

The Relationship between Openness to Learning and Organizational Learning

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Abstract

Introduction: Openness to learning is an individual's desire and capacity to acquire new knowledge, skills, and experiences. Organizational learning is the process by which an organization organizes, retains, and applies knowledge to improve its performance and adapt to changes in its environment. **Aim:** This study aimed to assess relationship between openness to learning and organizational learning among nursing students. **Research Design:** A descriptive correlational design was used in this study. **Setting:** The study was conducted at Nursing Technical Institution which is affiliated to Helwan University. **Subjects:** The study subjects were included all available of (2nd year) nursing students at the study setting (n=170). **Tools of Data Collection:** Two tools were used for data collection included openness to learning questionnaire and dimensions of learning organization questionnaire (DLOQ). **Results:** The majority of studied nursing students had a high level of openness to learning. Also, more than two thirds of them had a high level of organizational learning. **Conclusion:** There was a highly statistically significant correlation between openness to learning and organizational learning among nursing students. **Recommendations:** Develop an access of transparency and open sources of information and knowledge, foster a positive learning environment where students feel comfortable expressing their opinions and sharing their ideas. Also, Replicate the study on large sample size and in different governmental and private settings.

Keywords: Openness to learning, Organizational learning, nursing students.

Introduction

Learning is an individual action which confronts the learners with the risk of going to an unknown place in the end. For most of the teachers, a good student is the one who is eager to learn and has positive attitudes towards learning. Having learning expectation at a low level will reduce the motivation and consequently the success. Also, it is known that positive beliefs of students towards obtaining knowledge support their efforts to learn a subject. Learning is basically a learner performance. So, positive or negative attitudes towards learning are valuable for the success of learning (**Bizjak & Dolenc, 2022**).

Due to rapid changes around us force us to learn. We are involved in a learning activity at every moment of our lives. Some of these learning needs occur at the individual level, at the group level, and some at the organizational level. However, the idea that all leanings are provided as a result of student thinking or questioning and transferred to group or organization level, makes student learning an essential part of collective learning. Furthermore, student learning significantly impacts organizational learning practices (**Langford et al., 2022**).

Openness to learning (OTL) refers to the willingness to gain new and unfamiliar experiences in learning. It is a trait associated with a positive attitude toward learning and a curiosity about the world. Nursing students who are open to learning are generally more adaptable, open-minded, receptive to new ideas, they have intelligence and imagination, so their openness to learning was significantly and positively associated with their competence including: decision making, collaboration, academic achievement, problem solving and performance development (**Xu et al., 2023**).

In nursing education, the use of OTL is emphasized to cultivate competent nursing students and develop knowledge and skills. Fostering nursing student's OTL prepares them for their future professional role. Nursing students need to be open and innovative given that they are novice and inexperienced. Nursing students should deal with new and diverse situations in the clinical environment, and they are expected to identify their educational needs and respond to the needs of patients. Nursing students should be able to implement OTL while caring for the patients and apply solutions that suit the needs and problems of each patient. Nursing students are also expected to have an open-minded way of thinking so that they can play their professional role effectively (**Heydari et al., 2023**).

Organizational learning (OL) has been widely discussed by educators. Educational organizations that care about OL ensure that all students learn in cooperation and continuously meet organizational needs or expectations through learning to improve their performance. Today, traditional organizational

learning structures do not have either the necessary aptitude for alignment with fast environmental changes. In order to survive, they have to either change their structure or equip themselves with tools to achieve the ability to counter global changes through learning (**Şahin, 2021**).

Furthermore, OL is a tool that leads the organization to achieve its goals, high performance, and strategic renewal. Besides, OL makes individuals more confident and competent, thus increasing the organization's learning capacity, especially educational ones. Therefore, OL is indispensable if organizations are to produce desired outcomes. OL occurs by transferring personal knowledge or learning to group or organizational levels, so individual action capacity should be transformed into group action to provide OL. For this, it is crucial to have a shared culture, which holds the group together, develop a shared understanding, and have leadership that supports organizational learning (**Goula et al., 2020**).

Latest, the relationship of openness to learning and organizational learning needs to be seen as a key source of organization's competitive advantage. Due to students' openness to learning in different areas of their learning activity, they can dynamically respond to changes in a volatile learning environment and reduce its complexity. Therefore, openness of students toward learning should be seen as a key factor in raising the value of the organization which occurs within the learning process among their members, owners, and external partners (**Wiśniewska et al., 2021**).

