Relationship between Nursing Students' Motivation to Learn and Their Competency Self-Efficacy at Secondary Technical Schools of Nursing

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Abstract: **Motivation to learn and competency self-efficacy(CSE) are two of the most influential factors that affect nursing students academic performance and clinical success. Aim: Investigate the relationship between nursing students' motivation to learn and their competency self-efficacy. Study design: A descriptive correlational research design was utilized to conduct this study. Setting: in 6 schools (3 female- 3male) out of 19 Secondary Nursing Technical Schools in Kafr El-Shikh governorate. Subjects: included Nursing Students in the previously selected settings (n=278) (134 female and 144 male). Tools: Two tools were used to conduct this study: Motivation to learn questionnaire and Nursing competency self-efficacy scale (NCSE). Results: The finding of this study revealed that the vast majority of the studied nursing students had high level of motivation to learn and nursing students had high level of competency self-efficacy. Conclusion: There was high levels of nursing students' motivation to learn and high levels of competency self-efficacy (CSE). A statistically significant relationship was noticed between motivation to learn and competency self-efficacy. Recommendations: Develop strategies to motivate nursing students to learn and improve their competency self-efficacy.**

Keywords: **Motivation to learn, Nursing competency self-efficacy, Nursing students.**

I. INTRODUCTION

Acquirement of nurses clinical competency initiates when first join the field of nursing and persistent until the end of an individual's period of working. Thus one of the objectives of nursing education is training skillful nurses in order to protect the health of community members. Nursing students depend on theoretical guidelines and clinical experiences to increase nursing knowledge, skills and improve sense of competency self-efficacy which is considered one effective factor in student motivation to learn for academic achievement.[1, 2]

The relationship between motivation to learn and competency self-efficacy (CSE) are two important factors for health science students especially nursing students leading to better learning outcomes, increased retention of knowledge and depth of learning skills. Motivating to learn for nursing students plays an important role in explaining of behaviors, predicting effects of actions and guiding behavior to achieve objectives.[3,4] According to Bahari, Alharbi, and AleNazi (2022)[5] high

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competence self-efficacy can affect learning motivation in positive and negative ways. Lack of motivation to learn and poor competency self-efficacy is a hard problem for many nursing students, often resulting in a concern about assessment, a lack of ability to succeed work in clinical area, insufficient information for nursing science, decreased grads for nursing students and insufficient effort to complete tasks.[6]

According to Nilsen (2009)[7] **motivation to learn** is a vital aspect of learning where a student is moved to do something by having excitement, interest and enthusiasm towards learning. Ata (2014)[8] pointed out that motivation to learn includes five dimensions which is intrinsic motivation, extrinsic motivation, personal relevance of learning, self-determination to learn nursing and anxiety about assessment. **Intrinsic motivation** refers to accomplishing pleasure through enjoying learning of nursing, fulfillment and discovery of new things. **Extrinsic motivation** is based on motivational behavior aimed at achieving tangible reward or avoiding punishment (for example a desired grade) and learning the nursing can help in career. **Personal relevance of learning** refers to the nursing relation to regarding the student's goals and learns to practical value. **Self-determination to learn nursing** means put enough effort into learning the nursing and prepare well for the nursing tests. **Anxiety about assessment** means tension students association with grading and students response to nursing tests.[9]

Nursing competency self-efficacy (NCSE) is defined as a nursing student's ability to believe that they can effectively deal with or accomplish a task with some level of skill and capability in dealing with daily life problems that will result in an anticipated outcome.[10] Bhanndari et al. (2016)[11] pointed out that NCSE include ten dimensions; management skills, communication and collaboration, advocacy and ethical practice, clinical competence, professional accountability, proficiency, professional advancement, professional responsibility, leadership and self-assertiveness. **Management skills** are ability to provide care accordance with set standards of practice and use knowledge of other disciplines useful in nursing e.g. Computer. **Communication and collaboration** ability to identify the discrepancies between verbal and non- verbal behavior of patient and determine when consultation with other team members is required. **Advocacy and ethical practice** point to maintain privacy, confidentiality while sharing the patient's information, can strongly advocate patients, families and community in meeting their health needs. [12]

