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Nursing Students' Perspectives regarding Challenges and Barriers of Health Education at Different Community Clinical Settings in Alexandria, Egypt

Neama Yousef Mohammed[1], Eman Ahmed Elkaluby[2], Ahlam Mahmoud Mohamed[3]

[1]Assistant professor, Community Health Nursing, Faculty of Nursing, Alexandria University, Egypt
[2,3] Lecturer, Community Health Nursing, Faculty of Nursing, Alexandria University, Egypt
Corresponding Author: Dr. Neama Yousef Mohammed

Abstract: **Health education is a critical component of nursing roles and community health nursing students, as the future nurses, across their educational process should be well prepared to be competent health educators at different community settings. Aim: The study aimed to assess health education challenges facing the nursing students at different community clinical settings at the faculty of nursing Alexandria University as well as to evaluate their satisfaction with the process of health education. Study design: Descriptive design was used to carry out this study. Study setting: The study was conducted at the Faculty of Nursing, Alexandria University. Study tools: Three tools were used for data collection from the students namely: Tool I: Socio-demographic Characteristics Structured Interview Questionnaire, Tool II: Health Education related Challenges Assessment Questionnaire, and Tool III: Health education Satisfaction Visual Analogue Scale. Study subjects: The study subjects consisted of234undergraduate nursing students during the second semester of their fourth academic year 2018-2019 and who were registered at the community health nursing department from the above-mentioned setting. Results: The findings of the present study reveal that the highest mean percentage of barriers were belonging to the health education termination phase (53.7±22.4) followed by the implementation phase (48.3±16.5). Additionally, the student's dissatisfaction level is the highest also in accordance with the termination phase followed by the conduction phase (59%,47% respectively). There a significant relationship between student satisfaction with the health education process and their gender at different community clinical settings especially schools and as well as the Family Health Center/MCH rotations where p-value was 0.049, and 0.001 respectively. Conclusion: The 4th year nursing students at different community health clinical settings faced several barriers and challenges before, during and after giving their health education messages. These barriers namely: students' related barriers, content and audiovisual materials barriers, clients and environmental-related barriers, as well as evaluation barriers. Recommendation: Nursing students have intense needs for practical training on conducting effective health education messages, developing audiovisual materials, soft skills especially communication skills, identifying the different health education barriers and how to overcome these barriers.**

Keywords: **Clinical learning environment, Health education, Barriers, Challenges, Nursing Students, Satisfaction, Community Health Nursing.**

1. INTRODUCTION

Health education is any combination of learning experiences designed to help individuals and communities to improve their health, by increasing their knowledge or influencing their attitudes. As an effective tool that helps improve health in developing nations, health education not only teaches prevention and basic health knowledge but also conditions ideas that re-shape the everyday habits of people with unhealthy lifestyles. This type of conditioning not only affects the

immediate recipients of such education but also future generations (WHO, 2012). Providing appropriate health education is a central role in health promotion: maintenance, restoration, changing, encouraging, ensuring, persuading or modifying human health behaviors. Therefore, it is a science that emphasizes the developing of an individual's thinking capacities, self-care decision making, and recognition of values related to health and illness (WHO, 2012; Alicea-Planas etal,2015; Helliwell et al, 2003).

It is worth mentioning that, health education is considering an essential nursing practice standard that meaningfully impacts the individual health and quality of life (Bastable, 2008). The health education process has been compared to the nursing process as the steps of each process run parallel to one another (Aghakhani et al, 2012). These steps can be described in 5 steps namely: the first step including the assessment of the clients' previous knowledge, misconceptions, learning abilities, learning styles, cognition, attitudes and motivation and readiness to listen. Through the second step, the clients' resources, barriers and learning needs can be diagnosed. The planning of the education and goals are set, and educational interventions are chosen. In the planning phase (the third step), the type of education, the frequency, who will deliver the education and when and how it should be given, should also be addressed. The fourth step is the implementation or delivery of the education and the final step is the evaluation (Rankin et al, 2001).

Although nursing students, as future nurses, have accepted health education as an important role and are shown to have a positive attitude toward this issue. But in practice, providing health education messages is not at a satisfactory level as they are not practicing it in a consistent and structured manner. Several barriers have been proposed as an explanation for the discrepancy between the expectation and practice of students' nurses in health education (Fathiand 2015). Identification of these barriers that undermine health education can be a positive step toward the provision of better health education by future nurses. Mainly these barriers occur before, during and after providing teaching such as, lack of time, lack of clear objectives and expectations, poor knowledge of nurses, difficult to set teaching, unanticipated events occur frequently, lack of educational resources and shift rotation, also patients unwilling to participate in a teaching encounter, inadequate preparation of nurses for teaching role physical as well as clinical environment barriers (Kaymakc et al., 2007; Ramani and Leinster 2008; Aghakhani et al., 2012; Ghorbani et al., 2014).

