

**Effect of Educational Program on Knowledge and Uses of Social Network Sites of  
Faculty of Nursing Students at Tanta University**

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**Abstract**

**Background:** Now a day, social network sites among students become most common. There are different and more advancing types of social network sites and have greater impact on the way the people use of it and have remained major public health issues throughout the whole world. **The aim of the study** was to evaluate the effect of an educational program on knowledge and uses of social network of students on faculty of nursing at Tanta University. **Subjects and Method:** A quasi-experimental research design was utilized in this study and it was carried out at Faculty of Nursing, Tanta University. **Subjects:** The total studied sample was 79 students. **Tools of the study:** Two tools were used for data collection; tool I: Structured interview schedule consisted of three parts. Tool II: uses of social network sites, this tool was taken and adapted from the instrument developed by Gupta and Bashir in 2018. **Results:** Total knowledge and uses scores were significantly improved from preprogram to three months after program application for the studied sample, where the mean of total knowledge score increased from 9.25 pre program to 13.39 three months post program and the mean of total uses score increased from 31.47 pre program to 38.54 three months post program **Conclusion:** The levels of knowledge and uses of the studied sample toward social network were improved after implementation of the educational program. **Recommendation:** Conducting lectures, workshops and campaigns to raise awareness about correct and accurate information of social network sites and its uses among other students and all community groups.

**Key words:** Social networking, Community health nursing students.

## Introduction

The rapid advancement of social network sites (SNS) has confirmed that, the world is small and within the reach of all people. As it provide people with more, fastest and easiest information. This may be as a result of changing in the interactive learning and sharing environment. Nowadays, classroom is lacking, and the focus become more and more on SNS in nursing education. These provide students with wider opportunity to communicate and interact with each other inside and outside the classroom<sup>(1-3)</sup>.

Social network sites have become the most popular form of online conversation where persons can develop new content, share it and make reference for it at higher level. Due to social network sites invention, the online world has changed dramatically. Now, not only the youth use social network sites at higher rate in exchange information either personal or scientific, pictures, ideas, feelings and videos but also all age group as elderly and children as well. Now about 73% of wired American teens use social media websites<sup>(4,5)</sup>.

Social networking sites (SNSs), there is no clear definition of it and alternatively used the term ‘social media’, because of the different language used in defining them in practice and academia. There are normal terms used for online interaction.

Distinguished SNSs on three features, first; a setup of profile either public or semipublic, second; build a connection for different users within the system, and third; explain and show connections made by others in the system, as well as one’s own list of connections<sup>(6,7)</sup>.

In the previous years, social network sites become the most popular as it give people especially the youth different and modern methods of communication and interaction with the world and with each other. One of the most common examples for it, is the Facebook, where more than five hundred million individuals are used it and approximately 85% of them are undergraduate students<sup>(8)</sup>.

These numbers of Facebook users are increased and every new day this numbers increases and in continuous grow. You Tube users are also increases. The increasing uses of social network sites affects greatly on ordinary social relationship and communication and make the world more technologically<sup>(9,10)</sup>.

Communicating in person- to- person situation is quite different from communicating through the internet and SNS. Through these websites immediate, rapid message and chatting as well as updating the status are used as a way of communication. It is obvious that SNS

affect the way of receiving information and news. These sites have numerous and various portals through which persons get information and create more different news outlets<sup>(11,12)</sup>.

Experts have recommended 30 minutes or less per day as the maximum time a person should spend on social media<sup>(13)</sup>. It can be used on academic education to solve academic problem, research work, for online academic group discussion, for collaborative learning. Also, it can be used for Socialization, Entertainments and informativeness. Social media has greater effect on every different aspect of life and work nowadays. It is amazing that, social media grasp person's attention and concentration more rapidly without awareness of people. Social media has expensive and greater advantages on education, occupation and investment and on other fields of life. On the opposite it is also has unhealthy and destructive effect on the individuals if they don't use correctly<sup>(14,15)</sup>.