In the same trend, **clinical competence** indicates the ability to provide safe care and an ability to correctly assess and critically think through the best options for care utilizing evidence-based practice. **Professional accountability** focus on nursing students taking responsibility for actions, omissions, mistakes and upholding resolve ethical dilemmas effectively e.g. Restraining. **Proficiency** indicates the essential skills possessed by nursing students and they can work in different clinical settings in different situation. **Professional advancement** is based on update nursing students own knowledge and competencies. **Professional responsibility** refers to manage workload appropriately and the ethical and moral obligations for the nursing profession. **Leadership** is point to nursing students can make decisions and carry responsibilities within professional and legal boundaries. **Self-assertiveness** indicates to accept criticism and express negative feeling about other people.[13,14] CSE helps nursing students to decide how much effort they will expend on tasks, how long they will continue when experiencing difficulties and how resilient they will appear in harmful situations.[15,16]

Significance of study:

In Egypt, most families have desire to enroll their children in nursing schools after the preparatory certificate to join work automatically and approximately half of Egyptian students (56.3%) reported this based on previous studies by Ibrahim et al. (2015)[17], Low motivation to learn of nursing students and low competency self-efficacy lead to lower final marks, negative feedback, low academic performance and low self-confidence. Motivation to learn and competency self-efficacy are essential to increase ability of nursing students to their performance in the clinical field. Consequently, students with poor motivation to learn and poor competency self-efficacy have disappointing nurse educators.

Aim of the Study:

This study aims to investigate the relationship between nursing students' motivation to learn and their competency self-efficacy at Secondary Technical Schools of Nursing.

Research Question:

What is the relationship between nursing students' motivation to learn and their competency self-efficacy at Secondary Technical Schools of Nursing ?

II.   MATERIALS AND METHODS

I. Materials

Research design: A descriptive correlational research design was used to conduct this study.

Setting: The study was conducted in 6schools (3 female-3male) out of 19 Secondary Nursing Technical Schools in Kafr El-Shikh governorate. Kafr El-Shikh females 'school , Bila females' school and El- Reyad females' school. Kafr El-Shikh males' school , Bila males' school and El- Reyad males' school.

Subject: The subject of this study included nursing students in the previously selected settings number are 278 (134 female and 144 male) out of 1010 nursing students in the mentioned setting by using EPi Info7program.[18]

Tools: The study utilized two tools for data collection.

Tool I: Motivation to learn questionnaire: This questionnaire was developed by Glynn et al. (2011)[19], and adapted by Ata (2014)[8], to assess motivation to learn. It consists of 25 items divided into five dimensions; intrinsic motivation, extrinsic motivation , personal relevance of learning, self-determination to learn nursing and anxiety about assessment each dimension contains 5 items. The responses were measured on 5- point Likert scale were ranged from never (1) to always (5). The overall score were ranged from 25-125. The score ranged from 25-57 were reflected low motivation to learn, the score ranged from 58-91 were reflected moderate motivation to learn and the score ranged from 92-125 were reflected high motivation to learn.

Tool II: Nursing competency self-efficacy scale (NCSE): This tool was developed by Bhandari et al. (2016)[11], to assess nursing students' competency self-efficacy. It consists of 51 items divided into 10 dimensions′as follows; management skills (7 items), communication and collaboration (7 items), advocacy and ethical practice (7 items), clinical competence (4 items), professional accountability (5 items), proficiency (6 items), professional advancement(5 items), professional responsibility (4 items), leadership (3 items) and self-assertiveness (3 items).The responses were measured on 5- point Likert scale, were ranged from definitely cannot do (1) to definitely can do (5). The overall score ranged from 51 to 255. The scoring ranged from 51-118 reflects low NCSE, scoring ranged from 119-186 reflects moderate NCSE and scoring ranged from 187-255 reflects high NCSE.

In addition to personal characteristics that were developed by the researcher, to collect data from nursing students' included age, gender, school, academic year, work during studying, entering the school on a personal desire and percentage in previous exam.

II- Methods

1. An official permission was obtained from Dean Faculty of Nursing, Damanhour University and the responsible authorities of the study settings after explanation the purpose of the study.

2. The two tools were translated into Arabic, and were tested for their content validity by seven experts in the field of the study and accordingly, the necessary modifications were done.

3. The reliability of the two tools was tested statistically using Cronbach's alpha coefficient test. The result of Cronbach's Alpha Coefficient test proved to be reliable for motivation to learn (0.896) and (NCSE) (0.923).

4. A pilot study was carried out for 10% the total sample size of nursing students (n = 28), who were not included in the study subjects in order to check and ensure the clarity and feasibility of the tools and to identify obstacles and problems that may be encountered during data collection and the necessary modifications were done.