Significance of the Study

Openness to learning plays an important role and has been associated with high grade averages. People scoring high on openness to learning have been reported to have increased creative behavior in the education setting and high academic performance. Organizational learning is a tool that leads the organization to achieve its goals, achieve high performance, and strategic renewal. In educational organizations with a high organizational learning culture, student satisfaction is found high (**Şahin, 2021**).

Internationally the study of (the direct relationship between knowledge management dimensions and organizational learning in the context of the universities in Jordan) by **Alzuod (2021)** who revealed that, the majority from the total 370 questionnaire copies administered to the sample, 266 were returned, indicating that the response rate was at 71.90%. the findings supported the positive moderating effect of organizational culture on the relationship between knowledge management and organizational learning.

In addition, A study of (the influence of openness, collaborative culture, and organizational climate on learning behavior in the Taiwanese technology industry) by **Tsai (2018)** who revealed that Data were collected from 200 participations working in 42 technological companies; 178 participants were used to perform hierarchical linear modeling. Openness and collaborative culture were related

positively to learning behavior by majority (59.5%). Learning behavior influenced organizational climate negatively, and collaborative culture and organizational climate did not moderate openness and learning behavior.

Although, studies were conducted to study organizational learning with different variables but, no study was conducted to examine the openness to learning with organizational learning, so it's essential to assess the relationship between openness to learning and organizational learning.

Aim of the study:

This study aimed to assess the relationship between openness to learning and organizational learning among nursing students through the following objectives:

- Assess openness to learning as perceived by nursing students at the study setting.
- Identify organizational learning as perceived by nursing students at the study setting.
- Find out the relationship between openness to learning and organizational learning.

Research question:

The research question of this study was formulated as the following: -Is there a relationship between openness to learning and organizational learning 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:

The study was conducted in Nursing Technical Institute, which is affiliated to Faculty of Nursing, Helwan University Cairo, Egypt.

Subjects:

The study subjects were included all available of (2nd year) nursing students at the study setting (n=170).

Tools of data collection

Three tools were used for collecting data of this study as the following: -

Tool 1: Openness to Learning Questionnaire:

This tool was adapted from (Ntuli, 2012; Yildirim et al., 2022) and it consisted of two parts as the following:

Part 1: Personal characteristics of the studied nursing students:

This part was used to assess personal characteristics of students such as: age, gender, marital status, place of residence, academic achievement, father's job, family income status, mother's education.

Part 2: Openness to Learning Questionnaire:

This part used to assess students' willingness to continuously update and improve their learning. It included 20 items on four dimensions as: nature of learning =3 items, expectations from learning = 5 items, attitude toward learning =10 items, and anxiety about learning = 2 items.

Scoring system:

Openness to Learning Questionnaire consisted of (20) items with the total grades (100). It was collected by using a 5-point Likert scale that rating students' responses as (1) strongly disagree, (2) disagree, (3) neutral, (4) agree and (5) strongly agree. According to (Güçlü et al., 2022), nursing students' responses were calculated with scoring system, clarified, and converted into percentages as the following levels:

- ✓ **High level:** if the total score was equals or more than 75%, it means ≥ 75 points.
- ✓ **Moderate level:** if the total score was equal or more than 60 less than 75%, it means ≥ 60 to <75 points.
- ✓ **Low level:** if the total score was less than 60%, it means <60 points.

Tool 2: Dimensions of Learning Organization Questionnaire (DLOQ):

This questionnaire was adopted from (Lyman & Ethington, 2022) to assess learning culture in organization as perceived by nursing students. It included 21 items on seven dimensions as following: continuous learning =3 items, dialogue and inquiry =3 items, team learning and collaboration =3 items, embedded systems =3 items, empowerment =3 items, systems connections =3 items and strategic leadership =3 items.

Scoring system:

Organizational Learning Questionnaire consisted of (21) items with the total grades (100). It was collected by using a 5-point Likert scale that rating students' responses as (1) strongly disagree, (2) disagree, (3) neutral, (4) agree and (5) strongly agree. According to (Goula et al., 2020), nursing students' responses were calculated with scoring system, clarified, and converted into percentages as the following levels:

- ✓ **High level:** if the total score was equals or more than 75%, it means ≥ 79 points.
- ✓ **Moderate level:** if the total score was equal or more than 60 less than 75%, it means ≥ 63 to <79 points.
- ✓ **Low level:** if the total score was less than 60%, it means <63 points.