Internet addiction is another worst disadvantage of social network sites as persons spend too much time using it throughout the day and the night with denial to essential responsibilities. It is normally that their performance in different sides of life as in education and work will badly affected as a result of miss

using social network sites. In addition to that, students' losses their motivational level as they depend largely on social media as it provides easiest and fastest information. Therefore, students become less interested to actual practical learning environment and instead they focus more greatly in virtual learning environment. At the end, research and learning capabilities of students reduced as a result of misusing it<sup>(16,17)</sup>.

Mental and physical problems are other examples of bad effect of misusing to social network sites on individuals. Disintegration of the family is considered another bad effect of social network sites as individuals' losses family social relation skills and instead focus on using social media and every individual in the family become has separate life that grasp them away from their family interests. Cyber bullying, is one of SNS major issue these days. Some examples of these are publicly harassing, posting mean comments, spread unreliable and false information<sup>(19,20)</sup>.

### **Significant of the study**

Today the rapid advancement of social media, provide people with different methods of communication. Over the years, SNS among students has become more and more popular. It is a way of interaction and connections among students either in the school or outside it.

As a result of increased its popularity, professors and experts are wondering whether students achievements and grades will not be affected by time spent on these sites. They believe that the use of social network sites may affect positively or negatively on educational performance of students. So that, the community health nurse plays an important role in assessment of students` knowledge about social network sites, provides them with suitable information about available social network sites, teaching them the proper uses, correct and suitable duration of time for using social network sites<sup>(19,20)</sup>. Therefore, this study aims to evaluate the effect of educational program on knowledge and uses of social network sites among community health nursing students on Faculty of Nursing at Tanta University.

#### **Aim of the study**

Evaluate the effect of educational program on knowledge and uses of social network sites of students on Faculty of Nursing at Tanta University.

#### **Research Hypothesis**

Knowledge and uses of social network sites among community health nursing students on Faculty of Nursing at Tanta University expected to be improved after implementation of educational program.

### **Subjects and Method**

#### **Deign**

A quasi experimental (pre-post) research design was utilized in this study.

#### **Study setting**

The study was conducted in Faculty of Nursing, Tanta University.

#### **Subjects**

The sample size was calculated using Epi-info 7 software program. The criteria for sample size selection were determined at 95% confidence limit, study power 80% with a 5% margin of error. The calculated sample size was found to be 51 students and to be increased to 79 to increase the validity of the results. Seventy nine community health nursing students were included in the study. Systematic random sampling was used, where a list of names and numbers of all community health nursing students was obtained and it was about (170 students) then divided by the recommended sample size (79 students) to determine the interval of choosing sample and it was equal to 2. (Total population/ sample = interval) ( $170/79=2.1$ ). the starting point of selecting the sample was number one selected by simple random sampling then every time increase two numbers to be as follow (1,3,5,7,.....)

until attaining the recommended sample size of 79 students of community health nursing).

**Tools of the study:**

In order to collect the necessary data, the following two tools were used.

**Tool I: A structured interview schedule:**

It included the following parts:-

**Part (1): Socio-demographic characteristics of community health nursing students:**Which include data about: age, sex, grade of education, place of residence and family income.

**Part (2): History of using social network sites**

Which include data about pattern of using social network sites such as: usage, usage in education, duration of usage, daily time of usage, and the most frequently used social network sites.

**Part (3) knowledge of community health nursing students about social network sites<sup>(6-10,13-16)</sup> :**

This part developed by the researcher to evaluate nursing students' knowledge about social network sites. It included: definition, causes of use, types, benefits and harms of using social network sites.

**The scoring system:** The items of the questionnaire were checked with a model key answer, which were prepared by the researcher. A score one was given for each

correct point of answer while a zero score for incorrect answer and don't know.

The knowledge total score was calculated by summation of the score of all items of knowledge about social network sites and it equaled 20 points. The total amount of score summation of each student were divided by maximum score of knowledge and multiplied by 100 to get the total score percentage.