Community health care settings aim to reach people outside of traditional health care settings including, Schools, Health care facilities, Worksites, homes. Each setting provides opportunities to reach people using existing social structures. Community health care settings are considered one of the important Clinical Learning Environment (CLE) for the fourth-year nursing students (D'Souza et al., 2015). Community nursing students receive 15 weeks of field training: in primary care clinics in urban and rural areas, and home visits. In addition, they involved in school-based training as a school health nurse. These settings include everything that surrounds students and have a great influence on the development of the attitude, knowledge, skills, and problem-solving ability of students who engage into this situation (Vaismoradi et al., 2014; Steven et al., 2014). Moreover, these settings are also, the place where the theoretical components of the curriculum can be integrated with the practical and transformed into professional skills and attitudes within an emotionally safe environment. However, from the nursing students' point of view, CLE is "the most anxiety-provoking component of nursing education" (Moscaritolo et al., 2009). There is no doubt that assessing student's satisfaction with their clinical experience is essential for nursing faculty to enhance educational performance related to different clinical experiences such as providing effective health education messages (D'Souza et al, 2015; Steven et al, 2014). Satisfaction is an indirect performance that measures the effectiveness of a curriculum. Faculties that provide professional education should be concerned with students' satisfaction as an important educational process outcome. Therefore, students' satisfaction is an indicator of the quality of nursing education (Özgüngör, 2010). In many recent studies, students' satisfaction has been consistently identified as an important factor in a "good" clinical learning environment (Lee et al.,2009). Although the CLE has been investigated in various educational respects, there is a scarcity of studies exploring the nursing students' point of view from the standpoint of their satisfaction with the CLE on a worldwide basis (Abouelfettoh and Mumtin, 2014). The satisfaction of students is very important in the assessment of teaching at the faculties and may have a considerable role in monitoring, identifying positive and deficient areas and implementing necessary revisions of an educational program (Jamelske ,2009).

Nursing students should be allowed to provide effective health teaching experiences during Community health nursing clinical experience however they faced a lot of challenges and barriers. So, it is essential to identify the barriers that face them before, during and after the provision of their health education message. Moreover, the faculty staff believes that

undoubtedly the quality of clinical learning usually reflects the quality of the curriculum structure and the assessment of the clinical settings as the learning environment is a significant concern within the contemporary nursing education. Moreover, the nursing students' satisfaction is considered as an important factor to identify concerns about course shortfalls, guide improvements that contribute to improving the quality of teaching and learning. Thus, students' satisfaction could be used as an important contributing factor towards the development of clinical learning environments to satisfy the needs and expectations of students. One means to identify and evaluate the students' health education learning experience is to look at their clinical experience through their' eyes and allowing them to express their general satisfaction or dissatisfaction with clinical experience.

Community health nurses are instrumental in health education as they spend most of their time working with the local population. Their interaction enables them to identify the cause of common health problems and the people at higher risk to provide targeted health education that provides practical solutions. These nurses play a crucial role in community health education which is the process of promoting health and disease prevention within the community. Apart from providing affordable treatment, community health nurses participate actively in educating the community where they serve on health issues that enable them to live in a healthier way and environment to prevent diseases. The training for nursing students also helps them to run health education programs. They learn how to implement education and preventative measures for the wellbeing of urban and rural communities.

Aims of the study

The study aimed to:

- Assess health education challenges facing nursing students in different community clinical settings.
- Evaluate the level of student's satisfaction with the health education process at different community clinical settings

Research questions:

- What are health education challenges facing nursing students at different community clinical settings?
- What is the level of student satisfaction with the health education process at different community clinical settings?

2. SUBJECTS AND METHODS

Research design:

A descriptive research design was used to carry out the study.

Study setting:

The study was carried out in the Faculty of Nursing at Alexandria University. Faculty of Nursing Alexandria University was the first accredited faculty since 2010 and it has the accreditation for the second time by2016. Since it serves Alexandria governate, Egypt. The study at the faculty covered by eight departments that equip the candidate by the essential knowledge and skills needed to serve the community. Community Health Nursing department prepares the students to be able to maintain community health promotion that can be provided by health education through healthy messages.

Study subjects:

The target population for this research was nursing students who were studying in the above-mentioned setting during the academic year 2018-2019. All the eligible students registered in the community health nursing department during the second semester of the academic year 2018-2019 were included in the study. The total sample size was 234 students.

Tools of data collection:

In order to collect the necessary data for the study, three tools were used.

Tool I: Socio-demographic Characteristics Structured Interview Questionnaire for the Students: This was developed by the researchers after reviewing recent literature to collect necessary data from the students; it included data related student's age, gender, marital status, and place of residence.

Tool II: **Health Education related Challenges Assessment Questionnaire for the Students**: It is a 47-item questionnaire that uses a 3-point Likert scale. This was developed by the researchers after reviewing recent literature to assess the student's perspectives regarding challenges of health education at different community clinical settings; it included the following parts**; Part I**: challenges and barriers during the preparation phase of health education, **Part II**: challenges and barriers during conduction phase of health education, and **Part III**: challenges and barriers during termination phase of health education. The reliability test for the questionnaire was done, using Cronbach`s alpha that measured the degree of reliability. It showed a high reliability of the total score of the test, Alpha = 0.899. According to the health education-related challenges assessment questionnaire each student asked to respond to 47 statements by using a 3- point Likert self-rating scale which ranged from (0) disagree (2) agree. The total score ranged from 0 to 94 points; the higher score indicates higher health education barriers. It was divided into three levels according to the following; satisfied (0-25), partially satisfied (26-50), dissatisfied (51 - 94).

