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HEALTH EDUCATION BARRIERS, ENCOUNTERED BY NURSES AT ORAL HEALTHCARE UNITS

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Abstract: World-wide accepted methods for prevention and management of oral health problems are the health education messages. Nurses are facing multiple difficulties when assuming health education activities with dental patients. Therefore, this is a descriptive study, aimed to determine the health education barriers encountered by nurses at oral healthcare units. 125 nurses were selected randomly by convenient sampling, included 55 from Alexandria Dental Research Center at Smoha and 70 from free dental and oral clinic in El Amery University hospital, Alexandria, Egypt. Health Education Barriers Questionnaire (HEBQ) was used to collect the necessary data of the study which was developed by Abd El Mohsen A., in 2009. Based on the analysis of the subject's responses, the results revealed that: the nurses at oral health units have a serious lack in knowledge regarding health education process and there are several barriers and difficulties faced them in providing oral health education related to themselves, patients, health setting and health staff. The major recommendations are; to develop an oral health education strategic plan, in Alexandria for nurses; to construct a vision to manage any obstacles may face nurses in oral health education in Alexandria or Egypt as a whole.

Key words: Oral health, education, Barriers, Nurses

INTRODUCTION

Oral health problems, require a great educational help and support to manage patients' complains; as tooth loss, dental caries, periodontal diseases, oral mucosal diseases as candidiasis and even dangerous diseases as squamous cell carcinoma. (Hmud R., Walsh LJ. 2009 and Mayeaux EJ *et al.*, 1996) Moreover, complications of systemic diseases and its treatments or side effects are frequently affecting salivary mechanism, oral motor and sensory functions that need proper health awareness. Therefore, in some dental cases, health teaching is considering the total care. Patient education in oral health care will improve and stabilize individuals' oral health status and general health as well. (Mayeaux EJ *et al.*, 1996 and Shay K, Ship JA 1995)

The nurse as a health educator in oral health field should be aware with update knowledge and orient by the educational, communicational, and social processes to establish suitable patient health education interventions. Nurses should be well prepared to enter the profession as role models and cleverer guide in the health education field. (Hmud R., Walsh LJ. 2009 and Abd El Mohsen A., 2009)

Among Nurses; there are several barriers and difficulties that have been proposed for the explanation of the discrepancy between expectation and practice of health education as: time constraints, lack of well-defined role expectation, lack of communication skills or resources and lack of effective health education courses. Other barriers rose from patients and their families, health setting and surrounding staff. Despite the efforts for nursing staff education and training, patient education remains inconsistent and minimally effective. (Fathy A. 2006, University of Wales Swansea 1999 Abd El Mohsen A 2009).

Sometimes, only health education is enough to manage oral health problems among patients. Therefore, identifying the barriers that face nurses in providing patient education, in this field, would be a beneficial step to avoid these barriers and enhance the quality of oral and dental care services. The aim of this study is to determine the health education barriers encountered by nurses at oral healthcare units.

MATERIAL AND METHOD

Research design is a descriptive design, and the study was conducted at Alexandria Dental Research Center at Smoha and Free dental and oral clinic in El Amery University hospital. 125 nurses were selected randomly by convenient sampling, included 55 from Alexandria Dental Research Center at Smoha and 70 from free dental and oral clinic in El Amery University hospital, Alexandria, Egypt. The sample size determined by Epidemiological Information Statistical Program and nurses mostly enrolled at morning and evening shifts. Health Education Barriers Questionnaire (HEBQ) was used for data collection. It was developed by Abd El Mohsen A in 2009 to determine the hindering factors, problems and difficulties that encountered by undergraduate nursing students while providing patient health education; in terms of: Socio-demographic data such as (Age, Sex, Previous academic year, etc.), Difficulties regarding patient education assessment, planning, implementation, evaluation and documentation, Difficulties in relation to patient and family and finally difficulties in relation health setting and care team.

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The study was executed according to the following steps:

- Official Permission was obtained from the authorities in the mentioned setting, after explanation of study purpose.
- Written informed consent was obtained from the subjects, before involving in tool completion.
- Study subjects identified the purpose of the study and announced that they had the right to withdraw at any time without any consequences.
- Nurses were given the questionnaire in the presence of the researcher to clarify any vague question. Anonymity was assured by telling them to avoid putting their names on the questionnaire.