**The scoring system of knowledge was as follow:-**

- Poor knowledge: a scoring of < 50 % of the total score (<10 points).
- Fair knowledge: a scoring of 50 < 70 % of the total score (10 to <14 points).
- Good knowledge: a scoring of ≥ 70 % of the total score (≥14 points).

**Tool II: Uses of social network sites<sup>(21)</sup>**

This tool was taken and adapted from the instrument developed by Gupta and Bashir in 2018n<sup>(21)</sup>. It was used to assess usage of social network sites by community health nursing students. It assesses five dimensions of usage of social network sites. Dimension one Academic which includes 7 items. Dimension two socialization which includes 6 items. Dimension three Entertainments which include 4 items. Dimension four in formativeness which includes 3 items. Dimension five constraints which include 4 items.

### **The scoring system for usage of social network sites:**

- It was made using a 3-point LikertScale, a zero (0) score for the items which that wasn't agreed, one score for the items that was neutral and two score for the items that was agreed by community health nursing students except for dimension five constraints especially for items (1and 3) in these items the disagreed items were given score two and agreed items were given score zero. These scores were summed up and the total score equal 48 points then converted into a percent score.

### **The scoring system for usage of social network sites was classified into:**

- Poor usage: a scoring of < 50 % of the total score (< 24 points).
- Moderate usage: a scoring of 50 < 70 % of the total score (24 to < 34 points).
- Good usage: a scoring of  $\geq 70$  % of the total score ( $\geq 34$ points).

## **Method**

### **1. Ethical considerations**

- Before conducting the study, permission obtained from the Dean of Faculty of Nursing, Tanta Universityand the head of community health nursing department.
- An informed oral agreement was obtained. Rightsand confidentiality of

the students were respected in all phases of the study and the study not cause any harm to the students.

2. **Developing tools:** Tool I was developed by the researchers based on reviewing of current related literature and tool two was adapted from the instrument developed by Gupta s and Bashir l in 2018.
3. **Validity of the tools:** The study tools were tested for its validity by five expertise from the community health nursing department.
4. Cronbach's Alpha test was used to **test their liability**of the study tools and it was computed and was found to be 0.822 for all the study tools.
5. **A pilot study** was carried out on 10% (about 8 students) of the students.
6. **The study** was conducted in four phases as follow:
  - I. Phase one:** - Assessment phase :- (pretest) -The data was collected by the previously mentioned tools through giving each studied subject questionnaire to collect the baseline data as a pre-intervention assessment.
  - II. Phase two:** - Educational program development. An educational program was developed based on the results of phase one that determines the studied students' needs and recent relevant literature review.

**III. Phase three:** An educational program implementation.

The educational program content was implemented on 4 sessions. The educational program sessions were carried out with the duration of each session approximately 30- 45 minutes. The educational program was conducted by using group discussion with the studied community health nursing students, answering their questions and providing explanation. Teaching materials were included power point presentation, videos, and posters. The handout was distributed on the studied community health nursing students. It was written in a simple language and supplemented by photos and illustrations to help the studied community health nursing students in the understanding of the content simply.

**Session 1: Program orientation and expectation.**

**The aim of this session** was to orient the studied community health nursing students about the importance of the program and to assess their expectations from each session.

**Session 2:** An overview about social network sites. The aim of this session was to help the studied community health nursing students to define social media, discuss importance, select actual and

suitable duration of times for using social media.

**Session 3:** Types of social network sites, advantage and disadvantage. The aim of this session was to help the studied community health nursing students to identify the available social network sites, differentiate between advantage and disadvantage of social network sites.

**Session 4:** uses of social network sites. The aim of this session was to help community health nursing students to discuss different uses of social network sites and to evaluate its impact on academic, entertainment, informativeness and socialization.