5. Data collection for this study was conducted by the researcher through hand delivered questionnaire to nursing students at their nursing schools after explaining the aim of the study. Every nursing students took about (15) to (20) minutes to fill the two tools. Data collection took two month from 1-10-2020 to 1-12-2020, where one nursing students schools were interviewed weekly.

6. Data obtained was analyzed using the appropriate statistical tests.

Ethical considerations:

•   The research approval was obtained from Ethics Committee, Faculty of Nursing, Damanhur university for research approval.

- An informed oral consent was obtained from the study subject after explanation of the aim of the study.

- Privacy, confidentiality and the right to refuse to participate or withdraw from the study were assured during the study.

- Anonymity regarding data collected was maintained.

III.   STATISTICAL ANALYSIS

The collected data were coded and entered in special format to be suitable for computer feeding. Following data entry, checking and verification process were carried out in order to avoid any errors. Data were analyzed using the statistical package for social science SPSS (version 25). The following statistical analysis measures were used: Descriptive statistical measures, which included: numbers, percentages, and averages (Minimum, Maximum, Arithmetic mean $\overline{X}$), Standard deviation (SD), and Correlation Matrix. The following statistical analysis tests were used: Chi square, t student T test, and ANOVA test.

IV.   RESULTS

Table (1): Distribution of the studied nursing students according to their personal characteristics.

Table 1 shows the distribution of the nursing students according to their personal characteristics. According to their age; the mean age of nursing students were 16.01± 0.869, the highest percentage of then (35.6%) had from16 to less than 17 year's old; while the minority of them (3.6%) had from 14 to less than 15 year's old. Pertaining to gender; more than half of them (51.8%) were male. Regarding to them school, 42.4% of them were in Bila schools, 34.5% were in Kafr El Sheikh schools and 23.1% were in El Reyad schools. In relation to academic year, more than two third of them (36.4%) were in the third academic year; while 30.9% of nursing students were in first academic year. Additionally, majority of them 95.3% haven't work during education and the majority (86.3%) of them declared that they entering the school on a personal desire. Concerning percentage in pervious exam more than half (56.1%) of the students had 90.0% while 19.8% of them had 70% to less than 80%.

Table (1): Distribution of the studied nursing students according to their personal characteristics:

Nursing students' characteristics	Total N=278	
	No.	%
Age (years)		
▪ 14-	10	3.6
▪ 15-	75	27.0
▪ 16-	99	35.6
▪ ≥17	94	33.8
Min – Max 14 – 18 Mean ± SD 16.01±0.869		
Gender		
▪ Male	144	51.8
▪ Female	134	48.2
School		
▪ Bila (Male and Female school)	118	42.4
▪ Kafr El Sheikh (Male and Female school)	96	34.5
▪ El Reyad (Male and Female school)	64	23.1
Academic year		
▪ First	86	30.9
▪ Second	91	32.7
▪ Third	101	36.4
Work during education		
▪ Yes	13	4.7
▪ No	265	95.3

Entering the school on a personal desire		
▪ Yes	240	86.3
▪ No	38	13.7
Percentage in pervious exam		
▪ 70%	55	19.8
▪ 80%	67	24.1
▪ ≥90%	156	56.1
Min – Max 70– 99 Mean ± SD 90.07±9.273		

Table (2): Distribution of the studied nursing students according to the level of motivation to learn (n=278).

Table 2 displays that majority of nursing students (87.8%) got high level of total motivation to learn; while minority of them 1.4% of them got low level of total motivation to learn. At the same time, the highest percentage of nursing students got high levels (80.6 %, 89.9 %, and 85.6 %) regarding all dimensions of motivation to learn; intrinsic motivation, extrinsic motivation, and personal relevance of learning respectively. While, more than three quarters (78.4 %) of them had high of self-determination to learn nursing and less than half (45.7%) of them had high anxiety level regarding assessment.

Table (2): Distribution of the studied nursing students according to the level of motivation to learn (n = 278):

Items	Levels of motivation to learn					
	Low		Moderate		High	
	No.	%	No.	%	No.	%
▪ Intrinsic motivation	8	2.9	46	16.5	224	80.6
▪ Extrinsic motivation	4	1.4	24	8.7	250	89.9
▪ Personal relevance of learning	2	0.7	38	13.7	238	85.6
▪ Self-determination to learn nursing	10	3.6	50	18.0	218	78.4
▪ Anxiety about assessment	25	9.0	126	45.3	127	45.7
Total motivation to learn	**4**	**1.4**	**30**	**10.8**	**244**	**87.8**

Table 3 Distribution of the studied nursing students' according to the level of nursing competency self-efficacy (n=278).