Regarding preparation of questionnaire sheet, it is adopted and modified, then passed through a seven expertise jury members in nursing education and medical surgical nursing fields. Tool attained moderate test-retest reliability. 77% of its items reached a fair to moderate agreement between the test and retest.

A pilot study was carried out on 15 nurses apart of the study sample, to test tool clarity, feasibility, time needed to fill and understanding of the study tool.

Statistical analysis:

Data was fed, coded, edited and analyzed using PC with statistical packages for social science (SPSS, 19) version 7.0 for windows. The selected level of significance was $P \leq 0.05$. The results were estimated using numbers, percentage, arithmetic mean, standard deviation and median. Analytical statistics were done using Chi-square T, ANOVA tests.

RESULTS

Results have been presented as follows:

a) *Subjects' characteristics*

Table 1 shows that more than one half (56%) of the subjects were in early twenties and the majority (81.6%) of them were females. Nearly two-thirds (60%) were from Urban areas and as well as (68%) of the subjects had diploma certificate from nursing and polymeric or commercial diploma school. Also, about two-thirds (65%) of them had around 5 to 10 years of experience in oral health care while the majority (80%) had no previous studies about health education.

b) *Barriers in health education process:*

According to data in table 2, the majority (82.4%) of the nurses was interested to work in oral health field but more than three quarters (78.4%) had no time to communicate health messages with patients. As well as (72%) of them, didn't know the importance of oral care health education and approximately two third (60.8%) perceived that there is no specific responsible person to provide Health education in oral health units. Moreover, nearly three quarters (72%) of the subjects didn't know to take patient approval before teaching and the same proportion didn't identify the value of health education for patient. Almost all of the nurses (40% and 54.4%) perceived that they had limited and no knowledge about health education assessment.

Table 1: Percent distribution of subjects according to their general characteristics

General characteristics	No. N=125	%
Age:		
- 18≤ 25	70	56
- 26 ≤ 35	25	20
- 36 ≤ 45	10	8
- 46 ≤ 55	20	16
Sex:		
-Male	20	18.4
-Female	102	81.6
Work place:		
- Alexandria Dental Research Center at Smoha	55	44
- Free dental and oral clinic in El Amery University hospital	70	56
Residence:		
-Rural	50	40
-Urban	75	60
Qualification:		
- Diploma degree		
• nursing	40	32
• others*	45	36
-Associate degree	20	16
-Bachelor degree	20	16
Years of experience in oral health care:		
- Days	15	12
- Months	15	12
- 1 ≤ 5 years	65	52
- 5 ≤ 10 years	20	16
- 10 ≤ 15 years	10	8
Previous study about oral health education		
- At faculty of nursing,	10	8
- lectures at work place	15	12
- At private studies	0	0
- Never study	100	80

*= Polymeric or commercial diploma

The majority of the study subjects (80%) didn't aware how to assess patient knowledge before teaching and about the same percent (78.4%) didn't know the methods of data collection in health education assessment. The most apparent barrier regarding assessment in oral care health education was the lake of knowledge about this process in general, that mentioned by 44% of the nurses and lack of communication skills which reported by 32% of them.

Table 2: Percent distribution of subjects according to their difficulties in assessment of oral care health education

Difficulties regarding oral health education assessment	No. N=125	%
Interesting in oral health care work:		
-Yes	103	82.4
-No	22	17.6
Health education has a value in oral health:		
-Yes	20	16
-No	15	12
-Don't know	90	72
Time to communicate with patients:		
-5 ≤ 2 0 Min.	15	12
-20 ≤ 40 Min.	5	4
-45 ≤ 60 Min.	7	5.6
-1 ≤ 2 hr.	0	0
-There is no time for patient	98	78.4
A person who provide health education:		
-A nurse	13	10.4
-A dentist	18	14.4
-A social worker	8	6.4
- Medical physician	10	8
-No one provide health education	76	60.8
Take patient's approval before teaching:		
-Yes	25	20
-No	10	8
-Don't know	90	72
Knowledge about health education assessment:		
-Enough knowledge	7	5.6
-Limited knowledge	50	40
-Don't know	68	54.4
Assess patients' knowledge before teaching		
-Yes	8	6.4
-No	17	13.6
-Don't know	100	80
Identify Methods of data collection before teaching:		
-Yes	11	8.8
-No	16	12.8
-Don't know	98	78.4
Nurses' barriers in assessment for health education:		
-Lack of knowledge about health education process in general	55	44
-Difficulty to teach patient & family	7	5.6
-Can't manage the patient learning needs	15	12
- unable to collect enough data about the patient learning needs	8	6.4
-Lack of communication skills	40	32
-All of the above		

