

Healthcare Professionals' Views about Web- Based Module for Training on Evidence-Based Practice



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1. ABSTRACT

Evidence-Based Practice (EBP) is recognized as an essential competency for healthcare professional. Achieving competency in this area is a complex undertaking that is reflected in disparities between 'best EBP' and actual clinical care. The effective development and implementation of professional education to facilitate EBP remains a major and immediate challenge. Therefore, healthcare professionals (HCP) must become expert resources for patient. The study aimed to assess views of healthcare professionals toward designing web- based module for teaching evidence-based practice. **Methodology:** A phenomenological study design was used through focus group discussions using a semi-structured interview guide. Thematic content analysis was carried out following coding and analyzing content. Recurrent, emerging and diverging views were identified and represented under themes. All discussions were recorded and transcribed verbatim. **Results:** Focus groups were conducted with HCP. Two main themes and eight subthemes were identified. Participants expressed their views about EBP approach components and made suggestions for EBP module design. The study revealed that most of participants are interested in obtaining knowledge about the concept and steps of EBP. **Conclusion:** This study concluded that; healthcare professionals prefer clear, and interactive web- based education.

Recommendation: the researcher recommended to interactive educational methods is recommended for web- based education on EBP.

Keywords: Evidence-based practice; Health care professionals; Views; focus group; qualitative studies.

2. Introduction:

Evidence-based practice (EBP) is important approach in the health care field. It provides a scientific framework that ensure the effectiveness and quality of healthcare services. This framework approach involves current evidence, patient values, and professional expertise for informed clinical decisions. (Hsieh, P. L., & Chen, S. H., 2020, Gresham-Anderson, J. L., Williamson, K. M., & Ayinagadda, S., 2020). Healthcare professionals (HCP) are responsible for providing evidence- based preventive, therapeutic, and rehabilitative healthcare services. In addition to their role as clinical researchers (World Health Organization., 2017, Sinha, A. G. K., 2019). Therefore, they should be aware about the principles and process of EBP (Melnyk, B. M. ,2017).

However there several individual and organizational barriers that hinder the implementation of EBP approach. Among these factors lack of EBP knowledge, and overwhelmed workload among HCP and

academic staff members. In addition to other factors such as lack of resources, lack of authority to change practice and workplace culture resistant to change (Ubbink, D. T., Guyatt, G. H., & Vermeulen, H., 2013; Sadeghi-Bazargani H, Tabrizi JS, Azami-Aghdash S., 2014; Williams B, Perillo S, Brown T., 2015, Samy, E., Ahmed, A. I., & El-Mouty, S. M. A., 2019).

Although many teaching strategies have been used and evaluated, a lack of EBP competency is still one of the most reported barriers to practicing EBP (Sadeghi - Bazargani, H., Tabrizi, J. S., & Azami - Aghdash, S., 2014; Zwolsman, S., te Pas, E., Hooft, L., Wieringa-de Waard, M., & van Dijk, N., 2012).

Traditional face-to-face approaches to health professional education are being challenged due to increased clinical demands and decreased available time. These barriers can be addressed through the use of e-learning which can be completed at any time

convenient to the user (Kyriakoulis, K., et al., 2016; Bond, S. E., et al, 2018; Larsen, C. A. M. F., & Kristensen, H. K., M., Terkelsen, A. S., Carlsen, 2019).

Web-based training is effective choice to overcome the workload and time barriers of the other training strategies in Egyptian healthcare settings, as it provides time tailored frame with lower cost (Ameen, N., Soliman, S., Ahmed, A., & Hussien, M., 2019). Web-based education permit learners to access and take information at any time and from any location according to their personal circumstances (Lee, 2017). The effective educational strategy should be established in accordance with end users' views and preferences.

Aim of the Study

To assess views of healthcare professionals toward designing web-based module for teaching evidence-based practice.

3. Method

3.1 Design

The study is a phenomenological study that aims at exploring the views and preferences of healthcare professionals in relation to criteria of a web-based module for teaching evidence-based practice approach.

3.2 Setting

The study was carried out at World Wide Web (WWW) for globalization.

3.3 Participants

Healthcare professionals who have at least Bachelor's degree namely, nurses, doctors, pharmacist, and dentists were invited to participate in the study and having an internet access at any time of the day and skillful in using it.