**IV. Phase four:** Educational program evaluation. The aim of this phase was to determine the effectiveness of the educational intervention. This was done by reapplying the tools (tool I part IV, and tool II) through interviewing the subjects twice: -

-First time: Before implementation of the intervention (pretest).

-Second time: Three months after the implementation of the intervention.

**7. The actual data collection** was started from October 2020 to January 2021. The researchers met the study subjects in the community health nursing department in the faculty of nursing two days per week.

## 8. Statistical analysis

Using SPSS (version 23).For quantitative data, range, mean, and standard deviation were calculated. For comparison between means of two parametric variables student t-test was used. For qualitative data, comparison was done using chi-square. Spearman's correlation coefficient was used for evaluation between variables of the study. A significant was adopted at P value < 0.05 for interpretation of results of significance. High significance was adopted at P value < 0.01

### Results

**Table (1) shows socio-demographic characteristics of the studied community health nursing students.** It reveals that, slightly more than half of the studied community health nursing students (52.5%) their age ranged from 21 to <22 with a mean of  $21.54 \pm 0.636$  and the majority of them (93.7 % & 89.9%) were female and their family income were enough respectively. In addition to, more than two- thirds of them (67.1%) were livings in rural areas.

**Table (2) shows history of using social network sites of the studied community health nursing students.** It reveals that the majority of the studied community health nursing students (96.2% & 92.4%) were using social network sites and WhatsApp was the most frequently used

method respectively. More than three-quarters of them (78.5%) were using social network sites for studying and about one-third (31.6%) were using social networking sites for more than 5 years and were spending from 1 < 2 hours on social networks daily.

**Table (3)shows knowledge of the studied community health nursing students about social network sites preprogram and three months post program intervention.** It was observed that there was a significant improvement of the knowledge of the studied community health nursing students regarding meaning, causes, positive effect, negative effect, advantages and dis advantages of using social network sites from preprogram to three months post program intervention.

Furthermore, the total knowledge score of the studied community health nursing students was improved from preprogram to three months post program intervention, where the mean score of their knowledge increased from  $9.25 \pm 3.111$  during preprogram to  $13.39 \pm 3.356$  three months post program intervention with a statistically significant difference ( $t=7.149$ ,  $p= 0.001$ ).

**Table (4)shows levels of usage of social network sites by the studied community health nursing students from pre and three months post program**

**intervention.** It reveals that more than three quarters (77.2%) of the studied community health nursing students had a good usage score of social network sites during three- months post program compared to 36.2% during preprogram intervention. On the other hand, about (13.9%) had poor usage score during preprogram and this percentage decreased to (2.5%) during three- months post program intervention.

There was a significant improvement of the total usage score of social network sites by the studied community health nursing students from preprogram to three- months post program intervention, where the mean score of their usage increased from  $31.47 \pm 7.979$  during preprogram to  $38.54 \pm 7.148$  three- months post program intervention with a statistically significant difference ( $t=5.841, p= 0.001$ )

**Table (5) represents the correlation between total knowledge score and total usage score of social network sites among the studied community health nursing students preprogram and three months post program intervention.** It reveals that there was a significant negative correlation between total knowledge score pre and three-months post program intervention ( $p= 0.018$ ). While, total knowledge score preprogram was a positively correlated with total usage

score of social network sites preprogram ( $p= 0.025$ ). Moreover, post total knowledge score was a positively correlated with post total usage score ( $p= 0.000$ )

**Table (6) represents the relationship between levels of knowledge of social network sites of the studied community health nursing students during preprogram intervention and history of using social network sites.** It reveals that there was statistically significant difference between hours spends on social network sites daily by community health nursing students and levels of knowledge preprogram. While there was no statistically significant difference found between period of using social networking sites by community health nursing students and levels of knowledge preprogram.

**Table (7) represents the relationship between levels of usage of social network sites by the studied community health nursing students during preprogram intervention and history of using social network sites.** It reveals that there was statistically significant difference between hours spends on social network sites daily by community health nursing students and levels of usage of it preprogram. While there was no statistically significant difference found between period of using social networking sites by community

health nursing students and levels of usage of it preprogram.