Table 3 reveals that almost all nurses (89.6% and 92%) of the nurses reported that they didn't know how to plan for oral health education or to write the educational objectives while, 80% of them mentioned that they can prepare the content of oral health education. 36% and 36% of the nurses reported that the most common two barriers regarding planning for health education were: difficulty of health messages language and there was no enough time to prepare the teaching content. It was observed that more than one half (56%) of nurses didn't know how to prepare audiovisuals for oral health education and about the same proportion (52%) of them didn't aware by the types of this audiovisuals. As well as, 56% of the nurses mentioned that, the most apparent barrier related to audiovisuals development was; there is no enough time for preparing and designing it.

Table 3: Distribution of subjects according to their difficulties in oral care health education planning

Difficulties regarding oral health education planning.	No. N=125	%
Plan for patient education:		
- Yes	8	6.4
- No	5	4
- Don't know	112	89.6
Write educational objectives:		
- Yes	5	4
- No	5	4
- Don't know	115	92
Prepare content of teaching:		
- Yes	100	80
- No	17	13.6
- Don't know	8	6.4
Barriers in preparing content of teaching:		
- Difficulty of language	45	36
- Lack of references	10	8
- No time for searching	45	36
- difficulty for understanding	20	16
- No libraries or computers in unit	5	4
Prepare audiovisuals:		
- Yes	7	5.6
- No	48	38.4
- Don't know	70	56
Knowledge about audiovisuals types:		
- Good knowledge	10	8
- Limited knowledge	50	40
- Don't know	65	52
Barriers in preparing audiovisuals:		
- Difficulty to select suitable one	25	20
- Difficulty of health topics	10	8
- Lack of references	15	12
- No time for designing	70	56
- Expensive of the materials	5	4
understanding		

Table 4 shows, the greater part of nurses (81.6%) didn't provide clarifications and examples for patients and about three quarters (72%) didn't provide motivation and recognition during oral health education.

All subjects (56%, 44%) have no knowledge about methods of teaching in health education. Furthermore, the majority (76% and 80%) of the nurses didn't evaluate patients' learning and teaching effectiveness, while about the same proportion (81.6%) of them were recorded patient teaching activities. Less than two thirds (60%) of them found difficulties in formulating questions which was the apparent barrier

in evaluation of oral health education while 36% and 56% of hem reported that there was no specific document for recording health education activities and also, there was no enough time for this recording.

Table 4: Percent distribution of subjects according to their difficulties in oral health education conduction, evaluation and documentation

Difficulties regarding oral health education conduction, evaluation & documentation.	No. N=125	%
Provide clarifications & examples for patient:		
- Yes	20	16
- No	102	81.6
- Don't know	3	2.4
Provide motivation & recognition for patient:		
- Yes	25	20
- No	10	8
- Don't know	90	72
Identify methods of teaching in health education:		
- Yes	0	0
- No	70	56
- Don't know	55	44
Evaluate patient learning:		
- Yes	10	8
- No	20	16
- Don't know	95	76
Evaluate teaching effectiveness:		
- Yes	17	13.6
- No	8	6.4
- Don't know	100	80
Recording health education activities:		
- Yes	102	81.6
- No	20	16
- Don't know	3	2.4
Barriers in evaluation of patient education:		
- Difficulty to prepare questions	75	60
- Lack of knowledge about evaluation tools	10	8
- Lack of references	15	12
- No time for evaluation	25	20
Barriers in recording of patient education:		
- No specific document for health teaching activities.	45	36
- Lack of knowledge about documentation	6	4.8
- Lack of rules to guide recording	4	3.2
- No time for documentation	70	56

c) *Patients' factors*

Respectively to patients factors that may perceived as oral health education barriers, in figure (1) clarifies that almost all (86.4 and 74.4) of nurses mentioned that health beliefs or thoughts and patients' level of education were the main factors that hindered oral health education, followed by patients' past experience, religion and language.