3.4 Sampling technique and sample size

Purposive sampling technique was used in this study. The study included 60 healthcare professionals, and the sample size of participants depended on the principles of conducting focus group discussion (FGD). Five focus group were conducted, each FGD included 8- 12 participants according to Dti, 2016.

3.5 Procedure

Data Collection:

Data was collected through conducting FGD sessions by using guide that included questions about demographic and occupational characteristics of the healthcare professionals to obtain data about age, gender, educational qualification, and occupation.

The guide included semistructured interview that consisted of 7 open ended questions regarding the healthcare professionals' views and preferences about the content and component of the evidence-based practice (EBP) module, as well as the illustration method on the web.

The developed FGD guide was tested for its content validity by a jury committee that involves five experts in the field of education and EBP. Face validity of data collection guide was tested by conducting pilot study on one FGD that included 6 healthcare professionals (10%) of study sample that were excluded from the study sample. The semi structured interview was tested for its rigors and keeping on the principals of developing and conducting semi structured interview.

The researcher initiated FGD during the period from July 2021 to end of October 2021. Research sent invitation for target group through emails after introducing herself and gave a brief explanation about the objective of the study. The FGDs were conducted at the training room in healthcare organization according to healthcare professional's schedule. Each focus group consumed 20- 30 minutes.

3.6 Data analysis:

- Descriptive statistical analysis was used for the demographic and occupational data by using Stand for Statistical Product and Service Solutions (SPSS) program version 20.
- Qualitative data was analyzed by thematic analysis was used to illustrate the collected data. The interview transcripts were analyzed to conclude the common themes,

similarities, and/or variations among the participants' knowledge and/or views. Data were coded, identified under categories and subcategories, and organized together under common themes. To ensure the validity of the thematic analysis, the researchers met four times to review the findings to clarify the analysis in relation to the emerging categories and themes (Alhojailan, M.,I., 2012).

3.7 Ethical consideration. The researcher obtained the ethical approval from research ethics committee of faculty of nursing, Mansoura university and obtained verbal consent from the participants. The researcher assured participants that their participation in the study was voluntary. They informed that the collected data will be treated anonymously, confidentially and used for the purpose of the study.

4. Results

Table (1) represents the demographic and occupational characteristics of the healthcare professional. Regarding age, it was noticed that 58.33% of them were ≥ 30 years with a mean age 30.80 (3.52) years. All of them were female and had bachelor's degree. Study found that 78.33% of participants were head nurses and 83.44% of them did not attend any EBP training program.

The views of the study participants related to EBP module are illustrated in two main themes (Diagram 1).

1. Views about the components of web- based module:

Learning objectives and content

The majority of the participants (n=53) said that it is important to find clear objectives of the module during browsing the website. "...I think while browsing the site, I want to find the educational objectives of this module", "the objectives would tell me about the definition of EBP, benefits of using it while providing healthcare, and how to get the best evidence..." (FG2), (FG3), (FG4). More than half of participant (n=35) mentioned that the learning objectives is very important because they illustrate the general idea about the importance of the entire content.

Moreover, important points should be highlighted so that readers can readily identify pertinent information. "...We will only read the content if author displays the objectives of the topic at the beginning and ask us to read so, we will know the importance of reading this content ...". (FG1), "...while I read any post, I always search for important information with highlight or different color of text that attract me or give me alarm that's important text ...". (FG1).

Most of participants are interested in obtaining knowledge about the concept and steps of EBP.

Educational and evaluation strategies Interaction

All participant mentioned that the web-based module should include various interactive educational methods. They expect that module will permit discussion and interactions with peers and tutor.

..." I preferred to type my comment at comment bar within the sites and then the author can enter latter to see or checked for their comments..." (FG2), "... I preferred to use chatting within e-mail, and while you received it by e-mail or zoom chatting, we can discuss it later..." (FG5)

2. Views about the design of the web- based module:

Illustration and background

Illustrations should be used to improve understanding of essential information. The majority of participants (n=57) were interested in illustrating content in simple attractive figures, tables and diagrams. They found that this illustration methods will facilitate topic understanding. "...Try to make the drawings, illustrations, and tables simple, don't be too complicated, sometimes if the content is too long will make me "headache, confused, boring..." (FG2), "...In my view, I preferred to put illustrations on every page, if possible..." (FG5)

Language, layout, and typography:

Regarding written content participants preferred using English language, listing content in bullets rather than paragraphs. "...The first sight attracts me to enter and