Table 3 displays that majority of nursing students (91.7 %) get high level of total competency self-efficacy and moderate level (8.3%) of total competency self-efficacy. At the same time, the highest percentage of nursing students got high level (91.7%) regarding professional advancement following by advocacy and ethical practice, clinical competence, professional accountability respectively (89.6%,89.6%,89.6%) followed by professional responsibility, proficiency, leadership and communication and collaboration respectively (87.8% , 87.4%, 86.3% , 82.4 %). On the other hand, less than three quarters of the nursing students had high level of competency self-efficacy concerning self-assertiveness and management skills respectively (73.0% and 71.6%).

Table (3): Distribution of the studied nursing students according to the level of nursing competency self-efficacy (n =278):

Items	Levels of nursing competency self-efficacy					
	Low		Moderate		High	
	No.	%	No.	%	No.	%
▪ Management skills	0	0.0	79	28.4	199	71.6
▪ Communication and collaboration	0	0.0	49	17.6	229	82.4
▪ Advocacy and ethical practice	0	0.0	29	10.4	249	89.6
▪ Clinical competence	0	0.0	29	10.4	249	89.6
▪ Professional accountability	8	2.9	21	7.6	249	89.6
▪ Proficiency	6	2.2	29	10.4	243	87.4
▪ Professional advancement	4	1.4	19	6.8	255	91.7
▪ Professional responsibility	7	2.5	27	9.7	244	87.8
▪ Leadership	4	1.4	34	12.2	240	86.3
▪ Self-assertiveness	19	6.8	56	20.1	203	73.0
Levels of total nursing competency self-efficacy	**0**	**0.0**	**23**	**8.3**	**255**	**91.7**

Table (4): The relationship between the studied nursing students' competency self-efficacy levels and their personal characteristics.

Table 4 shows the relationship of nursing students according to the age14 years old 100% and compared to 91.5 % of nursing students aged of 17 years and more had high level of nursing competency self-efficacy. Also, Pertaining to gender 94.0 % of the female students had high nursing competency self-efficacy compared to 89.6 % of the male students. Moreover , regarding to school the highest level of Kafr El Sheikh schools and Bila schools respectively (93.8% and 90.7%) compared to El Reyad schools 90.6%.

Also, regarding to academic year the highest percentage of first and second year students (93.0 % and 93.4 % respectively) had high level of competency self-efficacy compared to 89.1% of the third year students. Furthermore, high competency self-efficacy was more work during education 92. 3% and those who entering the school on a personal desire 92. 9 % compared to who not entering the school on a personal desire 84.2%. Regarding to percentage in previous exam 90.9% of the nursing students who had less than 80.0% success rate had high level of competency self-efficacy, compared to 91.07% of those who had 90.0% percentage and more.

Table (4): The relationship between the studied nursing students' competency self-efficacy levels and their personal characteristics:

Items	Levels of nursing competency self-efficacy				Total N=278		Test of significance
	Moderate (N=23)		High (N=255)				
	No.	%	No.	%	No.	%	
Age							
▪ 14-	0	0.0	10	100.0	10	3.6	X^2=1.004
▪ 15-	6	8.0	69	92.0	75	27.0	P=0.800
▪ 16-	9	9.1	90	90.9	99	35.6	
▪ ≥17	8	8.5	86	91.5	94	33.8	
Gender							
▪ Male	15	10.4	129	89.6	144	51.8	X^2= 1.808
▪ Female	8	6.0	126	94.0	134	48.2	P=0.179
School							
▪ Bila (Male and Female school)	11	9.3	107	90.7	118	42.4	X^2= 0.791
▪ Kafr El Sheikh(Male and Female school)	6	6.2	90	93.8	96	34.5	P=0.673
▪ El Reyad (Male and Female school)	6	9.4	58	90.6	64	23.1	
Academic year							
▪ First	6	7.0	80	93.0	86	30.9	X^2= 1.441
▪ Second	6	6.6	85	93.4	91	32.7	P=0.487
▪ Third	11	10.9	90	89.1	101	36.4	
Work during education							
▪ Yes	1	7.7	12	92.3	13	4.7	X2 = 0.9380
▪ No	22	8.3	243	91.7	265	95.3	P = .006*
Entering the school on a personal desire							
▪ Yes	17	7.1	223	92.9	240	86.3	X^2= 3.277
▪ No	6	15.8	32	84.2	38	13.7	P=0.070
Percentage in pervious exam							
▪ 70%	5	9.1	50	90.9	55	19.8	X^2= 0.107
▪ 80%	5	7.5	62	92.5	67	24.1	P=0.948
▪ ≥ 90%	13	8.3	143	91.7	156	56.1	