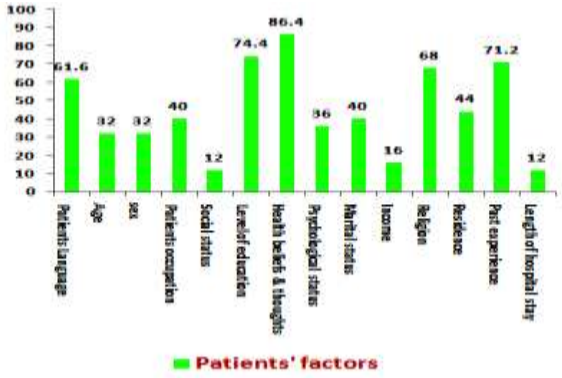

Figure 1: Distribution of the subjects according to their perception to patients' characteristics as health education barriers.

According to data in table 5, about two thirds (60%) of nurses complained that there was un-cooperation from patients and their families. Respectively proportions (48% and 36%) of subjects mentioned that gingival and psychological problems were the most common difficulties that hinder oral care health education, while, near two third of them (60.8%) stated that headache was apparent patients' complain that affect oral health education. Lack of patients' trust on a nurse as a source of information was the most common barrier related to patient and family as perceived by 52% of nurses.

Table 5: Distribution of subjects according to their perceived patients and families difficulties in oral care health education

Patients' difficulties that hinder oral care health education	No. N=125	%
Patient & family cooperation		
-Always	10	8
-Sometimes	15	12
-Rarely	25	20
-Never	75	60
Patient diseases as a barrier		
-Gingival diseases	60	48
-Face & jaw diseases	6	4.8
- Dental diseases	4	3.2
- Psychological problems	45	36
- Oral operations	10	8
- Medical diseases	10	8
Patients' complains:		
-Pain	13	10.4
-Vomiting	18	14.4
-Headache	76	60.8
-Abdominal Colic	8	6.4
-Bleeding	10	8
Barriers related to patient & family:		
- Lack of patient time	20	16
- Lack of patient trust on a nurse as a source of information	15	12
	65	52
-Lack of patient acceptance	12	9.6
- Poor health status	13	10.4
- Poor understanding		

d) *Health team and setting*

In relation to barriers with health team and setting, table 6 shows that, almost two thirds (64%) of subjects found that the health team was always cooperative, but (36% and 48%) of them mentioned that there was rare or no suitable place to conduct oral health education.

Table 6: Distribution of subjects according to their difficulties in oral care health education related to health team and setting.

Health Team & Setting Difficulties That Hinder Oral Health Education	No. N=125	%
Cooperation of health team:		
-Always	80	64
-Sometimes	10	8
-Rarely	10	8
-Never	25	20
Presence of a suitable place		
-Always	6	4.8
-Sometimes	4	3.2
-Rarely	45	36
-Never	60	48
Rules, routine & polices		
-Always	18	4.4
-Sometimes	89	71.2
-Rarely	8	6.4
-Never	10	8
Availability of resources for health education:		
-Yes	20	16
-No	102	81.6
-Don't know	3	2.4
Barriers related to health team & setting:		
-Lack of time	15	12
-Un-cooperation of health team	12	9.6
-Work overload	85	68
-Lack of facilities & resources	13	10.4

Respectively, approximately, more than three quarters (71.2%) of nurses complained that rules, routine and polices of the health setting considered barriers to implement oral care health education activities, and almost of them (81%) reported that there are no availability of resources for health education. The work overload in the unit was apparent barrier that reported by about two third (68%) of the nurses.

Table 7 reveals that there was no statistical significance difference between male and female subjects in relation to the all revealed barriers in oral care health education; T=0.826 & P=0.205 for barriers in conducting the process of health education, T = 0.774 & P= 0.44 for barriers in patients and their families, T = 0.273 & P=0.392 for barriers in health team and setting. Both sexes approximately, confront all types of barriers.

According to data in table 8, it was observed that there was a strong statistical significance difference between diploma, associate and bachelor degrees in favor of diploma nurses in relation to all revealed barriers. All barriers increased among diploma nurses (as mean values are increased) than bachelor and associate nurses in relation to the process of health education (F= 81.122), patient and family (F=76.25), and health team and setting (F=49.65).