Validity of the tools:

The study tools were translated into Arabic and tested for face and content validity by a panel group of five experts specialized in nursing administration from three universities namely: Ain shams university, Damamhur university, and Cairo university to judge their clarity, relevance, and accuracy through an opinionnaire sheets. Minor modifications were done based on jury opinions as regarding tools layout and format.

Reliability of the tools

The study tools were tested for their reliability by using Cronbachs Alpha Coefficient to determine the extent to which the questionnaire items were related to each other. The study tools were subjected to assessment of internal consistency reliability by using Spearman-Brown Prophecy Formula ($r1=2(3)/1+r$). When $r1$ estimated reliability of the entire test and \textcircled{R} estimated correlation coefficient computed on the split halves.

Test of reliability of openness to learning questionnaire as perceived by nursing students, showed (0.907). Also test of reliability for dimensions of organizational learning questionnaire as perceived by nursing students showed (0.932).

Pilot study

After reviewing of the tools by the experts, the researcher conducted a pilot study to ascertain the clarity, relevance and applicability of the study tools and to determine obstacles that might be encountered during data collection. It also helped to estimate the time needed to fill out questionnaire tools as following, the first tool was ranged between (10-20 min) and second tool was ranged between (5-10 min).

The pilot study was carried out on (10%) of the total sample size equal (17) students, rephrasing of some questions was done to ensure clarity of the questions and to be easily understood by students. However, it helps in estimation of the time needed to collect data and determine the obstacles. Based on the pilot study, no modifications were done and nursing students participating in it were included in the total study samples.

Ethical Considerations

Prior to study conduction, an approval was obtained from the scientific research ethical committee in faculty of nursing, Helwan University, in addition to an approval was obtained from the nursing director of Nursing Technical Institute. Participation in the study is voluntary and subjects were given full information about the study to assess the relationship between openness to learning and organizational learning among nursing students. They were assured that anonymity and confidentiality of their information would be guaranteed and were informed about their role before signing the informed consent. The ethical considerations included explaining the purpose and the nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it won't be accessed by any other party without taking permission of the participants. Ethics, values, culture and beliefs were respected.

II. Operational Design

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

A) Preparatory phase

It included reviewing the most current national, and international related literature and theoretical knowledge from various aspects of the study through using books, articles, the internet, periodicals and journals to develop tools for data collection.

B) Field work

The actual field work was started at the beginning of April 2023 to the end of May 2023. After obtaining all official permissions the researcher met the director of the Nursing Technical Institute to explain the aim of the study to gain the approval of data collection, the researcher determined the suitable time to collect the data and confirmed the days and times to assess the openness to learning and organizational learning. Before data collection, the researcher introduced herself to the nursing students, explained aim of the study and informed them their information will be treated confidentially, so, the researcher used codes in the questionnaire sheets because of their worry about their answers. Then, the researcher obtained verbal consent to participate in the study.

The researcher assessed the openness to learning and organizational learning using the study tools (openness to learning questionnaire & dimensions of learning organization questionnaire), The researcher visited the setting one day per week for 1 hour /day from 2:00 pm to 3:00 pm on Monday each time included about 20 students to collect the data. The students filled in the questionnaire in presence of the researcher to explain all unclear questions and the time required for each student to fill the first questionnaire was about 10 to 20 minutes and second questionnaire was about 5-10 minutes. The researcher checked the completion of each filled sheet to ensure the absence of any missing data.

III. Administrative design:

To carry out the study, official letters were issued from the Dean faculty of nursing - Helwan University explaining the aim of the study to the director of Nursing Technical Institute to obtain permission for data collection. Individual oral consent was also obtained from each nursing student who participated in the study.

IV. Statistical design:

Data entry and analysis were performed using SPSS statistical package version 25. Categorical variables were expressed as number and percentage while continuous variables were expressed as (mean \pm SD). Chi-Square (χ^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. Pearson correlation was done to measure correlation between quantitative variables.