X^2 Chi Square Test   * Statistically significant at p ≤ 0.05

Table (5): The relationship between the studied nursing students' motivation to learn levels and their levels of nursing competency self-efficacy.

Table 6 shows a statistically significant relationship was noticed between motivation to learn and nursing competency self-efficacy (x^2 = 84.238 p = 0.000) where the vast majority (92.5 %) of those with high competency self-efficacy had high level of motivation to learn compared to 34.8% of those with moderate nursing competency self-efficacy.

Table (5): The relationship between the studied nursing students' motivation to learn levels and their levels of nursing competency self-efficacy:

Items	Levels of motivation to learn						Total N=278		Test of significance
	Low (N=4)		Moderate (N=30)		High (N=244)				
	No.	%	No.	%	No.	%	No.	%	
Levels of NCSE									
▪ Moderate	4	17.4	11	47.8	8	34.8	23	8.3	X^2=84.238
▪ High	0	0.0	19	7.5	236	92.5	255	91.7	P=0.000*

X^2 Chi Square Test   * Statistically significant at p ≤ 0.05

Table(6): The relationship between the studied nursing students' mean score of motivation to learn and their levels of nursing competency self-efficacy (n=278).

Table 6 shows that higher motivation to learn mean score was found among those nursing students' with high level of competency self-efficacy compared to those with moderate level (105.49 ± 9.808 and 80.22 ± 21.66 respectively), with a statically significant relationship between them (f. 106.995, p = 0.000).

Table (6): The relationship between the studied nursing students' mean score of motivation to learn and their levels of nursing competency self-efficacy (n =278):

Items	Mean scores of motivation to learn Mean ± S. D	Test of significance
Levels of NCSE		
▪ Moderate	80.22±21.66	F=106.995
▪ High	105.49±9.808	P=0.000*

t Student T Test * Statistically significant at p ≤ 0.05

Table (7): Correlation matrix between the nursing students' motivation to learn and nursing competency self-efficacy (n=278).

Table 7 was noticed that total nursing students motivation to learn had moderate statistically significant correlation with intrinsic motivation (r = 0.523 p = 0.000), extrinsic motivation (r = 0.635 p = 0.000), professional accountability (r = 0.486 p = 0.000), proficiency (r = 0.609 p = 0.000), professional advancement (r = 0.595 p = 0.000), professional responsibility (r = 0.479 p = 0.000), and leadership (r = 0.468 p = 0.000),while it had low statistically significant correlation with advocacy and ethical practice (r = 0.299 p = 0.000), clinical competence (r = 0.447 p = 0.000), and self-assertiveness (r = 0.199 p = 0.001).

The same table reveals that total nursing competency self-efficacy had moderate statistically significant correlation with intrinsic motivation (r = 0.638 p = 0.000) extrinsic motivation (r = 0.548 p = 0.000), personal relevance of learning (r = 0.566 p = 0.000), and self-determination to learn nursing (r = 0.620 p = 0.000) while anxiety about assessment had no significant. Lastly , a moderate statistically significant correlation was found between total motivation to learn and nursing competency self-efficacy (r = 0.648 p = 0.000).

Table (7): Correlation matrix between the nursing students' motivation to learn and nursing competency self-efficacy(n =278):

