

## Emotional intelligence and its relation to critical thinking skills and self-esteem of Nurse Students

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### Abstract

**Introduction:** Emotional intelligence is an important aspect at work and life that can leads people to effectively think and act toward any situations they face which affect their self - esteem. **Aim:** assess the relationship between emotional intelligence and critical thinking skills and self-esteem of nurse student. **Design:** A descriptive, correlational design was used. **Setting:** The study was conducted at Abbassia institute of nursing for girls. **Subject:** all third year nurse students. Their total number is sixty. **Tools of data collection:** emotional intelligence questionnaire, critical thinking questionnaire and self-esteem scale. **Results:** majority of nurse students had low level of emotional intelligence, more than one quarter (26.7%) of nurse students had moderate critical thinking skills, and majority of nurse students had low self-esteem level (95 %). **Conclusion:** there was highly statistically significant correlation between emotional intelligence of nurse students, critical thinking skills and self-esteem. **Recommendations:** Integrate emotional intelligence courses into the nursing curriculum to increase nurse students development, and enhance education by critical thinking approach.

**Key words:** Critical thinking skills, Emotional intelligence, Nurse Students, Self –Esteem.

### Introduction

Emotion is a key motivator for person decision-making and action, and every intervention is affected by the emotional ability of the person which is known as emotional intelligence. It refers to psychosocial ability capable of changing both academic and workplace outcomes (*Maccann et al., 2020*). Students' emotional intelligence can provide an overview of students' critical thinking skills in solving problems and managing their emotions during the learning process (*Nurhayati et al., 2021*).

Critical thinking (CT) is the key to emotional intelligence. Naturally humans communicate critically with the world. Critical thinking is not only related to learning in higher education, but also involves all life activities such as interpersonal and working relationships. Critical thinking is considered important in the academic fields because it enables one to analyze, explain, evaluate, and restructure their thinking, thereby decreasing the risk of adopting, thinking with, or acting on, a false belief. However, even with knowledge of the methods of logical reasoning, and inquiry, mistakes can happen due to a thinker's inability to apply the methods or because of

character traits such as egocentrism (*Li et al., 2021*).

Emotional intelligence and self-esteem (S.E) are among the most important skills that determine success in life and psychological well-being. People with high emotional intelligence are competent in focusing and dealing with problems which increase their cognitive capacities. A high emotional intelligence and a high self-esteem offer assistance to preserve a state of concordance in oneself and increase self-confidence in managing the daily life challenges (*Arias et al., 2022*).

### Significance of the study:

Nursing students need to improve their emotional intelligence because it is important to understand their own emotions and empathize with the emotions of others to form an amicable interpersonal relationship with the patient. In addition, since gratitude disposition promotes psychological well-being, life satisfaction, happiness, and pro-social behavior (*Kim & Mun, 2021*).

### **Aim of the Study:**

This study aimed to assess the relationship between emotional intelligence and critical thinking skills and self-esteem of nurse students.

### **Research hypothesis:**

There is a relationship between emotional intelligence, critical thinking skills and self - esteem of nurse students.

### **Research design:**

A descriptive, correlational design was followed in carrying out this study.

### **Subjects and Methods**

#### **The study setting:**

The study was conducted at Abbassia School of nursing for girls which affiliated to general secretariat for mental health, Ministry of Health .Nursing school are five-year system, consisting of three years of study at school first, second & third year the study in Arabic language which included basic nursing & medical departments , while (fourth & fifth year) in English language at Health Technical Institute in Ambaba (Nursing Department) which included fundamental of nursing, medical surgical& critical nursing, child health nursing, maternal and newborn health nursing, community health nursing, mental health nursing and nursing administration . Then the student should spend obligatory six months as an internship.

#### **Subject of the study:**

The subjects of this study included all nurse students who in the above mentioned settings. Total number of nurse students is sixty

#### **Tools of data collection:**

Data for this study was collected by using three tools, namely Emotional Intelligence Questionnaire, critical thinking skills Questionnaire, and self-esteem scale.