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

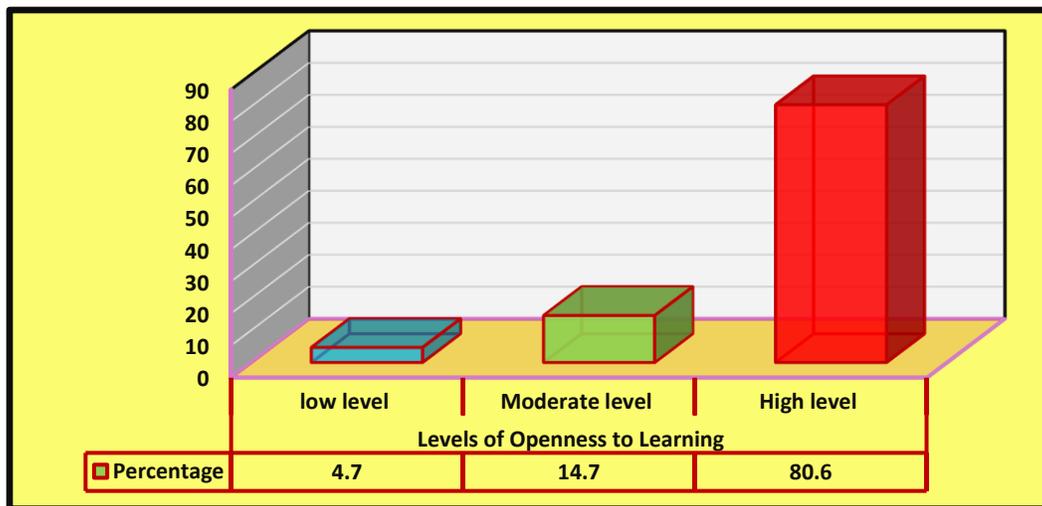
Results:

Table (1) Personal characteristics among the studied nursing students (n=170).

Items	No	%	
Gender	▪ Male	107	62.9
	▪ Female	63	37.1
	▪ Male to female ratio	1.7:1	
Age (year)	▪ 18 \leq 20 Yrs.	32	18.8
	▪ 21 \leq 23 Yrs.	129	75.9
	▪ 23 \geq 40 Yrs.	9	5.3
	▪ Mean \pm SD	21.52 \pm 1.43	
Marital status	▪ Single	151	88.8

	▪ Married	19	11.2
Place of Residence	▪ Rural	103	60.6
	▪ Urban	67	39.4
Academic achievements	▪ Excellent	29	17.1
	▪ Very good	107	62.9
	▪ Good	34	20.0
Father's job	▪ Employee	94	55.3
	▪ Not Employee	58	34.1
	▪ Died	18	10.6
Family income status	▪ Sufficient	112	65.9
	▪ Not Sufficient	58	34.1

Table (1) shows that, more than three-quarters (**75.9%**) of the age of the studied nursing students were ranged from $21 \leq 23$ years old, with a mean age of 21.52 ± 1.43 . Regarding marital status, the majority (**88.8%**) of them were single. Considering, place of residence, less than two third (**60.6%**) of them were from rural. In relation to academic achievements, less than two-thirds (**62.9 %**) of them gained very good grade. Concerning father's job, more than half (**55.3%**) of the studied nursing students' father were employee. In relation to family income, about two-thirds (**65.9%**) of them have sufficient family income status.



*Significant $p \leq 0.05$

F: ANOVA Test

**Highly significant $p \leq 0.01$

Figure (1): Percentage distribution of openness to learning among the studied nursing students (n= 170).

Figure (1) illustrates that the majority (**80.6%**) of the studied nursing students had a high level of openness to learning, while the minority had a low and moderate level with the percentage of (**4.7% & 14.7%**) respectively. In addition to the presence of a highly statistically significant difference between low, a moderate and high level, at **P = 0.000**.