Items		M1	M2	M3	M4	M5	Total motivation to learn
D1	r	0.490	0.465	0.430	0.405	0.154	0.523
	P	0.000*	0.000*	0.000*	0.000*	0.010*	0.000*
D2	r	0.586	0.500	0.523	0.694	0.069	0.635
	P	0.000*	0.000*	0.000*	0.000*	0.249	0.000*
D3	r	0.286	0.295	0.298	0.245	0.018	0.299
	P	0.000*	0.000*	0.000*	0.000*	0.760	0.000*
D4	r	0.417	0.454	0.372	0.377	0.070	0.447
	P	0.000*	0.000*	0.000*	0.000*	0.242	0.000*
D5	r	0.539	0.353	0.430	0.488	0.014	0.486
	P	0.000*	0.000*	0.000*	0.000*	0.814	0.000*
D6	r	0.632	0.504	0.620	0.577	0.013	0.609
	P	0.000*	0.000*	0.000*	0.000*	0.827	0.000*
D7	r	0.636	0.514	0.467	0.635	0.008	0.595
	P	0.000*	0.000*	0.000*	0.000*	0.900	0.000*
D8	r	0.489	0.361	0.438	0.465	0.043	0.479
	P	0.000*	0.000*	0.000*	0.000*	0.472	0.000*
D9	r	0.449	0.451	0.383	0.518	0.019	0.468
	P	0.000*	0.000*	0.000*	0.000*	0.753	0.000*
D10	r	0.109	0.171	0.137	0.134	0.007	0.199
	P	0.069	0.004*	0.022*	0.025*	0.199	0.001*
Total nursing competency self-efficacy	r	0.638	0.548	0.566	0.620	0.065	0.648
	P	0.000*	0.000*	0.000*	0.000*	0.276	0.000*

M1= intrinsic motivation, M2= extrinsic motivation, M3= personal relevance of learning, M4= self-determination to learn nursing, M5= anxiety about assessment

D1= management skills, D2= communication and collaboration, D3= advocacy and ethical practice, D4= clinical competence, D5= professional accountability, D6= proficiency, D7= professional advancement, D8= professional responsibility, D9= leadership, D10= self-assertiveness

r = Pearson correlation   * Significant p at ≤0.05

r ≥0.9 very high correlation   r 0.7-<0.9 high correlation   r 0.5-<0.7 moderate correlation   r < 0.5 low correlation

V. DISCUSSION

Nursing students' motivation has proved to be related to the successful outcome of education lead to an academic degree as well as a professional degree. Accordingly, acquirement of clinical competency begins when first entering the field of nursing and continues until the end of an individual's period of working. Nursing student's motivation plays a fundamental role in their learning and educational achievement can be easily maintained by Follow-up. As well as, Nursing student's competency self-efficacy is necessary for having positive feeling about learning experiences and developing motivation to learn.[20-22]

Regarding to nursing students' motivation to learn, the result of this study revealed that majority of nursing students get high level of total motivation to learn and high mean score. This findings may be related to highly motivated nursing students to do better than the other students on the nursing tests. Nursing students believe earning good nursing grade is important and learning nursing can help get a good job. Learning nursing help nursing students in their career and achieving goals and the nursing learn relates to nursing students personal goals these causes is reflected from dimensions intrinsic motivation, extrinsic motivation, personal relevance of learning, self-determination to learn nursing and anxiety about assessment.

This result is supported with a study was done in Sweden by Nilsson and Stomberg (2008)[23] and in Turkey by Aktaş and Sancar (2021)[24], who found that nursing students have higher motivation to learn motivated by the opinion that nursing was safe job and get good nursing grade. Also, This result is consistent with a study was done in Sweden by Stomberg and Nilsson (2010)[25], who explored the variation in nursing students' motivation and found that the nursing students had a high level of motivation to learn.However, this result is inconsistent by a study was conducted in Malaysia by Chan and Norlizah (2017)[26], and in Sri Lanka by De Silva, Khatibi and Azam(2018)[27] who pointed out to moderately level of motivation to learn among nursing students as indicator to the average level of overall motivation.

Regarding to nursing competency self-efficacy **(NCSE)**, the present study revealed that the majority of nursing students got high level of total competency self-efficacy and high mean score of total competency self-efficacy. This finding may be attributed to that nursing students identify the discrepancies between verbal and non-verbal behavior of patient and support the nursing team, nursing students provided nursing care accordance with set standards of practice as: the patient's consent to the nursing procedures and use knowledge of other useful disciplines in nursing as: computer, physics and sociology.

This result supported with a study was done in Egypt by Ibrahim, Abdelaziz and Akel (2019)[28], who revealed that the majority of nursing students perceived that they have a high level of competency self-efficacy due to nursing students have capabilities and talents to achieve their targets from the clinical training experiences. Nursing students is referring to the awareness of their competent abilities for achieving their clinical objectives which is a necessary prerequisite with the undergraduates. Strong competency self-efficacy is associated with proficient nursing practice and academic improvement.