Tool III: Health education Satisfaction Visual Analogue Scale:

Student satisfaction visual analog scale was adopted to evaluate the student's level of health education satisfaction. It is a visual analog scale that uses 3 elaborative faces that reflect the student's reaction or satisfaction level. It includes facial expression as satisfied, partially satisfied and dissatisfied. In addition to considering their comments as an open-ended question.

Methods

Administrative process:

- Permission to conduct the study was obtained from the Dean of the faculty of nursing at Alexandria University and the head of the community health nursing department at the faculty of nursing, Alexandria University.

Content validity:

- After reviewing the recent literature, the three tools were developed by the researchers. The tools were validated by juries of five experts in the field of community health nursing and nursing education. Their suggestions and recommendations were taken into consideration.

Pilot study:

- A pilot study was carried out on 24 students who didn't include in the study, in order to ascertain the relevance, clarity, and applicability of the tools, test wording of the questions and estimate the time required for filling the questionnaire. Based on the obtained results, the necessary modifications were done.

Fieldwork:

- Data were collected by the researchers over two months from March 2019 to May 2019.

Statistical analysis:

- The collected data were coded and analyzed using PC with the International Business Machine- Statistical Package for Social Sciences (IBM-SPSS version 25) and tabulated frequency and percentages were calculated.

- The level of significance selected for this study was p-value equal to or less than 0.05.

Scoring System:

Health education-related challenges assessment questionnaire scoring system:

- Each student asked to respond to 47 statements by using a 3- point Likert self-rating scale which ranged from (0) disagree to (2) agree.

- The total score ranged from 0 to 94 points, it was divided into three levels according to the following; satisfied (0-25), partially satisfied (26-50), dissatisfied (51 - 94)

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Ethical considerations

- Informed written consent was obtained from all students after providing an appropriate explanation about the purpose of the study and the nature of the research.

- The confidentiality and anonymity of student's responses, volunteer participation and the right to refuse to participate in the study were emphasized to the students.

3. RESULTS

Table (1) shows that around two thirds (65.4%) of the studied students aged 22 to less than 24years or more with a mean age 22.1±1.0years. More than half of the studied students (59.4%) were female while two-fifth of them (40.6%) were male. The majority of them (90.6%) were single compared to only 6.8% of students who were married. Those who live in an urban area represented (81.8%).

Table (1) Demographic Characteristics of the Studied Students (n.234)

Characteristics	Frequency	Percentage
Gender		
Male	95	40.6
Female	139	59.4
Age (Years)		
20 to less than 22	61	26.1
22 to less than 24	153	65.4
24 and more	20	8.5
Mean±SD	22.1±1.0	
Marital status		
Single	212	90.6
Married	16	6.8
Divorced	2	0.9
Widow	4	1.7
Place of residence		
Rural	44	18.8
Urban	190	81.2

Table (2) portrays the barriers to health education during the preparation phase. About three-quarters of students (73.1%,76.1%, and 74.4% respectively) stated that the inability to develop learning objectives, inappropriate preparation of teaching content and they not ready to deal with a group of clients were considered as students related barriers. Regarding the barriers related to teaching content, surprising results revealed that the majority of students (96.2%) reported that the most important barriers were overload of other clinical/faculty duties, while 71.8% of students having no time for searching and prepare the content effectively followed by sensitivity of health education topic which was mentioned by around two-third of students (62.8%). In relation to challenges related to audiovisual materials, the same table shows that more than two-third (66.2%,67.5% respectively) of students reported that inability to select appropriate audio-visual material and high cost of the audiovisual materials were the barriers of health education, while more than three quarters of them (76.9%) were stated that inability to use visual materials was barriers of health education.

Table (2) Challenges and Barriers during Preparation Phase of Health Education (n.234)

Challenges and barriers during the preparation phase of health education		Disagree		Neutral		Agree	
		No.	%	No.	%	No.	%
A-	**Students related barriers**						
1	Students' inability to assesses the client's learning needs	129	55.1	64	27.4	41	17.5
2	Students' inability to develop educational objectives	32	13.7	31	13.2	171	73.1
3	Students' inability to prioritize clients' problems	118	50.4	73	31.2	43	18.4
4	Students' inability to prepare appropriate teaching content	30	12.8	26	11.1	178	76.1
5	Students' not ready to deal with a group of clients yet	31	13.2	29	12.4	174	74.4