Table 7: Nurses' difficulties in providing oral care health education in relation to their sex as presented by mean and stander deviation.

Nurses' difficulties in oral health education	Female (n=102)		Male (n=23)	
Conducting health education process	$\bar{X}$	SD	$\bar{X}$	SD
	3.48	3.37	2.85	3.29
	T = 0.826		P=0.205	
Patients & families	6.93	8.24	8.41	8.29
	T = 0.774		P=0.44	
Health team & setting	72.2	8.04	71.69	8.10
	T =0.273		P=0.392	

*Significant relation at P level < 0.05

Table 8: Nurses' difficulties in providing oral care health education in relation to their qualifications as presented by mean and standardd deviation.

Nurses' difficulties in oral health education	Diploma (n=85)		Associate (n=20)		Bachelor (n=20)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Conducting health education process	42.6	2.7	30.4	4.0	23.8	3.4
ANOVA=F	F= 81.122**		P value = 0.00			
Health team & setting	20.7	5.9	15.6	2.4	13.0	3.6
ANOVA=F	F = 76.25**		P value = 0.00			
Patients & families	26.0	8.2	18.5	5.8	13.5	5.9
ANOVA=F	F = 49.65**		P value = 0.00			

*Significant relation at P level < 0.05

As noticed in table 9 nurses ordered the perceived barriers as follows: the first and major difficulty is in relation to themselves (Mean = 6.84 and Median = 3.00) followed by barriers in patients and their families (Mean = 4.23 and Median = 2.00), then barriers regarding health team & health setting (Mean = 2.34 and Median = 1.00).

Table 9: Distribution of mean and standard deviation of the study subjects according to rank of barriers in oral health education.

Ranking of barriers	Mean ± Std. Deviation	Median (Min.-Max.)
nurses themselves barriers	6.84 ± 2.361	3.00 (1.00-10.00)
Patients & families' barriers	4.23 ± 1.773	2.00 (1.00-10.00)
Health team & health setting barriers	2.34 ± 1.828	1.00 (1.00-10.00)

*Significant relation at P level < 0.05

DISCUSSION

Health education is directed towards improving health literacy and people's capacity to manage their health problems. (Don Nutbeam 2006, Horowitz in 1995). Patients have the right to take decisions that may affect their health by attending health education sessions, where ensures the knowledge and skills related to their health. (Schou and Locker 1997)

Oral health education in particular calls for active action from the patient. The lack of understanding around oral health, negatively affects both oral and overall health. However, oral health education still not obtains its essential value among clients, professionals and community. (Shay and Ship in 1995, Abd El Mohsen A, 2009)

It is very important to announce that the dental health education requires a dental nurse specialist to obtain broad knowledge and skills related to health education activities and integrate it with different oral diseases. The current study was held to determine the barriers encountered by nurses while providing oral health education. Identifying these difficulties is a significant goal to overcome it and design suitable educational interventions for nurses.

The present findings for subjects' socio-demographic data revealed that the highest percentage of study subjects were in early twenties, females and have diploma degrees with 5-10 years of experience in oral health care. This characteristic clarifies that the majority of the subjects were young with limited qualifications and experience that may be an essential barrier among them in oral health education activities.

This is supported by the National examining board for dental nurses in 2008 that mentioned; extended clinical duties, years of experience, high qualifications and age for dental nurses to get further well career opportunities and manage dental work tasks. Providing training and qualifications prospects for dental nurses in oral health education is important to develop further knowledge and new skills in extended clinical duties. The dental health nurse has to be succeeded professionally and competent in addressing the different patient learning needs.

While assessing the need for oral health education, the majority of the study subjects complained that; they had no time to estimate patients learning needs and communicate health information. As well as, there was no specific person had a responsibility to provide oral care health education, didn't know how to take patient approval before teaching and they have limited or approximately no knowledge about health education assessment.

Congruency, with nurses' complains; oral health education is often neglected by health care providers; Lack of well-defined role expectations as well as lack of knowledge is frequently cited by nurses as difficulties to assess oral health needs. Nurses are in a unique position to contribute in the improvement of her/his knowledge, skills and attitudes. But this role is so far, ineffective; nurses have a loaded roles and condensed time to engage in health education activities. Therefore, a well-planned program for oral health education is encouraged for oral health care professionals as a part of total plan of patient care. The presence of a health education specialist is urgent. (Blevins JY 2011, Kay and Locker 1996, World Health Organization 2013, Daly, Watt, Batchelor and Treasure 2002).