**Figure (1) shows levels of knowledge of the studied community health nursing students about social network sites pre and three months post program intervention.** It reveals that more than two thirds (68.4%) of the studied community health nursing students had a good knowledge score during three months post program compared to (15.2%) during preprogram intervention. On the other hand, about two -thirds of them (64.6%) had a poor knowledge score during preprogram and this percentage decreased to (17.7%) during three months post program intervention.

**Table (1):Socio-demographic characteristics of the studied community health nursing students**

Socio-demographic characteristics of the studied community health nursing students	The studied community health nursing students (n=79)	
	n	%
<b>Age</b>		
21 < 22	42	52.5
22 ≤ 23	37	47.5
<b>Range</b>	21-23	
<b>Mean ± SD</b>	21.54± 0.636	
<b>Sex</b>		
Male	5	6.3
Female	74	93.7
<b>Place of residence</b>		
Urban	26	32.9
Rural	53	67.1
<b>Family income</b>		
Not enough	8	10.1
Enough	71	89.9

**Table (2):History of using social network sites by the studied community health nursing students**

<b>History of using social network sites by the studied community health nursing students</b>	<b>The studied community health nursing students (n=79)</b>	
	<b>n</b>	<b>%</b>
<b>Use any type of social networks sites</b>		
Yes	76	96.2
No	3	3.8
<b>Using social network sites for studying</b>		
Yes	62	78.5
No	17	21.5
<b>Period of using social networking sites</b>		
Less than 6 months	10	12.7
6 month1< year	17	21.5
1 yr-5 years	27	34.2
More than 5 years	25	31.6
<b>Hours spend on social networks sites daily</b>		
1< 2 hours	25	31.6
2< 5 hours	33	41.8
5-8 hours	12	15.2
More than 8 hours	9	11.4
<b># The most frequently used type of social network sites</b>		
WhatsApp	73	92.4
Face book	63	79.7
Telegram	49	62
Instagram	37	46.8
Twitter	8	10.1

(# More than one choice)

**Table (3): Knowledge of the studied community health nursing students about social network sites preprogram and three months post program intervention**

Knowledge of studied community health nursing students about social network sites	The studied community health nursing students		
	Pre intervention (I) (n= 79)	Three months post intervention (II) (n= 79)	t P
	Mean ± SD	Mean ± SD	
Meaning of using social net worksites	0.99± 0.113	1.19± 0.395	4.451 0.001*
Causes of using social network sites	1.28 ± 0.891	2.37± 0.922	6.748 0.001*
Usage of social networks has any positive effects on your life.	1.92± 0.781	2.51 ±0.799	4.543 0.001*
Usage of social networks has any negative effects on your life.	1.86 ±0.828	2.23±0.715	2.998 0.004*
Advantages of using social networks	1.66± 1.120	2.63±1.189	4.745 0.001*
Disadvantages of using social networks	1.59±0.941	2.48±1.011	5.432 0.001*
<b>Total knowledge score</b>	<b>9.25± 3.111</b>	<b>13.39± 3.356</b>	<b>7.149</b> <b>0.001*</b>

\*Significant at (p &lt; 0.05)

**Table (4):Levels of usage of social network sites by the studied community health nursing students**

Levels of usage of social network sites	The studied community health nursing students			
	Pre intervention (I) (n= 79)		Three months post intervention (II) (n= 79)	
	n	%	N	%
	<b>Good use</b>	29	36.7	61
<b>Moderate use</b>	39	49.4	16	20.3
<b>Poor use</b>	11	13.9	2	2.5
<b>Mean ± SD</b>	31.47± 7.979		38.54± 7.148	
t	5.841			
P	0.001*			

\*Significant at (p &lt; 0.05)