6	Culture and belief differences between students and clients.	79	33.8	86	36.8	69	29.5
7	Students' inability to choose appropriate methods of teaching.	114	48.7	73	31.2	47	20.1
B-	**Teaching content related barriers**						
8	Insufficient references /lack of references.	96	41.0	83	35.5	55	23.5
9	No time to search and prepare the content effectively.	31	13.2	35	15.0	168	71.8
10	The difficulty of language.	44	18.8	78	33.3	112	47.9
11	Lack of guidance and direction from supervisors	100	42.7	88	37.6	46	19.7
12	Overload with other clinical/faculty duties.	3	1.3	6	2.6	225	96.2
13	The difficulty of the teaching content/topic.	103	44.0	86	36.8	45	19.2
14	The sensitivity of the health education topic.	27	11.5	60	25.6	147	62.8
15	Students' inability to search for general topics.	87	37.2	76	32.5	71	30.3
16	Too much content.	83	35.5	65	27.8	86	36.8
C-	**Audiovisual materials related barriers**						
17	Students' inability to prepare appropriate audiovisual materials.	22	9.4	57	24.4	155	66.2
18	Students' inability to use audiovisual materials.	13	5.6	41	17.5	180	76.9
19	The high cost of the audiovisual materials.	20	8.5	56	23.9	158	67.5
20	Inability to use up-to-date audiovisuals or recent technology.	99	42.3	81	34.6	54	23.1
Total preparation phase barriers mean% ± SD		**43.9±19.4**					

Table (3) reveals the challenges of health education during the conduction phase. other significant barriers of health education were the inability to deliver content in an organized manner, poor communication technique, low self-confidence and inability to exchange feedback reported by nearly three-quarters of the students representing (74.8%,74.4%,75.6%, and 76.9% respectively).On the other hand, inability to attract client attention and in ability to explain teaching objectives were students related barriers during health education session representing (67.9% and 71.8% respectively). The same table shows that the majority of student (91.5%) were stated that client time limitation were the most important barrier on the part of clients, while more than three quarters of them (76.1%) reported the barrier of health education was lack of clients' readiness and motivation to learn. Concerning to the environmental barriers of health education the table presents that the majority of students (90.6%,90.2% , 90.6% and 89.7% respectively) were stated that unsuitable place for given health education, inadequate time of clinic , noise , destruction and difficult to control on environment considered the most environmental barriers of health education.

Table (3) Challenges and Barriers during Conduction Phase of Health Education (n.234)

Challenges and Barriers during Conduction Phase of Health Education		**Disagree**		**Neutral**		**Agree**	
		no.	%	no.	%	no.	%
A-	**Students related barriers**						
1	Lack of enough knowledge and skills related to health teaching	122	52.1	74	31.6	38	16.2
2	Inability to attract client's attention to the topic	40	17.1	35	15.0	159	67.9
3	Inability to explain teaching objectives.	34	14.5	32	13.7	168	71.8
4	Inability to present the content and material of the subject well	127	54.3	65	27.8	42	17.9
5	Inability to deliver content in an organized manner	18	7.7	41	17.5	175	74.8
6	Poor communication technique.	23	9.8	37	15.8	174	74.4
7	Low self-confidence.	18	7.7	39	16.7	177	75.6
8	Inability to give and take feedback	14	6.0	40	17.1	180	76.9
9	Inability to summarize the topic or to mention important points.	139	59.4	60	25.6	35	15.0
10	Lack of support and cooperation from other students	107	45.7	71	30.3	56	23.9
B-	**Clients related barriers**						
11	Lack of clients' readiness and motivation to learn.	14	6.0	42	17.9	178	76.1
12	Lack of trust of students as a source of information	83	35.5	102	43.6	49	20.9
13	Clients time limitation	6	2.6	14	6.0	214	91.5
14	Clients already have knowledge of the topic	77	32.9	110	47.0	47	20.1
15	Clients' refusal to listen to students	78	33.3	102	43.6	54	23.1
16	Clients' related culture barriers	97	41.5	86	36.8	51	21.8

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Challenges and Barriers during Conduction Phase of Health Education		Disagree		Neutral		Agree	
		no.	%	no.	%	no.	%
17	One-way communication and no feedback from clients	101	43.2	79	33.8	54	23.1
	C- Clinical environment-related barriers						
18	The unsuitable place for giving health teaching.	6	2.6	16	6.8	212	90.6
19	Inadequate time of the clinic.	6	2.6	17	7.3	211	90.2
20	Noise and distraction.	8	3.4	14	6.0	212	90.6
21	Lack of support and cooperation from the health teams (staff).	86	36.8	70	29.9	78	33.3
22	Difficult to control the environment.	6	2.6	18	7.7	210	89.7
23	Lack of privacy.	80	34.2	76	32.5	78	33.3
24	Rules and policies of the clinic that limit the students from providing health teaching	75	32.1	92	39.3	67	28.6
Total conduction phase barriers mean% ± SD		**48.3±16.5**					

Table (4) portrays that at the end of health education session the most significant barriers were failure to receive feedback if the health education message understood by client or not and lack of time for evaluating client knowledge representing (76.1% and 67.5%respectively)**.**

Table (4) Challenges and Barriers during Termination Phase of Health Education (n.234)

Challenges and barriers during termination phase of health education		Disagree		Neutral		Agree	
		no.	%	no.	%	no.	%
	A- Evaluation related barriers						
1	Failure to get the health education messages feedback	35	15	21	9	178	76.1
2	Inability to develop evaluation questions.	115	49.1	77	32.9	42	17.9
3	Lack of knowledge about evaluation methods	132	56.4	68	29.1	34	14.5
4	Lack time for evaluating client knowledge	59	25.2	17	7.3	158	67.5
Total termination phase barriers mean% ± SD		53.7±22.4					

Table (5) presents students satisfaction with health education process. Only 15% of students were satisfied during preparation phase with health education process, the table also shows that **there is** no significant relation between gender and students' satisfaction where p value was 0.709.On the other hand, there is a significant relation between student satisfaction with health education process during conduction and termination phase of health education and gender where p value were 0.004, and 0.311 respectively.