Nurses complains are not consistent with the two-stage team approach to dental health education recommended by Daly, Watt, Batchelor and Treasure E T., in 2002, when they reported that dental professionals should be involved in assessing their clients' health education needs, and where appropriate, providing opportunistic advice and support. Oral health staff has an obligation to provide information about oral diseases and their prevention. Oral health education assessment is the cornerstone of whole health education activities and dental nurses must find time and trained him/her on how to assess patient learning needs especially in oral care, that mainly may managed by health teaching.

Almost all of subjects complained that they didn't know how to plan for oral health education or to write oral health educational objectives. They found difficulties to use language in dental health and there was no enough time to prepare the oral teaching content. Furthermore, they didn't know the types of or how to prepare educational audiovisuals. Consequently, it is an immense problem of limited knowledge and skills in oral and dental health education activities.

Valley in 2003 supported what perceived by the study subjects. He mentioned that the lack of time and poor preparation for patient education content was a frequent barrier for all nurses in all nursing fields. Also, poor educational preparation of nurses to be competent planners and teachers in health education is one result of poor quality of professional nursing practice. (Akbulut Y., Kurter E. 2007, Abd El Mohsen A, 2009). In the same aspect, Fathy A 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 nurses.

Contrarily, the dental profession has had a long-standing concern with the health education and promotion for oral diseases. It is essential that oral health promoters develop an improved understanding of oral health messages, planning for health promotion to effectively advance oral health and use evidence based practice in supportive media environment. (Kay EJ, Locker D in 1996, Schou L, Locker D in 1997)

Regarding implementation of oral health education, the majority of nurses reported that they didn't know how to provide clarifications, examples and motivation for patients. Exactly all of the nurses have no knowledge about methods of teaching in health education. Thus, the nurses have great hindering factors for conducting oral health education interventions.

This is in the line with the Department of Health and Human Services, Public Health Service Centers for Disease Control and Prevention in 2003 and Locker D in 1997 reported that; the performance of oral health education represents a unique opportunity for early prevention of both oral and general health problems. While, health professionals found it is difficult to stimulate the interest of patient by persuasion, teaching, tailoring the health message, and provide appropriate educational interventions especially in oral health field. Also, Abd El Mohsen in 2009 and Novello AC *et al.,* in 1992 stressed on that the inability to prepare, select, conduct the teaching activities and develop instructional aides for patient are considered a great barrier for transferring of health messages and require attention from nursing education. Health and education go hand in hand: one cannot exist without the other.

On the other hand, dental health educator has a responsibility to provide supportive environments with appropriate teaching, and practices to help patients and public in a form of explanations and examples, includes understanding of good oral hygiene and healthy eating behaviors; the importance of fluorides and fluoridation, dental sealants, accessing dental care on a regular basis; the impact of tobacco use on the mouth; risks of oral piercing; HPV and oral cancer; how tooth decay forms; and other oral health topics. (Fathy A., Bertness J, Holt K, 2013) Oral health education contributes to help patients in informed decision making about oral health.

For the evaluation and documentation of oral health education, almost all of the subjects stated that they didn't evaluate patients' learning and teaching. They found a difficulty in formulating questions regarding dental diseases. Also, they mentioned that there was no specific document or enough time for recording oral health education activities. It is clear that there is no specific system for evaluating or documenting oral health education activities in dental units which is a huge missing aspect in health care services.

Nurses' points of view is similar to Vazquez in 1995 and Bertness J, Holt K in 2013 who mentioned that the process of evaluation for patient learning is feared and misunderstood by many nurses. Mainly, the effectiveness of oral health education activities has seldom been evaluated. If the evaluation is carried out in a constructive and systematic way and results were taken into account, it can be a very useful mean of assessing achievements for real health improvement. Evaluation in oral health education is a valuable step since prevention is the key to control dental disease, that carries and periodontal disease are largely preventable through teaching personal lifelong healthy behaviors.