### **Emotional intelligence Questionnaire:**

#### **This tool consisted of two Parts:**

**Part I:** It aimed at collecting data regarding personal data of study subjects including: age, residence, family number, ranking between family, preparatory score, hobbies, types of hobbies, and reason to join school

**Part II:** This tool was adopted from *Eldidi (2005)* based on *Salama (1986) & Bar-On (1997)*. It aimed to assess emotional intelligence level among nurse students. It was included (5) basic dimensions contained (75) items grouped under five dimensions as follow: self- awareness, managing emotions, motivating one self, empathy, and handling relationship. Each dimension consisted of 15 items.

#### **❖ Scoring system:**

Responses of subjects were measured by 5 point Likert scale as follows: **1=Never,2= Rarely,3= Sometimes,4= Often, and 5= Always.** For each dimension, the scores of the items were summed- up and the total score was divided by the number of the items for giving a mean score for the part. The scores were converted into percent score. High emotional intelligence level if the score above 75% and moderate level if the subject had total score ranged from 60 to 75%, and low level if the subjects had total score less than 60% (*Eldidi, 2005*).

#### **Second tool: Critical thinking questionnaire:**

This tool aimed to measure critical thinking skills of nurse students. It was adopted from *Ragab (2018)* based on *Mohammed et al., (2004)*. It consisted of 76 items grouped into twelve sub scales grouped into twelve sub scales as follow: Tendency to evaluate external subjects, Correct use of language in listening writing and reading, Tendency to discern matters, Tendency to discuss matters objectively, Caring about judgment of certain Phenomena, Tendency to reach conclusion correctly, Caring about observation of matters and subjects , Openness and flexibility in dealing with matters , Identify relations from subjects , Tendency to avoid rumors in judgments ,Adaptation to new situations and providing in innovative solutions.

### ❖ Scoring system:

Responses of subjects were measured by 5 point Likert scale as follows: **1= Strongly Disagree, 2= Disagree, 3= Slightly agree, 4= Agree, and 5= Strongly Agree. For each dimension, the scores of the items were summed-up and the total score was divided by the number of the items for giving a mean score for the part. The scores were converted into percent score. The subjects were considered had high Critical thinking skills if the total percent score was above 75% and moderate level if the study subject total score ranged from 60 to 75% and low if the score less than 60% (Ragab, 2018).**

### Third tool: Self-esteem scale:

It was adopted from *Eid (2002)*. It aimed to measure self-esteem level of nurse students. It consists of 22 items.

### ❖ Scoring system:

Responses of subjects were measured by 4 point Likert scale as follows: **1= Not applicable at all, 2 =Apply to a little, 3= Applies to fairly, 4= Apply a lot.** For each dimension, the scores of the items were summed-up and the total score was divided by the number of the items giving a mean score. The scores were converted into percentage score. The subjects were considered high self-esteem levels if the total percent score was above 75% and moderate level if the study subject total score ranged from 60 to 75% and low if the score less than 60% (*Eid, 2002*).

## II-Operational Design:

The operational design for this study involves three phases namely: preparatory phase, pilot study and fieldwork phase.

### A- Preparatory phase:

The researcher reviewed of the current and past, national and international related literature concerning the subjects of the study, using text books, articles, periodical journals and websites. The researcher prepared with the tools for data collection.

### ▪ Tools reliability:

Reliability of the tools was examined through assessing internal consistency, measured by Cronbach's alpha coefficient. The result was (0,71) for Emotional intelligence questionnaire, (0,769) for Problem solving skills questionnaire and (0,93) for self-esteem scale.

### A- Pilot study:

A pilot study was conducted in the middle of October, 2020, it aimed to examine the applicability and clarity of language, test the feasibility and suitability of the designated tools, estimate the time needed to fill in the questionnaires and identifying potential obstacles and problems that may be encountered during the period of data collection. Tools were distributed to six nurse students who were chosen randomly and represented 10% of total study subjects. These six nurse students were included in the main study sample. Data obtained from the pilot study was analyzed, and no modifications were done. Each nurse students took time to fill in each questionnaire ranged from 20 - 30 minutes.