Table (5) Student's Satisfaction with Health Education Process (n.234)

Student's satisfaction with Health Education Process	Male (95)		Female (139)		Total (234)		Significance
	no.	%	no.	%	no.	%	
Preparation phase							
Dissatisfied	42	44.2	58	41.7	100	42.7	χ^2:0.687
Partially satisfied	41	43.2	58	41.7	99	42.3	P: 0.709
Satisfied	12	12.6	23	16.5	35	15.0	
Conduction phase							
Dissatisfied	58	61	52	37.4	110	47	χ^2:11.056
Partially satisfied	26	27.4	81	58.3	107	45.7	P: 0.004*
Satisfied	11	11.6	6	4.3	17	7.3	
Termination phase							
Dissatisfied	64	67.4	74	53.2	138	59.0	χ^2: 6.938
Partially satisfied	31	32.6	60	43.2	91	38.9	P:0.0311*
Satisfied	0	0.0	5	3.6	5	2.1	

X^2: Chi-square test P: P value of chi-square test *significant at P value<0.05

Table (6) reveals that students health education satisfaction visual analog scale at community health setting. There is a significant relation between student satisfaction at school and as well as the Family Health Center/MCH rotations and

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students' gender where p value was 0.049, and 0.001respectively.While there is no significant relation between student satisfaction at rural/ home visit, convey rotation and student gender where p value was 0.295,0.149.

Table (6) Student's Satisfaction Visual Analog Scale at Different Community Health Nursing Clinical Areas(n.234)

Student's satisfaction visual analog scale at community health nursing clinical area	Male (95)		Female (139)		Total (234)		Significance
	no.	%	no.	%	no.	%	
School rotation							
Dissatisfied	4	4.2	0	0.0	4	1.7	χ^2: 6.046 P: 0.049*
Partially satisfied	5	5.3	9	6.5	14	6.0	
Satisfied	86	90.5	130	93.5	216	92.3	
Family Health Center /MCH rotation**							
Dissatisfied	70	73.7	1	0.7	71	30.3	χ^2: 15.993 P: <0.001*
Partially satisfied	12	12.6	16	11.5	28	12	
Satisfied	13	13.7	122	87.8	135	57.7	
Rural rotation/ home visit							
Dissatisfied	34	35.8	39	28.1	73	31.2	χ^2:2.441 P: 0.295
Partially satisfied	6	6.3	15	10.8	21	9.0	
Satisfied	55	57.9	85	61.2	140	59.8	
Convey rotation							
Partially satisfied	2	2.1	2	1.4	4	1.7	χ^2: 0.149 P: 0.699
Satisfied	93	97.9	137	98.6	230	98.3	

X^2: Chi-square test P: P value of chi-square test *significant at P value<0.05

**MCH= Maternal and Child Health Center

4. DISCUSSION

Health education is directed towards improving health literacy and people's capacity to manage their health problems (Nutbeam, 2006). Nursing students, as the future nurses, across their educational process they should be educationally well prepared to be proper health educators. They should be challenged to become more competent to create and solve problems and dilemmas that arise during health education process. (Smith and Pressman, 2010).According to the National Academic Reference Standards (NARS) (2017) Nursing students should be equipped to be competent in Providing health education based on the needs/problems of the patient/client within a nursing framework and in all health facilities Therefore, identifying the barriers that face the nursing students in providing health education messages at different community clinical settings, would be a beneficial step to avoid these barriers later on and enhance the quality of health

care services. Moreover, identifying the Students' satisfaction level is an important indicator of clinical nursing education quality

In the present study nearly about three quarters of the study subjects agreed that, themselves are considered as barriers before giving the health education messages to their clients. Students lacking the ability to develop and write educational objectives according to their clients' needs, they inappropriately prepared effective teaching content in a simple language, in addition they experience a lot of worries and fears to deal with a large group of clients. All these students' related barriers and challenges in the preparation phase were clarified by the students' comments as they stated that "During the faculty years we deal on individual base: in the hospital we give health education individualized and we did not do such health education in front of a large group of people" (male student), " I am worry to give a health class to a group of people, I did not do it before."(female student), " Really I did not able to write the educational objectives in right way"(male student", "Most of time we use English terminology and I found it difficult for me to write and do the health education in local language".(female students). These findings are support Abd El Mohsen's study in 2009, as about half of nursing students didn't prepare learning objectives before teaching patients, didn't understand patients' needs and faced some problems in getting proper content of patient teaching as difficult language of health information, lack of reference and over load of clinical duties.