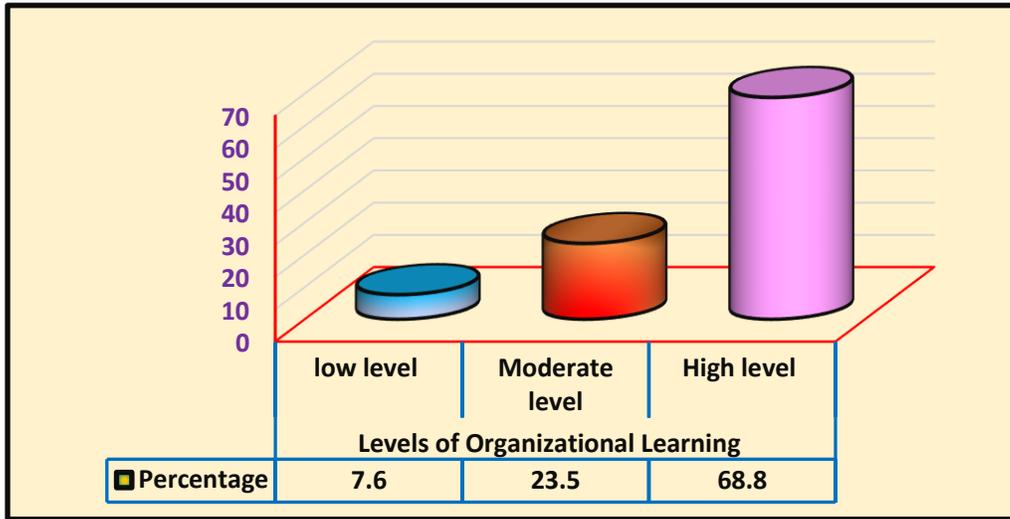


Figure (2): Percentage distribution of organizational learning among the studied nursing students (n= 170).

Figure (2) illustrates that, more than two-thirds (68.8%) of the studied nursing students had a high level of organizational learning while the minority had a low and moderate level with the percentage of (7.6% & 23.5%) respectively. In addition to the presence of a highly statistically significant difference between low, a moderate and high level, at $P = 0.000$.

Table (2): Relation between total level of openness to learning and personal characteristics among the studied nursing students (n= 170)

Items	No.	Low		Moderate		High		χ^2	P-Value	
		8	4.7	25	14.7	137	80.6			
		N	%	N	%	N	%			
Gender	Male	107	7	4.1	17	10.0	83	48.8	2.66	0.263
	Female	63	1	0.6	8	4.7	54	31.8		
Age (year)	18 ≤ 20	32	8	4.7	22	12.9	2	1.2	139	0.000**
	21 ≤ 23	129	0	0.0	3	1.8	126	74.1		
	23 ≥ 40	9	0	0.0	0	0.0	9	5.3		
Marital status	Single	151	0	0.0	14	8.2	137	80.6	107	0.000**
	Married	19	8	4.7	11	6.5	0	0.0		
Place of residence	Rural	103	4	2.4	11	6.5	88	51.8	4.0	0.134
	Urban	67	4	2.4	14	8.2	49	28.8		
Academic achievements	Excellent	29	0	0.0	0	0.0	29	17.1	129	0.000**
	Very good	107	0	0.0	3	1.8	104	61.2		

	Good	34	8	4.7	22	12.9	4	2.4		
Father s job	Employee	94	0	0.0	0	0.0	94	55.3	125	0.000**
	Not Employee	58	0	0.0	15	8.8	43	25.3		
	Died	18	8	4.7	10	5.9	0	0.0		
Family income	Sufficient	112	0	0.0	0	0.0	112	65.9	79	0.000**
	Not Sufficient	58	8	4.7	25	14.7	25	14.7		
Mother s Education	University	31	1	0.6	0	0.0	30	17.6	28.7	0.000**
	Diploma	78	4	2.4	6	3.5	68	40.0		
	Read & write	33	1	0.6	7	4.1	25	14.7		
	Don't read or write	28	2	1.2	12	7.1	14	8.2		

*Significant $p \leq 0.05$

F: ANOVA Test

**Highly significant $p \leq 0.01$

Table (2): represents that, there was a highly statistically significant relation between personal characteristics (Age, marital status, Academic achievements, fathers' job, family income and mother s education) and total level of openness to learning among the studied nursing students, at $P = \leq 0.01$.

Table (3): Relation between total level of organizational learning and personal characteristics among the studied nursing students (n= 170)