### C. Field work:

The fieldwork of the study was

Performed in the period from the beginning of November to December 2020. The researcher explained to the participants the questionnaire sheets (Emotional intelligence questionnaire, critical thinking skills questionnaire and self-esteem scale). The researcher, distributed data collection tools to the respondents individual in the classroom, each respondent had adequate time to complete the questionnaire sheets. Each nurse students took time to fill in each questionnaire ranged from 20 - 30 minutes. The researcher was present during this time to clarify any inquiries. Each participant filled the tools and back it to the researcher to check for completeness.

### **Ethical consideration:**

The study proposal was approved by ethical committee in faculty of nursing, Ain Shams University, and approval was taken from ethical committee of scientific research in general secretariat of mental health. In addition, oral approval was obtained from each participant. They were informed about the study aim and about their rights to refuse or participate or withdraw from the study at any time without giving reasons. The study maneuvers not entail any harmful effect on participants.

### **III- Administrative design:**

Letters containing the aim of the study were issued from the dean of the Faculty of Nursing, Ain Shams University, to the ethical committee of scientific research in general secretariat of mental health. Official permissions for data collection and implementation of the program were obtained. The researcher met director for ethical committee of scientific research in general secretariat of mental health for explaining the aim of the study and tools to be used for data collection throughout the training program phases and obtain their approval and seek their support during the study.

### **IV- Statistical design:**

Data entry and statistical analysis were done using SPSS 24.0 statistical software package. Data were presented in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables. Correlation Coefficient (r) test was used to test the closeness of association between two variables.

### **Results:**

**Table (1):** shows that, more than half (58.3%) of nurse students had age more than 17 year, majority (86.7%) of them residence in urban area, respectively. More than, two third (70%) of them had family member ranged from 3-5, more than half (51.7%) of them had the young among their family. Also, as regards preparatory score more than one third (35%) of them had < 75 %, more than half (56.7) of them had hobbies and half (50%) of them had drawing as a favorite hobby. Meanwhile (48.3%) of nurse students choose to joint school by their desire.

**Table (2):** displays that empathy items had got the highest mean score. However, managing emotions had got the lowest mean scores.

**Figure (1):** reveals that majority (96.7%) of nurse students had low level of emotional intelligence.

**Table (3):** indicates that, tendency to evaluate external subjects had got the highest mean scores while caring about judgement of certain phenomena had got the lower mean scores.

**Figure (2):** reveals that more than one quarter (26.7%) of nurse students had moderate critical thinking skills.

**Table (4):** Displays that there were highly statistically significant differences between mean scores of nurse students total self-esteem.

**Figure (3):** Reveals that majority of nurse students had low self-esteem level (95 %).

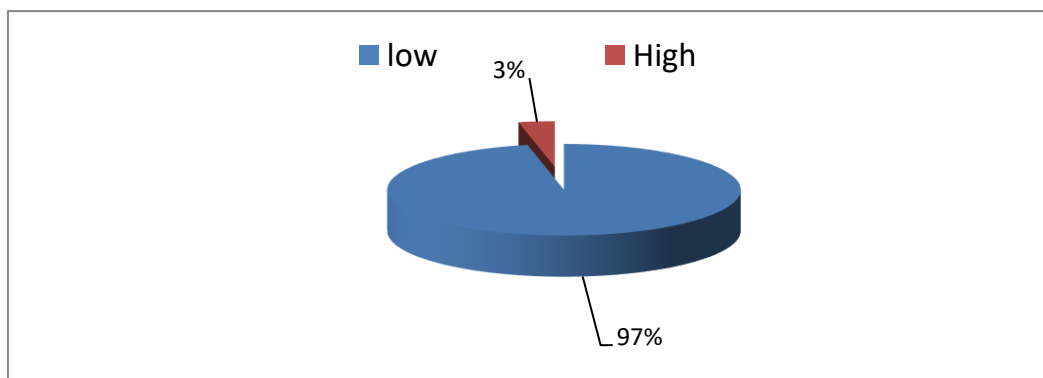
**Table (5):** shows that there was highly statistically significant correlation between emotional intelligence of nurse students, critical thinking skills and self-esteem.