Another barrier face students before giving health education message was related to the health education content as majority of them (96.2%) stated that, they were unable to write the content effectively due to the overload of other clinical/faculty duties and due to lack of Arabic references and 71.8% of students agree that they overloaded and there was no enough time to search or prepare the health education content, while sensitivity of health education topic were mentioned by around two third of students (62.8%). These findings are supported by many nursing researches as Abd- El-Maksoud (1993), Abd El Mohsen (2009), Bastableand (2013), El-Demerdash (2014), and Fathy & Abdelaziz (2015). Moreover, Akbulut Y (2007) and Abd El Mohsen, (2009) supported what perceived by this study subjects as they mentioned in their studies the lack of time and poor preparation for health education content was a frequent barrier for all nurses in all nursing fields. In the same aspect, Fathy in 2006 mentioned that, one of the most important steps in health education is the appropriate plan, selection of instructional media, formulating of educational objectives of teaching content which are lacked with most of the study subjects. It was found also a lack of knowledge about the content to be taught to patients was an important barrier to patient education especially from the students' perspectives. In addition to the previous barriers, majority of the current study subjects didn't know how to prepare or use educational audiovisuals which considered another barrier that confront them to give health education during the preparation phase. Accordingly, it is an immense problem of limited knowledge and skills in health education activities.

In relation to audiovisual materials barriers, the present study results (Table 2) showed that, more than three quarters of students agreed that inability to use visual materials, followed by inability to select and develop appropriate audio-visual material, and the high cost of the audiovisual materials considered audiovisual related barriers before giving health teaching. Moreover, some students also highlighted with their statements why they faced with these barriers" We have no time to develop these audiovisual materials"(male student), "We did not learned how to do visual materials before"(female student), "it is very costly to us to pay in one audiovisual poster"(female and male student), " I think we can get this audiovisual from the health center themselves but they lacked or even if you found it is hanging in English language". These results are support Abd El Mohsen (2009) who found that nursing students reported that they faced some barriers in preparing and using audiovisual materials for patients as: inability to select suitable aids for the patients, lack of time to develop audiovisual materials for patients in addition the high costs of the audiovisual materials and lack of knowledge about audiovisual materials development. On contrary, it is worth mentioning that, Kaymak et al. (2007) found that involvement of nursing students in preparing education material including audiovisual materials and delivering patient education were useful not only for the patients but also for themselves. So, 67% of the study subjects stated that preparing educational materials increased their creativity, contributed to their development, and pleasing and motivated them as well. Moreover, well-planned and carefully documented materials help to improve patient understanding and skills related to their healthcare needs and so can attract their attention to the students' healthy message.

The present study results also agreed with Ghorbani et al (2014) study that tried to explore the nursing students' attitudes on barriers and facilitators to patient education in Ireland, as they expressed that there are many challenges ahead of the

successful implementation of patient education and one of such challenges is the deficiency of educational tools such as patient education leaflet and lack of awareness of the necessity of patient education in clinical practice.

Regarding the implementation process of health education, the majority of study subjects agreed that, their inability to deliver content in an organized manner, their poor communication technique with a low self-confidence and inability to exchange feedback, in addition to their lacked ability to motivate and attract client attention, and their deficient ability to explain teaching objectives were the main barriers during health education session. This means that, those nursing student's lack readiness, motivation ability and inadequately prepared for providing patient health teaching. So, those nursing students are in need for practice, support, appropriate curriculum and proper setting with the development of needed supplies. Bastable and Alt (2013), Eldmirdash (2014) and Fathi and Abdelaziz (2015) agree with this results and reported that, many nurses and other healthcare personnel admit that they do not feel competent or confident with their teaching skills so, the role of the nurse as educator still needs to be strengthened in undergraduate nursing education. Also, nursing students at the current study had a serious lacking in communication skills as reported by Abd El Mohsen (2009) and Fathi et al (2015).

Thus, there is no doubt that, those nursing students have great hinder factors for conducting health education messages effectively as they also highlighted in their comments as follow“ We had got health education course before but actually it is theoretical and there is discrepancy between expectation and actual practice of health education”(female student), “I made a written lesson plan but actually if I will apply it in reality, I will not be able to do so as there are a lot of constraints” (male student), “I am not able to do educational plan. Because it is a group activity, I did not do it before my friends do it for me” (male student), “I need course on how to make audiovisual materials and how to conduct educational session practically”. (female student). On contrary to this result Kaymakc et al. (2007) found that nursing students did not encounter any problems into attracting patient's attention to the topic and they present the content and material of the subject well.

Other important barriers face nursing students during conducting health teaching raised by high percent of nursing students 91.5% was related to client time limitation, followed by lack of clients’ readiness and motivation to learn as reported by 76%. Moreover, clients may lack of trust of student as a source of information or they may be already having enough knowledge similar or higher than what introduced by the student. That this why Clients’ may refuse listening to students’ topic and this agreed with the result of Abd El Mohsen (2009).