Items	No.	Low		Moderate		High		χ^2	P-Value	
		13	7.6	40	23.5	117	68.8			
		N	%	N	%	N	%			
Gender	Male	107	11	6.5	29	17.1	67	39.4	5.80	0.055*
	Female	63	2	1.2	11	6.5	50	29.4		
Age (year)	18 ≤ 20	32	13	7.6	19	11.2	0	0.0	105	0.000**
	21 ≤ 23	129	0	0.0	21	12.4	108	63.5		
	23 ≥ 40	9	0	0.0	0	0.0	9	5.3		
Marital status	Single	151	0	0.0	34	20.0	117	68.8	118	0.000**
	Married	19	13	7.6	6	3.5	0	0.0		
Place of residence	Rural	103	9	5.3	14	8.2	80	47.1	14.3	0.001**
	Urban	67	4	2.4	26	15.3	37	21.8		
Academic achievements	Excellent	29	0	0.0	0	0.0	29	17.1	111	0.000**
	Very good	107	0	0.0	19	11.2	88	51.8		
	Good	34	13	7.6	21	12.4	0	0.0		
Father s Job	Employee	94	0	0.0	0	0.0	94	55.3	198	0.000**
	Not Employee	58	0	0.0	35	20.6	23	13.5		
	Died	18	13	7.6	5	2.9	0	0.0		
Family income	Sufficient	112	0	0.0	0	0.0	112	65.9	148	0.000**
	Not Sufficient	58	13	7.6	40	23.5	5	2.9		

Mother s Education	University	31	1	0.6	0	0.0	30	17.6	32.1	0.000**
	Diploma	78	6	3.5	15	8.8	57	33.5		
	Read & write	33	3	1.8	9	5.3	21	12.4		
	Don't read or write	28	3	1.8	16	9.4	9	5.3		

*Significant $p \leq 0.05$

F: ANOVA Test

**Highly significant $p \leq 0.01$

Table (3): represents that, there was a highly statistically significant relation between personal characteristics (gender, age, marital status, place of residence, academic achievements, fathers' job, family income and mother's education) and total level of organizational learning among the studied nursing students, at $P = \leq 0.05$.

Figure (3): Multiple linear regression between

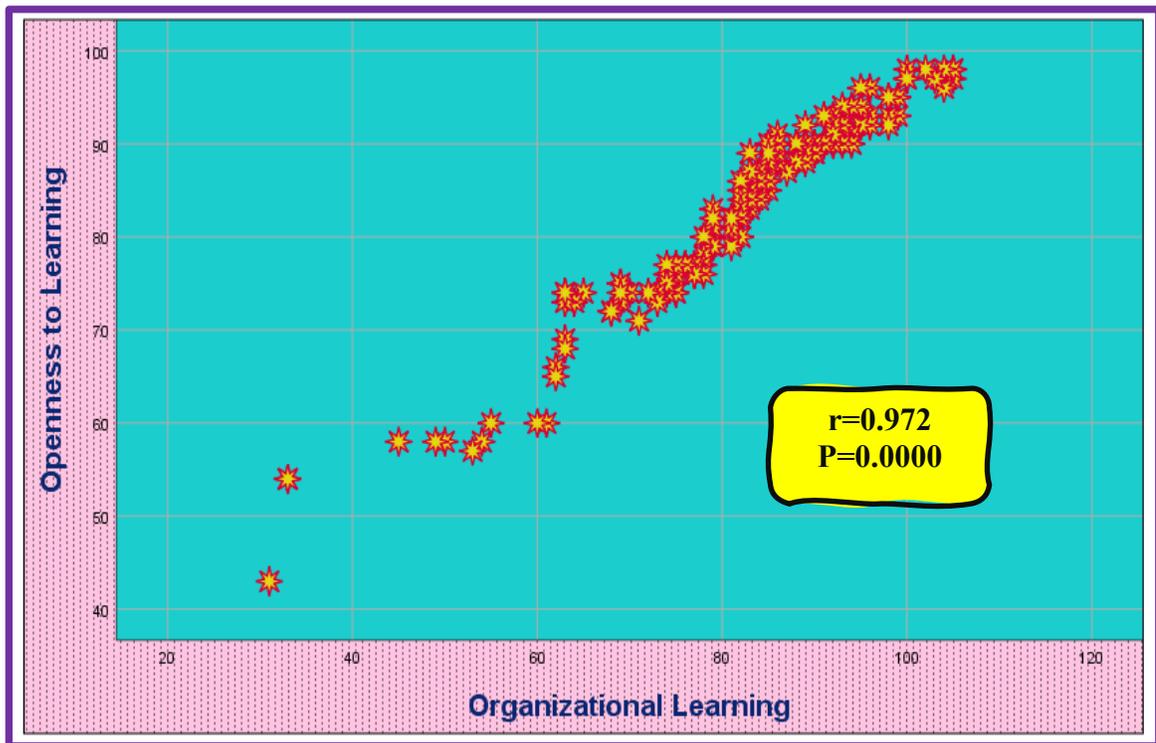


Figure (3): Linear regression between openness to learning and organizational learning among the studied nurses (n= 170).