**Table (1):** Personal data of study subjects (n= 60).

Personal data	N	%
<b>Age</b>		
<17	25	41.7
≥17	35	58.3
<b>Residence</b>		
Rural	8	13.3
Urban	52	86.7
<b>Family number</b>		
< 3	12	20.0
3-5	42	70.0
> 5	6	10.0
<b>Ranking between family</b>		
Big	29	48.3
Middle	22	36.7
Young	9	15.0
<b>Preparatory Score</b>		
<75%	21	35.0
75%-85%	19	31.7
>85%	20	33.3
<b>Hobbies</b>		
Yes	34	56.7
No	26	43.3
<b>Types of hobbies (n=34)</b>		
Drawing	17	50
Physical exercise	4	11.8
Reading	13	38.2
<b>Reason to Join school</b>		
Grades	8	13.3
Desire	29	48.3
Both	23	38.4

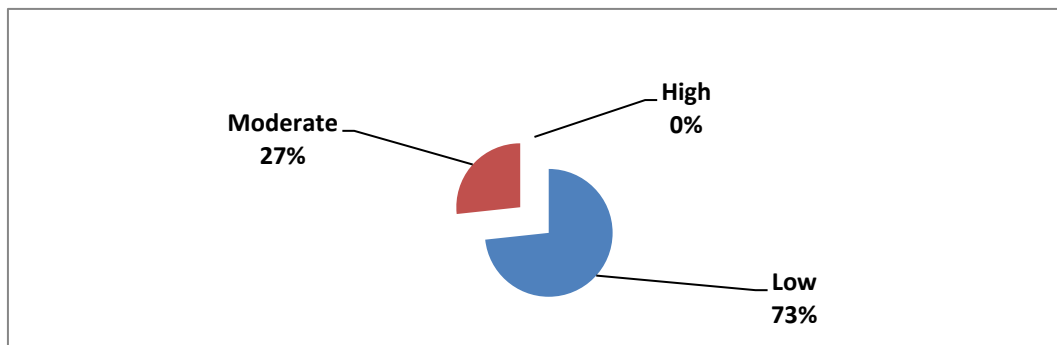
**Table (2):** Total emotional intelligence mean scores of nurse students.

Emotional intelligence dimensions	$\bar{x}$	SD
Self- awareness items	2.36	0.22
Managing emotions items	2.00	0.30
Motivating Oneself items	2.19	0.28
Empathy items	2.92	0.25
Handling relationships items.	2.83	0.17
<b>Total emotional intelligence levels</b>	2.46	0.18

**Figure (1):** Nurse Students total Emotional Intelligence Levels.

**Table (3):**Nurse Students mean scores regarding total Critical thinking skills.

Subscale critical thinking skills	$\bar{x}$	SD
Tendency to evaluate external subjects	3.64	0.50
Correct use of language in listening, Writing and reading	2.64	0.39
Tendency to discern matters	2.60	0.35
Tendency to discuss matters objectively	2.98	0.58
Caring about judgment of certain Phenomena	2.45	0.41
Tendency to reach conclusion correctly	2.50	0.62
Caring about observation of matters and subjects	3.25	0.21
Openness and flexibility in dealing with matters	3.48	0.26
Identify relations from subjects	3.11	1.41
Tendency to avoid rumors in judgments adaptation to new situations	2.74	0.81
providing in innovative solutions	2.67	0.58
<b>Total Critical Thinking Skills</b>	<b>2.82</b>	<b>0.26</b>

