2021; Aung & Vinitwatanakhun, 2021) who noted that the total mean score of perceptions towards transformational leadership style was high. this result consistent with (Alsadaan, et al., 2023; Al-Thawabiya, et al., 2023).who showed responses on multifactor leadership questioner items that measure the factors related to transformational leadership were rated high. These results indicated that the study sample perceived them as utilizing the transformational factors often. This is also confirmed by (Hai, et al., 2021; Panahbehagha & Shakib 2017)

This result contradicted with (salim, & Zakaria, 2021) who found that Universities academic in the Sultanate of Oman do not pay special attention to transformational leadership skills, which this negatively affects the quality and credibility of teaching.

**Regarding to total level of creativity among nursing students**, the current study illustrates that more than half of the nursing student have a high level of creativity, followed by one-quarter of the studied nursing students have a moderated level. While the minority of them have low level.. This result is agreement with (Alizamar, et al., 2019) that showed that more than half of the students have 'high enough' creativity. This result is agreement with (Bahtiar, & Ibrahim, 2022) who showed near to half of student have high level of Creative Thinking Skills followed by one-quarter of the nursing students have a moderated level. While the minority of them have low level.

This result contradicted with (Tehranineshat & Rakhshan 2018) who showed the level of creativity in bachelor degree nursing students was worse. In the same line ( Özdemir, & Işık 2022 who noted nursing student creativity score average was at a medium level. this result consistent with (Abedini, et al. 2022) who showed that creativity skills are moderate among students in different fields of nursing school, the overall score of creativity with an average.

**Regarding the relation between nursing teaching staff transformational leadership and student's creativity**, the current study represents that there was a highly statistically significant positive strong correlation between nursing teaching staff transformational leadership and student's creativity. Moreover, regression coefficients, revealed that independent variable (Total score of transformational leadership) is a positive predictor factor of nursing student's creativity. indicates that the increase in nursing teaching staff's perception regarding transformational leadership by one standardized point score is associated with an increase in nursing student's creativity standardized point score.

This result consistent with (Afshari, et al., 2017) who showed that there was a positive and significant relationship between students' creativity and each of the components of transformational leadership style of lecturers. Also, findings indicated that components of transformational leadership style played a role in explaining students' creativity. These results are consistent with (Huang et al., 2017; Zhang, et al., 2019) who concluded that teacher transformational leadership is important situational factors that influence students' creative tendencies, and be motivated by guiding students' recognition of task meanings and themselves, and arouse curiosity, thus stimulating their creative tendencies.

In the same line ( Afsar & Masood 2018) who showed transformational leadership has the strongest positive relationship with creative self-efficacy. In the same line ((Jaiswal & Dhar, 2016; Chaubey, et al., 2019) who showed Transformational leaders give their follower valuable feedback for uncovering novel problems. They encourage the follower for creative thinking. In the same line (Hasnain, et al., 2020) who showed positive link between transformational leadership and creativity, and Creative Self Efficacy. This result is agreement with (Mao, et al., 2020) who showed that teachers' transformational leadership was significant, positive correlations with students' creative tendency. This consistent with (Ma, et al. 2023) showed that all dimensions of transformational are significantly positively correlated with creative self-efficacy.

The result contradicted with (Salim & Zakaria, 2021) showed was limited to the relationship between norms of transformational leadership, creativity for academic staff at Sohar University. In the same line (Dipuro, et al., 2022) who showed transformational Leadership as one of independent variables does not partially affects creativity significantly. This result consistent with (Hsu, 2016) showed the absence of a relationship between transformational leadership and creativity.

## Conclusion

The current study aimed to assess the relationship between nursing teaching staff transformational leadership and creativity among nursing students. Based on the current study findings, it can be concluded that, more than three-quarters of the nursing teaching staff perceived a high level of transformational leadership. And, more than half of the nursing students have a high level of creativity. This study concluded that there was a highly statistically significant positive strong correlation between nursing teaching staff transformational leadership and student's creativity. These findings support the research aim and research questions.

## Recommendations

Based on the current study findings the following recommendation as the following:

### Nursing teaching staff

- Conduct in service training to increase nursing teaching staff awareness about transformational leadership and student creativity.
- Increasing awareness of leadership role and its effect on student's creativity.
- Offer dedicated courses on creative thinking, brainstorming techniques, and design thinking principles to equip students with essential tools for creativity.
- Recognize and reward students who demonstrate creativity in their teaching and research, inspiring others to embrace innovation.

### Organizational Level

- Structure organizational climate regarding an open system in relation to innovation & flexibility.
- Introduce students to digital tools like graphic design, video editing, and coding to enhance their creativity.
- Use online platforms for collaborative projects and idea sharing.
- Create flexible learning spaces that encourage experimentation, collaboration, and out-of-the-box thinking.
- Provide faculty members with training on creativity techniques, innovative teaching methods, and fostering a creative learning environment.

### Research level

- Further explore the influence of Transformational leadership on other educational outcomes, like student engagement or motivation.
- Explore the impact of transformational leadership on developing students' soft skills, such as communication and teamwork.

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