This finding agreed with Abo Habieb et al. (2013)[29], who finding that nursing students on Faculty of Nursing, Mansoura University in Egypt had high self efficacy this is because the academic staff emphasize on the quality of graduates through quality of academic programs and a keeping in mind the unique attributes of each nursing student which may lead to high self efficacy. This results may be related to the student opinion toward their general self efficacy that they can deal efficiently with expected events and easy for them to stick to their aims and accomplish their goals.[30]

This result is inconsistent with a study was done in Iran by Parsa-Yekta Ramezani, and Khaton (2007)[31], study conducted with nursing students, which found that most students had moderate clinical competence and contradict research on the relationship between the learning motivation and self-efficacy of nursing students in Iran, which indicated that students' self-efficacy for professional nursing

There were statistically significant relationship between nursing students' competency self-efficacy and their personal characteristics.**Regarding to gender,** the finding of current study showed that a statistically significant relationship was found between nursing students' competency self-efficacy and nursing students' gender, female students had higher mean score compared to male students due to female students are more persistent and trained in nursing skills and nursing sciences and female nursing students' choice of nursing education depends on the fact that they consider that the nursing profession offers job security and opportunity as well as the desire to care others. This result agrees with Soudagar, Rambod and Beheshtipour (2015)[32], in Iran showed that female nursing students had the highest percentage rather than male students and that may be as a result of nursing nature that is more suitable for women character of caring people. Beside, males are recently joining to nursing profession.

In contrast, the present results disagree with the study in China by Zhang et al.(2015)[33], which examined the relationship between self-efficacy beliefs and achievement motivation found that the self-efficacy scores of the male nursing students were higher than those of the female nursing students who revealed that male student nurses have higher confidence up to the nursing practice and are accepted and supported by more people. Another explanation is that male student nurses may often be encouraged by nurse managers compared with females nurses. However, findings obtained in Iran Jalil et al.(2019)[34], showed that there was no significant difference between males and females with regard to scores of self-efficacy.

Regarding to work during education due to nursing students desire to increase experience and application training and information from school to reality like nursing science, challenges for nursing students, get a good job and significantly work learning new things throw it and may be related to poor financial status for nursing students. This result is supported in Egypt by Abd El-Halem et al.(2011)[35], and in Turkey by Elibol and Seren (2017)[36], who revealed that Highlighted that

students have many chances in nursing work before and after graduation this shows that they are confident about the nursing profession due to the ease to find a job and said that the majority chose the nursing profession. Support and encouragement were identified as being important for nursing students self-efficacy and positive career outcomes for students making career choices. This result is consistent with a study was done in Britain by Lauder et al. (2008)[37], who revealed that majority of nursing students like to work to increase skills and economic outcome. This result in the same line with other study in Iran by Motahari et al. (2020)[38], who reported that nursing students recognize nursing as a caring profession and opportunity to assist people gain a better health.

However, this result is inconsistent with Gaber and Mostafa in Egypt (2013)[39], who revealed the nursing profession is a critical job in the community and there is a serious deficiency in the nursing workforce determine the image of nursing as a profession among undergraduate nursing students and interns. The results showed that the availability of work and financial reward were the least mentioned reason among nursing students and students turn attention by changing the topic of nursing work in front of others.

Moreover, the result of this study shows **a statistically significant relationship between total nursing students' motivation to learn levels and levels of NCSE both were high.** Also, this study indicated **a statistically significant relationship between nursing students' motivation to learn mean score and their levels of NCSE** may be related to the effect of motivation to learn on competency self-efficacy and vice versa, nursing students beliefs about their abilities has an effect on meeting professional needs and serve as a core cause of student action. Nursing students' competency self-efficacy are more willing to attend academic activities, resulting in more effort, more persistence and reactions less negative when facing hard situations. Items such as experiences, opportunities, environment, personal characteristics, motivation and theoretical knowledge creates nursing students believe in their own abilities to enhance their success skills and academic achievement that reflected competency self-efficacy correlation with intrinsic motivation, extrinsic motivation, personal relevance to learning and self-determination to learn nursing. **On the other hand regarding to correlation between nursing students' motivation to learn and nursing students' competency self-efficacy of subscales dimensions.** This result revealed that was a positive and moderate statistically significant correlations related to many nursing students are drawn to the profession because of a sincere desire to help others. Nursing students can get a renewed sense of motivation very day as they continue to provide caring and service to the patients in clinical areas.