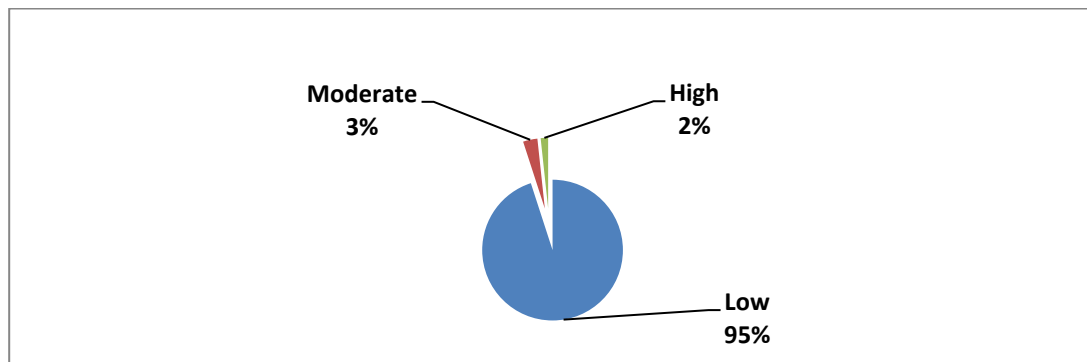


**Figure (2):** Nurse Students total critical thinking skills Levels.

**Table (4):** Total self-esteem levels mean score of nurse students (n=60).

Total self-esteem	$\bar{x}$	SD	P value
self-esteem	1.1900	.27196	0.000**

(\*\*) Highly statistically significant at  $p < 0.01$



**Figure (3):** Total self-esteem levels of nurse students (n=60)

**Table (5):** Correlation between emotional intelligence, critical thinking skills and self-esteem of nurse students.

Items	Spearman correlation	critical thinking skills	Self-esteem
Emotional intelligence	R	.216	-.009
	P value	.097	.948

### Discussion:

Nurse students who greatly contribute to the provision of health services in health facilities at the desired level, to the fulfilment of the demands of the healthcare receivers and play an important role in displaying

leadership behaviours appropriate to the situation by effectively using their emotional intelligence skills. Although emotional intelligence and leadership are basic and intertwined components of the success of nurse students. There is a need for more studies that will contribute to the promotion and development of nurse leadership with a high level of emotional intelligence in achieving the goal of developing healthy work environments (Yildirim et al., 2022).

Regarding to total Emotional Intelligence mean scores the present study displays that at empathy items had got the highest mean scores. However, in managing emotions had got the lowest mean scores. From researcher point view, this result may be due to better understand how others are feeling, and even feel it in ourselves.

It helps us maintain relationships and plays a role in dictating our success in both personal and professional relationships and regulate emotions allows individuals to accept and handle both pleasant and unpleasant feelings. This ability is crucial in living a student's life where one has to cope with occasional failures and disturbing experiences as well as the pressure to perform academically.

This result in same line with study by Hajibabae et al., (2018) who conducted study about "The relationship between empathy and emotional intelligence among Iranian nursing students" and reported that the results showed a strong positive correlation between empathy and emotional intelligence, indicating that with an increase in emotional intelligence scores, empathy scores also increase.

Regarding to total Emotional Intelligence levels, the present study illustrated that more than half of nurse students had low level of emotional intelligence. From researcher point view, this result may be due to most of nurse students were the first time they hearing about emotional intelligence.

This finding consistent with Hanan et al., (2017) who conducted study about "Effect of Nurse Educators' Emotional Intelligence on Student Nurses' Assertiveness at Dakahlia Nursing Secondary Schools" revealed that the majority of nurse educators had low level of emotional intelligence. Also the present study finding are in disagreement with Mahmoud et al. (2013), who stated that nursing students at the Faculty of Nursing, Alexandria University, Egypt had moderate levels of emotional intelligence, although these levels of emotional intelligence did not much progress along the academic semesters.

