

# A Need Assessment Study for Module on Medical Emergency in Syrian Dental Schools

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## ABSTRACT

It is often said that the quickest way to assess students learning is to use the questionnaire system, suggesting that questionnaire might be potent in its effect on students in Syrian dental schools. The principal aim of the study was to assess the need for developing a module on Medical Emergency in Syrian dental schools for undergraduate students. Need assessment study design was used for the study where undergraduate students within Syrian dental schools were targeted. Credible questionnaire was adopted for need assessment and a total of 100 undergraduate dental students were sampled to serve as respondents, then the questionnaire was complemented with dental experts in medical emergency. Findings revealed that need assessment using credible questionnaire was a significant predictor developing a module on medical emergency among Syrian dental schools. The conclusion of this study is to develop a consensus on 10 items to be included in the curriculum for training the undergraduate dental students in medical emergency in Syrian dental schools.

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## 1. Introduction

Medical educators have a professional and ethical obligation to assess the needs for developing curriculum to meet the needs of their learners and society [1]. The questionnaire technique such as Delphi technique has been used in many health researches within the fields of medical education [2] and in developing clinical practice [11].

[12]. All of them support the linking between medical education and community needs and they proposed a 6-step approach to develop curriculum for medical education.

A needs assessment is really recommended to develop any curriculum in educational process [13]. It is the process of assessing the students perspective to determine the gaps between current curriculum and the required one [14]. Therefore, needs assessment throughout the curriculum development process can help benefits both the students, teachers and the patients [15]. Development of Health care education in medical fields is very important to improve quality of life. In medical emergency, it is recommended for dentists and dental academic staff to cooperate with medical organizations such as Red Cross and Red Crescent who are

responsible for emergency management [9]. Dentists have a professional and ethical obligation to Conduct a deep medical history and stabilizing the patient's medical condition to prevent many medical emergency issues [9]. There is lack of any standardized medical emergency module [9] in Syrian dental schools' curriculum. Therefore, a need is felt to develop the curriculum in Syrian dental schools for training undergraduate students in medical emergency. Therefore, Need assessment can also be described as a systematic process to obtain a thorough picture of the strengths and weaknesses of a student community that can be used for academic needs of all undergraduate students in Syrian dental schools to improve student achievement and meet academic aims and objectives [9]. Emergencies will occur in spite of all efforts at prevention [9]. Hence, the goal of this study was to conduct the educational need assessment amongst the undergraduate dental students and dental experts, in order to design a module on medical emergency for dentists. Therefore, the specific goals were as following:

1. To assess the views of dental experts on the educational needs in medical emergency in Syrian dental schools.
2. To identify those medical emergency topics in the field of dentistry that should be included in the new module for undergraduate dental students

## **2. Methods**

In this study, Need assessment was done by recruiting the credible questionnaire, after obtaining permission from the dean commission in Syrian dental schools. The included items need to obtain a consensus from dental experts. Undergraduate dental students in Syrian dental schools were asked to describe their satisfaction level in the current curriculum related to medical emergency concepts. Representatives from senior year (fifth year) dental students were invited to participate in this study. the participants were asked to determine their satisfaction of each item related to medical emergency concepts in the current curriculum. The scale about students' satisfaction toward the curriculum was divided into five choices (strongly dissatisfied, dissatisfied, fair, satisfied, strongly satisfied) and the students have to select one of these choices to describe their satisfaction toward the current curriculum related to medical emergencies concepts in their dental school. An assessment of similar curricula of medical emergency module in other country was also done after literature search to support the designing of the questionnaire. two questionnaires were used in this study project. The first questionnaire was personally handed over to 100 participants which included senior year under graduate dental students in Syrian dental schools [5]. A brief discussion before starting the questionnaire. Then any clarification regarding any question was also done. Based on the review of literature and few existing curricula [5], a total of ten items about medical emergency in dentistry were identified and included in the questionnaire for senior-year undergraduate dental students in Syrian dental school who completed all curriculum subjects that contain medical emergency concepts. The questionnaire was validated in a pilot study among five undergraduate dental students and certain modifications were done. The second questionnaire was distributed to six experts in the subject of medical emergencies, with considerable experience in the field of dentistry were approached over the e-mail to participate in the process of developing a module on medical emergency. The work experience of these dental experts ranged from 5 years to 24 years. The same 10 items were used in the second questionnaire but the questions here are concentrated about determining the importance of each item to be included in the new module on medical emergency in Syrian dental schools. Dental experts feedback regarding need of curriculum for new medical emergency module were taken. All the data collected were analyzed in the view of the objectives of the study by using spss v. 21.0.0.0.