This result is consistent by studies were done in Turkey by Yardimci et al.(2017)[40], and Ariff1 (2022)[41], who revealed that correlation between self-efficacy and learning motivation was positive and significant, that have indicated that the appropriate use of motivational strategies results in higher levels of motivation to learn and (NCSE). Increase learning motivation associated with the promotion of self-efficacy in nursing students. The relationship between the learning motivation and self-efficacy subscales was significant, too. This finding agreed with a study was done in Egypt by El-Sayed, Abd-Elhamid and Mousa (2021)[42], to explore the relationship between academic motivation, academic self-efficacy and perceived social support among undergraduate nursing students who showed that significant positive correlations between students' academic motivation and both their academic self-efficacy and perceived social support. Most of nursing students had moderate levels of academic motivation and academic self-efficacy that revealed a positive relationship between the intrinsic, extrinsic motivation and self-efficacy of nursing students.[43]

Also, the finding of this study is inconsistent with a study was conducted in Saudi Arabi by Alosaimi (2021)[44], who found that perceived motivation and self-efficacy the nursing students was moderate to low and mean score is low who pointed to a lack of effective communication among nursing students to meet the needs and deficiency skills. It goes along with a study was done in Indonesia by Husain (2014)[45], to explore a correlation between self-efficacy and academic motivation among undergraduate students.

While, correlation between nursing students' competency self-efficacy and anxiety about assessment. Present study shows that no statistically significant relation between nursing students' competency self-efficacy and their anxiety about assessment related to the effect of anxiety and emotions on the students' academic outcomes both in the classroom and clinical settings is still limited because nursing students stability and balance when facing nursing tests as: nursing students don't worry about failing the nursing tests and don't feeling of anxious and nervous when do it is time to take nursing tests due to the levels of care given to the nursing students and frequent examinations and hence emphasize that personal factors and competency self-efficacy of the nursing students can predict better performance.

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This result is supported with a study was done in USA, by Aciksoz, Uzun and Arslan (2016)[46], in Turkey who revealed that no significant correlation between the self-efficacy, anxiety and clinical stress because balance multiple works, career adjustment and family responsibilities with the long study hours that are required for success.

This result is inconsistent with a study was done in China by Wang and Rashid (2021)[47], and Hidayati et al.(2022)[48], in Malaysia that showed a negative relationship between self-efficacy, nursing students' anxiety of tests and anxiety level of the first-year. High levels of stress results in undesirable outcomes, including poor memory and concentration, which lead to ineffective learning and poor academic performance. High levels of stress are also associated with reduced self-efficacy among students.

VI.   CONCLUSION

The result of the current study showed that most of the nursing students had high levels of motivation to learn and high levels of competency self-efficacy. A statistically significant relationship was observed between nursing students' motivation to learn and their competency self-efficacy.

VII.   RECOMMENDATIONS

In the light of the results of the current study, the following recommendations can be suggested:

A. Schools managers should:

• Modifying the plans to increase the motivation to learn among nursing students and the effectiveness of competency self-efficacy, so that the schools managers pay more attention to the individual and environmental factors.

• Carrying out regular visits to nursing schools to enhance the good skills of nursing students to remove misconceptions through seminars, brochures and advertisements to establish the importance of motivation to learn and competency self-efficacy.

• Conduct frequent training programs to prepare new nurse educators to how assess the needs and skills of nursing students to increase motivation to learn and improve competency self-efficacy continuously.

B. The nurse educators should:

• Motivation regulation in clinical areas to gain a deeper understanding of the causes and levels of motivation to learn and competency self-efficacy toward nursing students.

• Nurse educators should take measures to create a peaceful environment, nursing students feel comfortable, and secure therefore positive feeling toward the learning climate and environment can increase positive emotions like enjoyment, pride, and hope in the students during learning which leads academic success.

• Nursing educators should be concerned with nursing students' perception toward motivation for learning, and competency self-efficacy to encouragement competition and achievement between nursing students.

c. The nursing students should:

• Provide continuous adequate and constructive feedback of nursing students' about themselves and their academic achievement is needed to motivate them and increase competency self-efficacy.

• Establishing motivation system for nursing students achievements such as written acknowledgement for students good behavior in nursing clinical area and/or for effective interaction in classroom.

• Dividing students into small groups to provide chance for each student to deal with the equipment and apply training procedures and maintaining appropriate clinical practice to improve communication skills, teamwork abilities, and efficiency.

Future/ further studies that should be conducted:

• Identify obstacles that have an effect on opportunities for increase and development of motivation to learn and competency self-efficacy toward nursing students.

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