Regarding total critical thinking skills among nurse students, the present study illustrated that more than one quarter of student nurses had moderate level of critical thinking skills from the researchers' point of view, the result might be due to nursing students had lack of knowledge about critical thinking and the curriculum of different nursing courses does not include critical thinking concept. As well as, the fact that the critical thinking concept was new to the majority of nursing students.

This outcome is consistent with study by Mahasneh et al. (2013), which investigated critical thinking among nursing students, and they found that the undergraduate nursing students had a weak level of critical thinking skills. Moreover, Ghasvand et al. (2017), conducted a study, in Malaysia, to examine the critical thinking skills among nursing students and found that the most nursing students had a weak level of critical thinking skills.

Related to total self-esteem, the present study displayed that minority of student nurses had high level of self-esteem. From the researcher point of view this result may be due lack of experience, fear of making mistakes, difficult patients, discomfort at being evaluated by educators, demeaning experiences, and lack of support by nursing personnel.

This outcome agreement with **Mohamed, (2019)** entitled "Relationship between emotional intelligence and self-esteem among nursing students" and represented that most of the studied students had a low self-esteem and only 1.5% of the students had a high level of self-esteem and recommended training program to improve self-esteem.

The present study illustrated that there were statistically significant correlation between emotional intelligence knowledge and score among nurse student before implementation the program. From the researcher point of view this result may be due to importance of developing emotional intelligence should be a useful adjunct to improve academic and clinical performance, and to reduce the risk of emotional distress for student nurses during their clinical placements. Student nurses need to be aware of the impact and importance of emotional intelligence and EQ lowers stress and burnout of health care professionals in several ways. It improves communication, better doctor-patient relationships.

Finally, the present study illustrated that there were statistically significant correlation between emotional intelligence knowledge and score among nurse student .From the researcher point of view this result may be due to importance of developing emotional intelligence should be a useful adjunct to improve academic and clinical performance, and to reduce the risk of emotional distress for student nurses during their clinical placements. Student nurses need to be aware of the impact and importance of emotional intelligence and EQ lowers stress and burnout of health care professionals in several ways. It improves communication, better doctor-patient relationships.

This outcome accordance with **Kilic et al., (2017)** who conducted study about

"Emotional Intelligence Levels of Nursing Students and Affecting Factors" and illustrated that there was statistically significant correlation between emotional intelligence knowledge and score among nurse student. moreover, this result supported with **Gaballah et al., (2021)** who conducted study about " Nursing Student' Emotional Intelligence and Their Self-Determination in Faculty of Nursing at Port Said University" and illustrated that positive statistically significant relation was found between nursing student overall self-determination and their emotional intelligence dimension.

### **Conclusion:**

In the light of the study findings, it concluded that, there was highly statistically correlation between emotional intelligence, critical thinking skills and self – esteem of nurse students . These findings support the research hypnosis which stated there is a relationship between emotional intelligence, critical thinking skills and self - esteem of nurse students.

### **Recommendations:**

**In the light of the results of the study findings, it is recommended that:**

#### **For management:**

- Create emotionally friendly teaching environment for nurse students
- Motivate nurse students to gain new skills and stay updating by providing opportunities for them.

#### **For education**

- Integrate emotional intelligence courses into the nursing curriculum to increase nurse's student development.
- Enhance education by using critical thinking approach.

#### **For research**

- Replication of the current study on large sample with different settings is required.
- Effect of emotional intelligence training program for nurse students on their self – efficacy.