**Table (5): Correlation between total knowledge score and total usage score of social media among the studied community health nursing students preprogram and three months post program intervention**

Variables	Knowledge about social network sites		Usage of social network sites	
	Pre – intervention	Three months post intervention	Pre - intervention	Three months post intervention
	r	r	r	r
	p	P	p	P
<b>Pre total knowledge score of social network sites</b>	-	- 0.265 0.018*	0.252 0.025*	- 0.026 0.821
<b>Post total knowledge score of social network sites</b>	- 0.265 0.018*	-	- 0.035 0.761	0.391 0.000**
<b>Pre total usage score of social network sites</b>	0.252 0.025*	- 0.035 0.761	-	- 0.010 0.929

\*Correlation is significant at the 0.05 level (2-tailed)

\*\*Correlation is significant at the 0.01 level (2-tailed)

**Table (6): Relationship between levels of knowledge of social network sites of the studied community health nursing students during preprogram intervention and history of using social network sites**

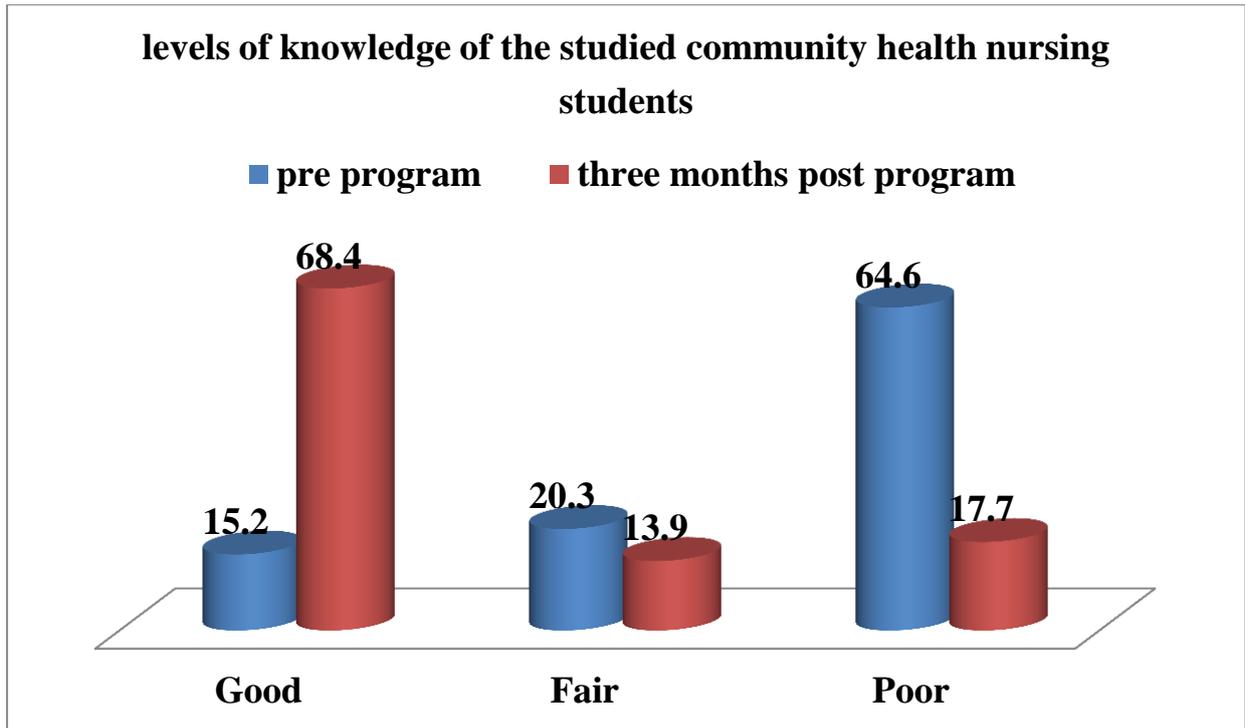
History of using social network sites	Levels of knowledge about social network sites during preprogram						X <sup>2</sup> p
	Poor knowledge n =(51)		Fair knowledge n =(16)		Good knowledge n =(12)		
	n	%	n	%	n	%	
<b>Period of using social networking sites</b>							
Less than 6 months	8	15.7	0	0.0	2	16.7	9.880
6 month1< year	9	17.6	7	43.7	1	8.3	0.130
1 yr-5 years	20	39.2	3	18.8	4	33.3	
More than 5 years	14	27.5	6	37.5	5	41.7	
<b>Hours spend on social networks sites daily</b>							
From one to less than two hours	16	31.4	7	43.7	2	16.7	15.785
From two to less than five hours	23	45.0	3	18.8	7	58.3	0.01*
From five to eight hours	6	11.8	6	37.7	0	0.0	
More than 8 hours	6	11.8	0	0.0	3	25.0	