## **3. Results**

A total of 150 of senior year under graduate dental students in Syrian dental schools were invited to participate in the first questionnaire, out of which 100 gave their consent to participate. All of participants

have completed their courses about medical emergency in their dental school. The questions in the questionnaire focused on satisfaction toward the current curriculum related to medical emergencies concepts in Syrian dental schools. There was majority in participants who were fair toward 5 topics in the curriculum about medical emergency concepts in Syrian dental schools as seen in (table 2). There was majority in participants who were dissatisfied toward other 5 topics in the curriculum about medical emergency concepts in Syrian dental schools as seen in (table 2). Majority (35) of strongly dissatisfied responses were concentrated on one topic which was about management of paediatric emergencies in dental practice as seen in (table 2). Majority (3) of strongly satisfied responses were concentrated on one topic which was about Principle of first aids in dental practice as seen in (table 2). Table 1 shows Rating of topics in medical emergency during by dental experts for under graduation level in Syrian dental school. Dental experts agreed that the all suggested topics of medical emergency module which were suggested should be included in the curriculum in Syrian dental schools. nine topics out ten were selected as extremely important topics according to dental experts' responses to be included in new medical emergency module as seen in (table 1). All topics were selected as important topics according to the dental experts' responses to be included in new medical emergency module as seen in (table 1). two topics out of ten were selected as moderately important topics according to dental experts' responses to be included in new medical emergency module as seen in (table 1). No topics were selected as not important or slightly important topics according to the dental experts' responses. two experts suggested that medical emergency module shall be distributed throughout five years during the period of under graduation level, four suggested that it shall be of last three years before graduation. Therefore, the experts' opinion emphasized the need of a medical emergency module for the undergraduate dental students in Syrian dental schools with a well-developed curriculum depending on the topics which were suggested in this study.

**Table 1.** Rating of topics in medical emergency by dental experts for under graduation level in Syrian dental school.

Grade categories	not important	slightly important	moderately important	important	extremely important
Number of students	6 (5.7%)	54 (51.4%)	40 (38%)	5 (4.8%)	0 (0%)
Medical emergency drugs in the 3rd year	0	0	2	4	0
The emergency kit and resuscitation equipment in the 3rd year	0	0	0	2	4
Management of medical emergencies and resuscitation in the 3rd year	0	0	0	3	3
Management of respiratory disorders in dental practice in the 4th year	0	0	0	1	5
Management of cardiovascular disorders in dental practice in the 4th year	0	0	0	2	4
Management of endocrine disorders in dental practice in the 4th year	0	0	0	3	3
Management of paediatric emergencies in dental practice in the 5th year	0	0	0	1	5

Management of neurological disorders in dental practice in the 5th year	0	0	0	2	4
Management of anaphylaxis in dental practice in the 5th year	0	0	0	3	3
Principle of first aids in dental practice in the 5th year	0	0	2	3	1

**Table 2.** Rating of topics in medical emergency by dental students in Syrian dental schools.

Students' satisfaction	Strongly dissatisfied	Dissatisfied	fair	Satisfied	Strongly satisfied
Number of students	5 (4.9%)	14 (13.3%)	41 (39%)	37 (35.2%)	8 (7.6%)
Medical emergency drugs	0	15	45	38	2
The emergency kit and resuscitation equipment	5	30	48	17	0
Management of medical emergencies and resuscitation	8	34	42	16	0
Management of respiratory disorders in dental practice	22	43	35	0	0
Management of cardiovascular disorders in dental practice	23	35	42	0	0
Management of endocrine disorders in dental practice	15	50	35	0	0
Management of paediatric emergencies in dental practice	35	65	0	0	0
Management of neurological disorders in dental practice	20	42	38	0	0
Management of anaphylaxis in dental practice	25	60	15	0	0
Principle of first aids in dental practice	0	20	40	37	3

#### 4. Discussion

This study had a hypothesis that sought to explore whether assessment of dental curriculum can statistically predict the need for developing a new module on medical emergency in Syrian dental schools. Findings of this study revealed that assessment of dental curriculum was a significant predictor of the need for developing a module on medical emergency in Syrian dental schools.

Two questionnaire were used to collect the participants' answers and these type of questionnaire are more objective type [10] to assess knowledge.

The topics of suggested new module in this study were selected by the author after literature search in medical emergency training modules and recommendation by following medical emergency principle that mentioned in standard references [3], [4]. The skill of patient management in medical emergency situation is an important task that dentists must perform in dental practice. We believe that developing medical curriculum should be approached and based on standard approaches such as Harden's 10 step approach and Kern's 6-step approach towards curriculum development for medical education [6], [7]. There was a limitation because our study was only applied on dental students in Syrian dental schools so it is difficult to apply our results on non-dental student [8]. The score of fair choice and satisfied choice in students' satisfaction questionnaire was very close in Medical emergency drugs concepts and Principle of first aids in dental practice, but that is not means there no need of to develop these topics in the curriculum in Syrian dental schools. There are three topics which were selected with same score between choice important and choice extremely important as seen in table 1 so maybe we need to ask the dental experts who participated in this study to participate in another questionnaire to distinguish the difference between these topics about how much they are important to be developed in the curriculum.

## 5. Conclusion

Medical emergency is an important issue in the field of dentistry. To the author's knowledge, this is the first study done to assess the need of curriculum for training medical emergency in dentistry in Syrian dental school. The study results indicate that there is a definite gap in knowledge about medical emergency in dentistry amongst the dental students in Syrian dental schools. The majority of dental students themselves feel that they are not satisfied toward their current curriculum about medical emergency concepts in Syrian dental schools and they strongly feel a need for a well-structured training module on medical emergency in dentistry. Even the dental experts strongly agree that a curriculum must be developed for teaching module in medical emergency in Syrian dental schools. Introduction of a new module on Medical emergency at under graduate level shall ensure that dental students will be ready enough in an efficient way to improve the accuracy and reliability of medical emergency diagnosis, treatment planning and achieve educational outcomes.

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