**References:**

- Arias, J., Soto-Carballo, J. G., & Pino-Juste, M. R. (2022):** Emotional intelligence and academic motivation in primary school students. *Psicologia: Reflexão e Crítica*, 35(1), 1-9.
- Bar-On, R. (1997):** The Emotional Intelligence Inventory (EQ-i): technical manual, Toronto, Canada: Multi-Health Systems.
- Eid, M. (2002):** Identity and anxiety creative, Cairo house, Cairo, p.p. 64
- Eldidi, R. (2005):** Emotional intelligence questionnaire, Egypt, Anglo Egyptian Bookshop, p.p.14.
- Gaballah, S., Zahran, S., Berma, A., & Aldiasty, N. (2021):** Nursing Student Emotional Intelligence and Their Self-Determination in Faculty of Nursing at Port Said University. *Port Said Scientific Journal of Nursing*, 8(3), 46-67.
- Ghisvand, C., & Facione, P. (2017):** A look across four years at the disposition toward critical thinking among undergraduate students. *The Journal of General Education*, 50 (1) 29-55.
- Hajibabae, F., Farahani, M., Ameri, Z., Salehi, T., & Hosseini, F. (2018):** The relationship between empathy and emotional intelligence among Iranian nursing students. *International journal of medical education*, 9(3) 239-243.
- Hanan, A., Wafaa, F., & Marwa, M. (2017):** Effect of Nurse Educators' Emotional intelligence on student nurses' assertiveness at Dakahlia nursing secondary schools, *Port Said Scientific Journal of Nursing*, 4(2)123-143
- Kilic, H., Cagliyan, S., & Dag, G. (2017):** Emotional Intelligence Levels of Nursing Students and Affecting Factors, *Journal of Education and Research in Nursing*, 14(4) 275-283.
- kim, M., & Mun, M. (2021):** Effect of Nursing Students' Emotional Intelligence on Gratitude Disposition, *Annals of R.S.C.B.*, ISSN:1583-6258, 26( 1) Pages. 531 - 541 Received 08 November 2021; Accepted 15 December 2021.
- Li, Y., Li, K., Wei, W., Dong, J., Wang, C., Fu, Y., & Peng, X. (2021):** Critical thinking, emotional intelligence and conflict management styles of medical students: A cross-sectional study. *Thinking Skills and Creativity*, 40(6) 100799.
- Maccann, C., Jiang, Y, Brown, LER, Double, KS, Bucich, M, Minbashian, A. (2020):** Emotional intelligence predicts academic performance: A meta-analysis. *Psychol Bull.*:146(2):150–186.
- Mahasneh, D., & Cox, P. (2013):** Measuring change in students' critical thinking ability: implications for health care education. *J Allied Health*, 31(2) 9-64.
- Mahmoud, A., Al Kalaldehy, M. & Abed El-Rahman, M. (2013):** The effect of assertiveness training program on Jordanian nursing students' assertiveness and self-esteem, *International Journal of Nurse Practitioner Educators*, 2(1)1-15.
- Mohamed, M., Shabaan, F., Eshra, D. and Mohsen, M. (2004):** Study of the integration of critical thinking and ethical decision making in nursing university curriculum, Doctorate Dissertation, Faculty of nursing, Menoufyia university, pp.45- 46.
- Mohamed, S. (2019):** Relationship between emotional intelligence and self-esteem among nursing students. *Egyptian nursing journal*, 16(2), 53.
- Nurhayati, L., Maula, L. H., & Nurasih, I. (2021).** Kecerdasan Emosional dan Kemampuan Berpikir Kritis pada Materi Bangun Datar di Kelas Tinggi Sekolah Dasar. *Jurnal Mimbar Ilmu*, 26(2), 274–280
- Ragab, S. (2018):** The Relationship between Critical Thinking Skills and Self Efficacy among Nursing Students, Faculty of Nursing, Un published master thesis, Ain - Shams University, pp. 61- 62.
- Salama, M. (1986):** personal Estimate for adults questionnaire, Egypt, 2<sup>nd</sup> ed., Anglo Egyptian Bookshop. Self-Efficacy among Nursing Students, Faculty of Nursing, Un published master thesis, Ain - Shams University, pp. 61- 62.
- Yildirim, N., Kantek, F., & Yilmaz, F. (2022):** Relationships between leadership orientations and emotional intelligence in nursing students. *Perspectives in Psychiatric Care*, 58(3)903-909.