\*Significant at (p &lt; 0.05)

**Table (7): Relationship between levels of usage of social network sites of the studied community health nursing students during preprogram intervention and history of using social network sites**

History of using social network sites	Levels of usage of social network sites during preprogram						X <sup>2</sup> p
	Poor usage n =(11)		Moderate usage n =(39)		Good usage n =(29)		
	N	%	n	%	n	%	
<b>Period of using social networking sites</b>							
Less than 6 months	1	9.1	5	12.8	4	13.8	2.929
6 month1< year	1	9.1	9	23.1	7	24.1	0.818
1 yr-5 years	6	54.5	13	33.3	8	27.6	
More than 5 years	3	27.3	12	30.8	10	34.5	
<b>Hours spend on social networks sites daily</b>							
From one to less than two hours	3	27.3	17	43.6	5	17.2	16.423
From two to less than five hours	2	18.2	14	35.9	17	58.6	0.01*
From five to eight hours	2	18.2	4	10.5	6	20.7	
More than 8 hours	4	36.3	4	10.5	1	3.4	

\*Significant at (p &lt; 0.05)



**Figure (1):Levels of knowledge of the studied community health nursing students about social network sites pre and three months post program intervention**

## Discussion

Social network sites (SNS) provide people with more and easiest information. This may result in changing in the learning, interactive and sharing environment. SNS have become the most popular form of online conversation; it has changed the online world in the last ten years dramatically. It allow all people either young or old to communicate, interact and sharing information, ideas, feelings with each other's<sup>(22,23)</sup>.

As a result of increased SNS popularly, experts and professors believe that the use of social network sites may affect positively or negatively on educational performance of students. So that, the community health nurse plays an important role in assessment of students` knowledge about social network sites, provides them with suitable information about available social network sites, teaching them the proper uses, correct and suitable duration of time for using social network sites<sup>(24)</sup>. Therefore, this study aims to evaluate the effect of educational program on knowledge and uses of social network sites among community health nursing students on Faculty of Nursing at Tanta University. Communicating in person- to- person situation is quite different from communicating through the internet and SNS. Through these websites: messages,

updating status and chatting are considered methods of communication with friends. The sites open up various portals through which persons get information and create more different news outlets<sup>(25)</sup>.

The current study revealed that the majority of the studied community health nursing were using social network sites and WhatsApp was the most frequently used method Table (2). This may be due to that community health nursing students believe that Whats app is the easiest, fastest and most popular method of social network sites for them. This is in line with the results of the studies conducted by **Siahiet al. (2018)** and **Perpetua and Kelechi (2018)**, who found that using social network sites and WhatsApp was the most frequently used method among the studied students of Alvan Ikoku Federal College of Education in Owerri<sup>(26,27)</sup>.

Regarding number of hours spent on social media daily. Experts have recommended 30 minutes or less per day as the maximum time a person should spend on social media. It can be used on academic education to solve academic problem, research work, for online academic group discussion. For collaborative learning<sup>(28)</sup>, also, it can be used for socialization, entertainments and informativeness.