However, health educator has responsibilities for evaluating, charting patients' education outcome. Training on conducting evaluation and recording of patient oral health education are the core elements of dental nurse traits; she/he should identify weak and strength points of teaching activities and try to modify and follow up the patient awareness progress. For the reason that oral health problems can be managed and prevented by health teaching and personal self-management as discussed by Akbulut Y., Kurter E in 2007 and Bertness J, Holt K in 2013.

Respectively to the barriers regarding patients' characteristics as perceived by the study subjects at oral health care units, the majority of them mentioned that health beliefs or thoughts and patients' level of education were strong factors that hindered oral health education, followed by patients' past experience, religion and language. The alteration of attitudes, beliefs, education and language in order to promote oral health via is an extremely heterogeneous. Lack of routine dental care, Tooth decay dental pain, poor nutrition, and dysfunctional speech, as well as a lack of concentration, poor appearance, low self-esteem and patients' oral health practices may also, be a challenge for health educator to overcome these obstacles.

Health disparities are commonly associated with populations whose access oral health education services and compromised by poverty, low income level, limited education or language skills,

race/ethnicity, geographic isolation, religion, age, gender, disability, or an existing medical condition. Adults' education and lacking language skills or reading competence may be an obstacle for dental and oral education. Researchers continue seeing disparities in the burden of oral diseases and oral health teaching. For example, patients with low education and false health belief, have multiple oral health problems than whom with high education level. Challenges remain in eliminating inequalities in oral health field and receipt of preventive measures. (Department of Health and Human Services, Public Health Service Centers for Disease Control and Prevention 2003, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion 2011, Shay K, Ship JA 1995)

In relation to other hinders that faced nurses in oral health education related to the patient and family, they complained of un-cooperation from patients and their families for health communication. The most common patients' health problems that may hinder oral health teaching were; gingival inflammation, headache and psychological problems. Also, Lack of patients' trust on a nurse's information was another barrier.

Graziani C., Rosenthal M., Diamond J., in 1999 discussed that patients have several misperceptions, fears, culture diversity, false beliefs, inconsideration and unawareness about the value of health literacy. Hmud R. and Walsh in 2009, reported that fear of pain have been linked strongly to the development of dental anxiety and to avoidance of dental treatment. Even at extreme levels of oral clinical morbidity many patients still belief themselves to be in good oral health. While lacking of oral health knowledge, awareness of health education importance, costly dental health treatment and non-feasibility of oral education interventions in low and middle income countries, lead to numerous complications for oral health among individuals and communities. All these factors may be hider their cooperation and foster their misunderstanding in the field of oral health education.

Furthermore, each patient has a different capacity to learn, varying in dimensions of physical, emotional, and cognitive readiness. When patient suffers from acute symptoms as: pain, vomiting, gingival inflammation and gum sore or any other general complain, at this moment patient is not ready for learning. Accordingly, patients have many factors hindering his/her oral health education activities. (Awasthi SH, Bhandari M. 2006) Therefore, it is a challenge for dental nurses to use proper communication, build of effective nurse patient relationship, and persuade patient to gain information, skills and attitudes. It is the responsibility of health care system to ensure that the delivery of care is consistent with the patient's values and not a result of miscommunication or cultural stereotyping. (Volandes A., et al., 2008 Smith H., Pressman H. 2010, Freeman R., 2008)

Oral health staff themselves and health setting, also, can be a source of oral health education barriers. About all of the subjects reported that there was no suitable place to conduct health education. Work load and health setting routine and polices are common barriers to conduct oral health education activities. Health setting has a great role in promoting and enhancing oral health teaching among staff and in between patients.

In Egypt, there are many obstacles that impair the progression of professional nursing which in turn may inhibit goal acquisition of total care. These obstacles include: supply and demand for nurses, education level of nurses, long hours of work, poor working conditions, difficult routine and low wages. Egypt suffers from a harsh scarcity in the number of nurses in hospitals and public clinics. Hence, it is important to work across agencies and sectors to develop a range of complementary approaches. However, oral health units need to work in partnership with other professional bodies to ensure that the way of oral health education is delivered in a setting reaches a consistent standard. Also, it is essential to develop national occupational standards for oral health promotion (Rashdan T., 2007, Department of Health 2005). Moreover, Fathy in 2006 stressed that in health setting, there is no special or appropriate place for patient teaching and the unavailability of equipment, facilities and instructional aides to be used in patient teaching. As a result, the Department of Oral Health and dental care professionals rightly recognizes that oral health should be considered as part of general health, and that oral health education helps, but is not enough without preparation, plan, place, materials and cooperation.