Health education was found to be an interactive process of between healthcare providers in the form of nursing students and the clients in the context of clinical care settings. Therefore, a lot of environmental related barriers were emphasized by high percent of the nursing students during their implementation of health education session. These barriers were Unsuitable place for giving health teaching, inadequate time of the clinic, noise, and difficulties to control the environment. These findings are agreed with Bastable (2013) and El-Demerdash S (2014) who mentioned that, the environment in the various settings where nurses are expected to teach is not always conducive to carrying out the teaching–learning process. Lack of space, lack of privacy, noise, and frequent interferences caused by client treatment schedules and staff work demands are just some of the factors that may negatively affect the nurse’s ability to concentrate and effectively interact with patients. Alavi (2005) found that some environmental physical factors such as crowded and noisy wards, lack of time, stress, and workload pressure are also important obstacles.

In addition to the physical environmental barriers, about one third of the current study subjects mentioned social environment related barrier in case of lack of support and cooperation from the clinical settings staff. In another study on students' perspectives of health education, it was mentioned that, the process of patients’ education was facilitated by positive relationships between staff nurses and students and also hindered by the lack of time and support from nurses (Ghorbani, 2014).

As for the termination phase barriers which face nursing students’ after providing their health education, about three quarters and two thirds of nursing students agreed that failure to measure the impact of health education messages on their client behavior change, and lack time for evaluating clients’ knowledge were consider evaluation related barriers. These barriers may be due to the nature of the community health clinical experience which is totally different than the other clinical experiences. Students may see their clients just once in the primary care centers in a hurry manner or just twice in the schools. While in other specialties students can meet their patients several times during their hospital stay so they can test their health education message by testing their patients’ awareness. Lack of knowledge about evaluation

methods and inability to develop evaluation questions were other barriers related to evaluation phase (Table 4). This in accordance with Abd El Mohsen (2009) and El-Demerdash et al. (2014).

Furthermore, in the present study the lowest mean barrier score was during the preparation phase 43.9±19.4 while the highest mean was belonging to the termination phase (53.7±22.4) followed by the implementation phase of health education (48.3±16.5). These differences in the mean score can be justified in table (5) as the study subjects' dissatisfaction level is lowest also in the preparation phase (42.7%) as compared to the highest one in the termination phase followed by the conduction phase (59% ,47% respectively). According to Strfmberg (2003), who stated that, any combination of educational barriers might interfere with the plan being relevant and timely for the targeted learner, and also will affect of their satisfaction

That is why this dissatisfaction level can be linked to higher numbers of barriers both in the implementation and evaluation phase. While during preparation phase there is an important role of staff supervisors' guidance to the students in preparing the content and audiovisual selection. The staff guided students also to correct the wrong information in their content. In addition, students still have a time to train themselves several times in their presentation before giving the health education message. While in the implementation and evaluation phase the main role and responsibility of the presentation is on the students themselves and most of them may be in stress from both clinical evaluations, dealing with clients and environmental barriers as well. This justification confirmed by the students' words" In the preparation phase we get the help from our supervisor: she read the written presentation and give us the feedback several times but the difficulties actually when we face the clients face to face"(female student), "The situation is totally different before and during the health education I imagine I will give the content effectively as I wrote before but there are a lot of barriers as the environment is noisy and clients are hurry they did not stay to listen"(female student), "I forget all what I prepared when I just remember that I will be evaluated. I think I should give health education with no stress related evaluation and I want always my supervisor support and guidance." (female student).

It is worth mention that, previous studies have shown that, nurses' performances in giving patient health education have not been at a satisfactory level (Park, 2005; Vafaee-Najar et al., 2012; and Friberg et al., 2012). Although a variety of factors that influence the process of providing health education, the importance of these factors from students' perspectives may be different. Therefore, there is a great interest to find its reason and focusing on the variation between nursing student's satisfaction level and their gender at different clinical areas. This study put the spotlight on the students' satisfaction across the health education process and throughout their experience at different clinical settings and their gender (Table 5) the current study results found that there is a significant relation between student satisfaction with health education process during conduction and termination phase of health education and students' gender. Also, there is a significant relation between students' satisfaction at different community health clinical settings such as school, as well as the Family Health Center - MCH rotations and students' gender.

Why did the satisfaction level vary from clinical settings to another and to what extent the students' gender play a role in students' satisfaction? m. Other studies as Chesser-Smyth (2005) and Abouelfettoh (2014) questioned the effectiveness of clinical settings and both studies claiming that the clinical settings fail to provide students with positive examples of behavior and even recognized it as a source of stress, creating feelings of fear and anxiety which in turn affect the students' responses to learning and certainly affect their satisfaction. According this study results it was found that Male adolescents were dissatisfied in a higher percentage than female in rural rotation where they made home visiting, and at the family health center rotation. In this regard some nursing students stated that, "The new experience of home visits put a lot of stress on us equally".(male students), "I found that so hard to made home visits. I can't enter the home if there is no male present in the house it is culturally unacceptable to enter the house in the absence of house males". (male student), "Entrance the homes may expose us to a lot of problems especially in case lack of security" (female student)., "There was a high expectation from the clients at home visit but we lacked resources and we did not prepare ourselves enough for this rotation in the matter of knowledge" (male students) In this regard, another participant stated "When I visit patient with any chronic disease, I'm always afraid that what if he asks me a question I think I did not have answer to his question"(female student), " In the specialty of community health it is expected to have all the knowledge from the previous 4 years but I did not remember all these previous knowledge" (male student). In line with the previous statement it is clear that both male and female did not equip themselves with the needed knowledge, in addition male adolescents

have worries about the culture related barriers, while female adolescents worry about their security when doing home visit.