The current study showed that about one-third of the studied students were spending from 1 < 2 hours on social networks daily (Table 2). This may be related to during the use of social network sites persons don't aware of time and spent most of time transferring from chatting to communicating to searching and at the end most time lost without awareness of it and this mean that they don't have control and management of their times. This is consistent with **Lusk (2010)**, who studied the Effect of Social Media on the Study Habits of Students of Alvan Ikoku Federal College of Education in Owerri and found that most of the students were using social media extensively (more than one hour per day)<sup>(29)</sup>.

Social network sites have greater effect on our ordinary social relation, where face to face communication decreased or become lost. As a result of it different methods of communication and interaction were used on social media. Also social network sites affect greatly in different sides of life as in education, work and investment<sup>(30,31)</sup>.

One of the most important results of the present study were the improvement of the knowledge of the studied community health nursing students regarding meaning, causes, positive effect, negative effect, advantages and dis advantages of using social network sites from preprogram to

three months post program intervention with a statistically significant difference between them (table 3). This may be due to that the educational program was effective in improving knowledge of the studied community health nursing students about social network sites. This similarlywith **Ahmed et al. (2011)**, in Oman, who stated that there was significant improvement of the knowledge of the studied students from preprogram to three months post program intervention with a statistically significant difference between them<sup>(32)</sup>.

Social media is considered a double-edged sword when a person uses it well, helps advance work, education and benefits all aspects of life. On the other hand when person misuse it, it affect badly in health, performance and also decrease motivational levels especially among students as they depend greatly on easily accessible information<sup>(33,34)</sup>.

The current study illustrated that, there was a significant improvement of the total usage score of social network sites by the studied community health nursing students from preprogram to three- months post program intervention (Table 4). This related to the effectiveness of the educational program in improving the studied community health nursing students' usage of social network sites.

This is in line with the results of the studies conducted by **Siahi et al. (2018)**, who found that there was a significant improvement of the total usage score of social network sites by the studied students from preprogram to three- months post program intervention<sup>(26)</sup>.

Furthermore, the current study showed that there was a significant negative correlation between total knowledge score pre and three-months post program intervention. While, total knowledge score preprogram was a positively correlated with total usage score of social network sites preprogram. Moreover, post total knowledge score was a positively correlated with post total usage score. Because it is normally that during preprogram, the community health nursing students had low level of knowledge about social network sites and this levels increased post program as a result of program implementation. While as the total knowledge increases, the total usage of social network sites will in turn improves as well<sup>(35-37)</sup>.

Finally, health education is a vital part of nursing care, especially when used comprehensive assessment that target all aspects of the problem and factors that support improvement. So that, the community health nurse plays an important role in assessment of students` knowledge about social network sites, provides them

with suitable information about available social network sites, teaching them the proper uses, correct and suitable duration of time for using social network sites<sup>(38-40)</sup>.

### **Conclusion**

Based on the results of the current research, it was noticed that the educational program was effective in improving level of knowledge and uses of the studied sample toward social network sites. In which before program application, the majority of studied sample had poor knowledge and uses scores. While, after program application, the majority of them had good total knowledge and usage scores. There was statistically significant difference between hours spends on social network sites daily by community health nursing students and levels of knowledge preprogram. There was a significant improvement of the total usage score of social network sites by the studied community health nursing students from preprogram to three- months post program intervention.

### **Recommendation**

The following recommendations can be suggested based on the results of the present study:

1. Conducting lectures, workshops and campaigns to raise awareness about correct, complete and accurate information on social network sites

and its uses among other students and all community groups.

2. Group discussions, Seminars and symposiums should be arranged at regular interval to train students how to make control over time when using social network sites.
3. Conducting Workshops to students about most beneficial sites to their academic education.
4. All possible forms of mass media such as (T.V, newspaper, radio, Posters, and booklets) are needed to help in the dissemination of correct and accurate information to a large sector of the community especially youth about social network sites and its uses.

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