When comparing between male and female subjects in relation to the encountered barriers in oral health education, there was no statistical significance difference between both genders regarding all revealed health education barriers. Gender differences in the nursing profession still need extensive research, especially in oral health care. Similar to this result, Ozdemir A., in 2008 reported that men choose to go into the nursing profession are parallel to those cited by women who go into the field: Male nurses started to understand themselves to go into a highly female profession. This point of view is supported by the current results, because male nurses faced the oral

care health education barriers, approximately as female nurses, even they are minimal number.

Contradictory to this view, the results of Freeman R., and Williams Mc.W, W in 2008, who concluded that differences in communication and working styles exist between male and female dental nursing students. The female compared with the male students felt a disadvantage when requesting and obtaining nursing assistance. Women nurse students found it harder to request nursing support, this suggested that gender acted indirectly as a factor in gaining chair-side advice. Therefore similarities and differences related to gender are vary and need more investigation.

Respectively, the level of nurses' education and qualification is considered as a vast factor to determine the oral health care barriers that face health professionals. As seen in the present results; the diploma nurses confront more barriers and difficulties than associate and bachelor degrees when comparing the three levels of nursing qualifications. So, oral health education training could be provided, both as part of the undergraduate curriculum and as part of continuing professional development for diploma nurses, to promote a better understanding of counseling skills and educative techniques in dental health education.

Supporting to this finding, Nurses should be educationally well prepared to be proper health educators. They have been challenged to become more competent to create and solve problems and dilemmas that arise during patient education process. (Smith H., Pressman H., 2010). A baccalaureate program is for an advanced degree and offers more breadth and depth of study in nursing. A diploma or associate's degree often work in the field for a period of time, and then return to school to acquire a baccalaureate nursing degree to enhance their skills. Baccalaureate programs offer more advanced education in areas that support critical thinking, clinical reasoning, and analytical skills; prepare nurses for a broader scope of practice; further professional development; and facilitate understanding of complex issues affecting healthcare delivery. (National Advisory Council of Nurse Education and Practice 2010, Abd El Mohsen A., 2009)

Finally, the study subjects ranked the difficulties in conducting the oral health education process as: the first and major problem encountered them, is lacking of their knowledge and skills in health education field which is expected findings because a high proportion of nurses had inadequate knowledge about oral health, particularly in the domain of the 'indicators of a healthy mouth' and in preparing or conducting oral health messages. This in line with Milde and Heim in 1991 who reported that nurses perceived themselves as inadequately prepared to provide health education and the nursing administrators perceive undergraduate nursing students at a lower competency level in this aspect. In addition, Levin in 2006 and Kay EJ, Locker D in 1996, mentioned that dental nurses faced several problems and barriers in oral health education related to a serious lacking in knowledge and practicing health education activities. The emphasis throughout is on the advice available to the dental team on how to teach patients to change their behavior, rather than on shifts in the scientific basis of the content of that advice.

CONCLUSION

Oral diseases are major health concern affecting almost every person in the world. Most oral diseases are preventable by oral health education which can then reduce pain, suffering, and health care expenses. The current study reveals that, a high proportion of nurses in oral health care units confront a multiple difficulties related to themselves in assessment, planning, implementation, evaluation and documentation of oral health education activities, some barriers caused by patient and family and other arises from health setting. These barriers mainly encountered diploma nurses than associate or baccalaureate ones.

Recommendations and further studies

Nurses as health educators, must facilitate the educational process for patient, family and society. Experienced dental nurses are in demand for a wide range of job opportunities, creativity and critical thinking skills to make decisions in their work and should be competent in oral health education activities. Efforts are needed because oral diseases still affect all dimensions of people life. Collaboration and cooperation between oral health and other disciplines is an urgent issue. Furthermore, a strategic plan for oral health education training must be established to be used among nurses. The present study provided a view of further studies:

- Replication of the current study with dental patients themselves to identify the difficulties from their perspectives.
- Develop an oral health education strategic plan for nurses to help them; managing any obstacles may face them in health education.
- Use health education models as a guide for training nurses in oral health education.
- Survey for all oral health clinical areas in Egypt to determine the resources and facilities for oral health education.

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