Figure (3): Linear regression showed that, there was a highly statistically significant positive strong correlation between of openness to learning and organizational learning among the studied nursing students, at r ranged from **0.516 to 0.809 & P = 0.000**.



Discussion

The current study aimed to assess the relationship between openness to learning and organizational learning. Also, the research question of this study was formulated as, Is there a relationship between openness to learning and organizational learning? In addition, the present study included all available 2nd year nursing students (N=160) at the Technical Nursing Institution of Helwan University.

Regarding personal characteristics of nursing students, more than three-quarters of the age of the studied nursing students ranged from $21 \leq 23$ years old, with a mean age of 21.52 ± 1.43 , and the majority of them were single. Less than two thirds of them were from rural. In addition, less than two-thirds of them gained very good grades regarding to academic achievement. Also, about two-thirds of them have sufficient family income status. From the researcher's point of view, these findings could be due to the inclusion criteria of the study subjects included all available second year nursing students.

The current study results were matched with a study by **Afewerk et al., (2021)** in Ethiopia entitled "Attitude and its associated factors towards the nursing profession among BSc nursing students learning at governmental universities in Amhara region" and who revealed that, about two thirds of nursing students aged $21 \leq 23$ years old, more than two thirds of students were single, and more than half were from rural.

The present study findings were stated that, less than two-thirds of the studied nursing students were male. The current study results were in same line with the study by **(Yu, 2021)** who conducted the study in China entitled "The effects of gender, educational level, and personality on online learning outcomes during the COVID-19 pandemic" and who revealed that the majority of study subjects were males.

On other hand, the study findings were dissimilar to **Alghamdi et al., (2020)** who conducted study in Jordan about " Online and face-to-face classroom multitasking and academic performance: Moderated mediation with self-efficacy for self-regulated learning and gender " and who reported that, the majority of the studied students were females.

Regarding Openness to learning among the studied nursing students, the current study results were clarified that, the majority of the studied nursing students had a high level of openness to learning. From the researcher's point of view; this result might be due to mental, cognitive, and psychological capabilities of nursing students, such as thinking, exploration and questioning, internal stimuli, external stimuli, and support networks, deepening insight, self-confidence, risk-taking, problem-solving skills,



clinical decision-making skills, inter-professional and teamwork skills, and leadership power of nursing student.

The present study findings were in harmony with **Heydari et al., (2023)**, who conducted the study in Iran about "Individual innovation from the perspective of nursing students: A qualitative study" and who reported that, the majority of nursing students were participating in the study had high level of openness to learning.

The study results were in agreement with a study by **Xu et al., (2023)** the study conducted in China entitled "The Relationship between Personality Traits and Clinical Decision-Making, Anxiety and Stress among Intern Nursing Students during COVID-19: A Cross-Sectional Study" and who found that, about two thirds of nursing students were reported higher openness scores.

Conversely, the study results were contrasted with the study by **(Yap & Tan,2021)**, the study conducted in Malaysia entitled "Lifelong learning competencies among chemical engineering students at Monash University Malaysia during the COVID-19 pandemic" and who showed that, the majority of students possessed a moderate level of creativity and openness to learning.

As regarding to organizational learning among the studied nursing students, these study findings revealed that, more than two-thirds of the studied nursing students had a high level of organizational learning. From the researcher's viewpoint, applying dimensions of organizational learning, can embed a learning culture in its organizational practices improving the skills and knowledge of its students to deliver quality learning at all levels to facilitate improvements, thus making the organization more innovative.

This study result was similar to with **(Yap & Tan,2021)**, who conducted study in Malaysia entitled "Lifelong learning competencies among chemical engineering students at Monash University Malaysia during the COVID-19 pandemic", and who showed that, the organizational climate related to learning behavior was supported by study scores.

As well, this result agreed with **Alrashidi et al., (2023)**, in their study in Saudia Arabia entitled "Utilization of the dimensions of learning organization for enhanced hospital ", and who mentioned that the dimensions of learning organization were utilized very satisfactorily, and the culture of learning was strongly embedded in the hospitals' systems and practices.

Relation between total level of openness to learning and personal characteristics among the studied nursing students, the present study illustrated that, there was a highly statistically significant

relation between personal characteristics (Age, marital status, Academic achievements, fathers' job, family income and mother's education) and total level of openness to learning among the studied nursing students.