On the other hand, other students wrote done in the remarks section that stated they were satisfied because they fulfill they actual role "Most of the people are poor they expected to help them financially and it is not our role, but we tried to do our role very well"(male student). "I am satisfied very well because I helped immobilized patients and he not able to go to the hospital" (female student). Furthermore, the satisfaction level difference between male and female student at family health centers and MCH center can be explained according to the student's point of view as some students stated that "In family health centers all the clients were busy they had no time to listen"(male student), "Noise everywhere; imagine how I can give any health education message in a noise and unorganized place.(male and female student), "There was much work paper, we did not learn much, we were not allowed to practice many nursing procedures"(female student).

Beside the previous environmental barriers and client related barriers, some male students highlighted an important matter as the culture related barrier as well as their work overload "I am male students. How did you expected me to give health education to lactating women about breast feeding or family planning or even minor discomfort during pregnancy, I think these topics not suitable for us as males" (male student). This area is full of a lot of requirements and work. In this regard, one of the participants stated: "I work at nights to financially support myself. In the morning, when I go to family health center, I'm so tired to continuo these required activities"

As regard to the School and convey rotation, it can be seen from table (6) that, almost all male and female students were satisfied with the clinical convey rotation and school rotation. In this regard students' statements may give explanation for this high satisfaction level "However this experience is too short, but we learned a lot, we learned how to work as a one team and in organized matter. of course, we noticed our client's satisfaction with our efforts in the convey, I think this experience helped to increase our self-esteem" (male student). Moreover, the student's acceptance within the nursing team is related with their' satisfaction especially that they develop the sense of "team spirit" in a well-organized nursing care environment as stated by themselves. This was stated by female students "It is the first time I worked in a group in a satisfied way. The good preparation before the convey affecting on its successes" These findings are in agreement with previous findings of studies Warne (2010), Strfmberg (2011), Bisholt (2014), and Dimitriadou (2015).

In line with Papastavrou (2016), involvement in a new role "the role of the Nurse Teacher" at school is preferred by student nurses and helped to increase their satisfaction level "School rotation is the best, Hope to spend more time in to have maximum advantage of learning"(male students), "Regardless the noise I love to be a teacher"(female students), "We do a lot of activities it is full rotation, we learned both theoretically and clinically"(female student) In addition, some students stated "We have been treated very well from the school staff and they consider us as their teachers as well as our clinical supervisor" some added that "the supervisor was helped us all the time and we take a lot of conferences that helped us a lot".

When the students were treated with respect and appreciation as well as being included as part of the organization team; presence of effective levels of mentor expertise and guidance with continuous feedback on their professional performance, frequent clinical conferences with their mentor and the concurrence of clinical practice with theory. These findings are in agreement with previous findings of studies Dimitriadou (2015, Sundler (2014), Papp I(2003) Mattila (2010).Finally speaking when, comparing between male and female subjects in relation to the encountered barriers in health education, Fathi (2015) had found no statistical significance difference between both genders regarding all revealed health education barriers. Gender differences in the nursing profession still need extensive research

5. CONCLUSION

The 4th year nursing students at different community health clinical settings faced several barriers and challenges before, during and after giving their health education messages. These barriers namely: students related barriers, content and audiovisual barriers, clients and environmental related barriers, as well as evaluation barriers. The highest mean percentage of barriers were belonging to the termination phase (53.7±22.4) followed by the implementation phase of health education (48.3±16.5). Additionally, the student's dissatisfaction level is the highest also in accordance with the termination phase followed by the conduction phase (59%,47% respectively). This dissatisfaction level can be linked to

higher numbers of barriers both in the implementation and evaluation phase. There a significant relation between student satisfaction with health education process and their gender at different community clinical settings and students' gender.

6. RECOMMENDATION

Based on the results of the present study, the following recommendations are suggested:

1. Emphasizing the need of soft skills training for students focusing on new situation stress management, communication skills, and the importance of the interpersonal relationships.
2. Conduct health education training courses emphasizing audiovisual materials preparation and selection.
3. Develop health education guidance center to guide those who newly practitioners for health education.
4. Developing a guideline regarding nursing students health education barriers and how overcome these barriers.
5. Further research should be encouraged regarding identify to how extent the clients are satisfied with nursing students health education performance, as well as to identify to clients' satisfaction with nursing students' health education performance and studying gender differences especially related to students related barriers in the health education process.

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