From the researcher's point of view, this result might be due to openness to learning playing a relevant role in interpersonal relationships, teamwork and communication. It presents its importance on both individuals and groups in the operation of an organization.

This finding was similar to **Afewerket al., (2021)**, who conducted a study in Ethiopia entitled 'Attitude and its associated factors towards the nursing profession among BSc nursing students learning at governmental universities in Amhara region', and who revealed that, nursing students' personal characteristics had positive relation with openness to learning.

On contrary, this outcome was in disagreement with **Lowery et al., (2022)**, who conducted a study in Colorado, entitled "Dimensional label learning contributes to the development of executive functions", and who concluded that, there were no significant differences between openness to learning and personal characteristics of studied students.

Relation between total level of organizational learning and personal characteristics among the studied nursing students, the present study showed that, there was a highly statistically significant relation between personal characteristics (gender, age, marital status, and place of residence, academic achievements, fathers' job, family income, and mother's education) and total level of organizational learning among the studied nursing students.

From the researcher's point of view, the actual contribution of this study is its attempt to determine the relationship between openness to learning and organizational learning, in which the educational organization can adopt in dealing with organizational learning and their learning activities that motivates nursing students to reduce internal conflicts and obstacles to effective performance and thus increase productivity, effectiveness, and improve the quality of learning.

The study results were in accordance with **Purwanto, (2020)**, who conducted study in Indonesia entitled "Effect of Hard Skills, Soft Skills, Organizational Learning and Innovation Capability on Islamic University Lecturers' Performance ", and who found that, there was a statistically significant relation between total level of organizational learning and personal characteristics among the studied students.

On the opposite way, a study conducted by **Wiśniewska, (2021)**, who conducted the study in Spain entitled “the relationship between organizational learning at the individual level and perceived employability”, and who identified that, no influence of employee personal characteristics on organizational outcomes.

As regard to the total openness to learning and organizational learning among the studied nursing students, these study findings revealed that, the majority more than four-fifths and more than two-thirds of the studied nursing students had a high level of openness to learning organizational learning respectively.

This study result was similar to with **(Yap & Tan,2021)**, who conducted study in Malaysia entitled “Lifelong learning competencies among chemical engineering students at Monash University Malaysia during the COVID-19 pandemic”, and who showed that, the relationship between openness and learning behavior was supported by his study results, Also organizational climate related to learning behavior was supported as well.

On the same line, a study conducted by **Ju et al., (2021)**, who conducted the study in South Korea entitled “the Relationship Between Learning Organization and Organizational Performance and Employee Attitudes: Using the Dimensions of Learning Organization Questionnaire”, and who concluded that, openness to learning was a valuable and unique source of competitive advantage for a growing number of organizations.

This finding was supported by **Tian et al., (2021)** who conducted a study in China, entitled "Organizational learning ambidexterity and openness, as determinants of SMEs' innovation performance ", and who reported that, there were high levels of openness further boosted the effect of organizational learning ambidexterity on SMEs' innovation performance.

Conclusion

Based on the current study findings, it can be concluded that, the majority of the studied nursing students had a high level of openness to learning. And, more than two-thirds of the studied nursing students had a high level of organizational learning.

Furthermore, there was a highly statistically significant positive strong correlation between dimensions of openness to learning (nature of learning, expectations, attitude, and anxiety) and dimensions of organizational learning (continuous learning, dialogue and inquiry, team learning and

collaboration, embedded systems, empowerment, systems connection and strategic leadership) among the studied nursing students with **P value = 0.000**.

Recommendations

Based on the study results, the following recommendations can be given:

At organizational level: Develop an access of transparency and open sources of information and knowledge among nursing students. Maintain resources for development of the learning processes and activities to achieve academic success.

At student level: Conduct self-learning continuously to improve student performance, skills and creative thinking. Establish plans, set individual goals, expect positive outcomes from the learning process and take control over their learning and self-evaluate their progress.

At educational level: Emphasize the Value of Curiosity by encouraging students to ask questions and be curious about the world around them. Create an environment where curiosity is celebrated, and students feel safe to explore new ideas. Encourage a positive attitude towards challenges and mistakes as opportunities for learning.

At further research: Replicate the study on large sample size about relationship between openness to learning and organizational learning. Find out relationship between openness to learning and organizational learning with student's academic achievements.

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