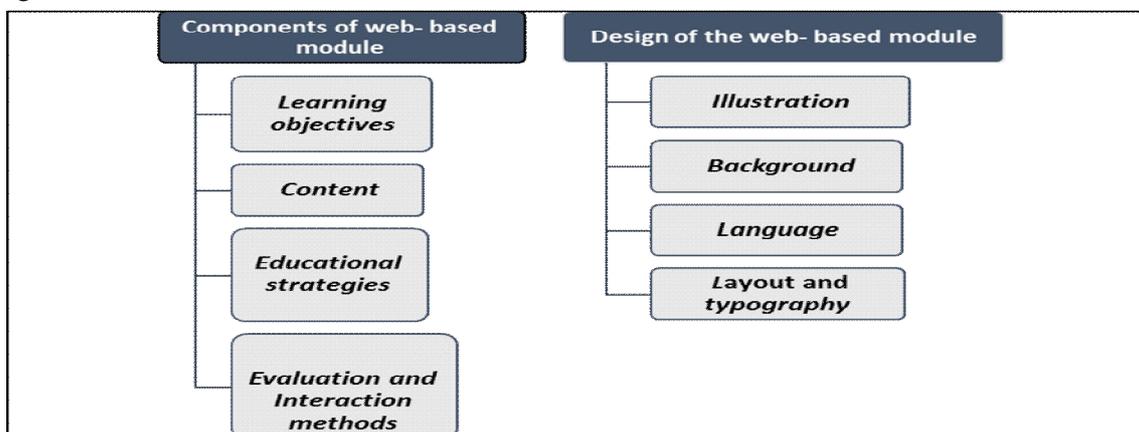
complete reading at any site is the language, so try to make the written content within a simple and concise manner...”. (FG3), (FG4), (FG5), “...I preferred to do not put too many points on a page, maximum five points is enough...”. (FG1), (FG2), “...I do not like long paragraphs which would discourage for reading further...”. (FG3), (FG4), (FG6).

Other participants recommended short sentences and paragraph to facilitate comprehension of the content. “...In my opinion wordy and lengthy poster always stop people from reading, people feel bored...”. (FG3), “...long sentences make us feel confused...”. (FG6)

Table 1 Healthcare professional’s demographic and occupational characteristics (n=60)

Item	N	%
Age		
< 30 years	25	41.66
≥ 30 years	35	58.33
Mean (SD)	30.80 (3.52)	
Sex		
Female	60	100
Educational Qualification		
Bachelor	60	100
Occupation		
Nurse	47	78.33
Pharmacist	10	16.66
Dentist	3	5
Attended prior EBP training		
None	50	83.44
Once	10	16.66

Diagram 1.



5. Discussion

Despite positive attitudes towards EBP and a predominant recognition of its necessity for the delivery of quality and safe healthcare, its consistent translation at the point of care remains elusive. (Lehane, E., et al., 2019). Education web-based module programmes and associated curricula act as a key medium for shaping healthcare professional knowledge,

skills, and attitudes, and therefore play an essential role in determining the quality of care provided (Young, T., Rohwer, A., Volmink, J., & Clarke, M., 2014). The present study was eager to explore the views of HCP about the design of a web-based module for teaching EBP to ensure their acceptance for such educational strategy.

The current study revealed that majority

of studied participants aged ≥ 30 years with a mean age 30.80 (3.52) years, it was found that 78.33% were head nurses.

Related to attendance of a training program on EBP. It was also noted that 83.44% of them did not attend any EBP training program. This finding could be explained due to workload, lack of time, and lack of the *financial* resources among HCPs. This result is in line with studies that reported that the majority of the participants did not attend any training on EBP (Karki, S., et al., 2015).

Concerning to components of the web-based EBP educational module, the participants of the present study were concerning with the importance illustrating learning objectives of the module as well as presenting a concise clear idea about the basics of EBP approach. stated. They also considered interactive educational strategies as important part of the web- based module. Previous studies reported the same views about the components of educational interventions. These studies emphasized on the importance of delivering fundamental process of EBP by using participatory learning approach (Olson, C. A., & Bakken, L. L., 2013; Welch, C. E., et al., 2014).

On consensus manner with other researches, the present study agreed on a rigorous and up to the point illustration of web- based module facilitating understanding of the presented content. Using of visual illustration such as the diagrams that are used mind maps, using of and bullets, were recommended (Lau, X. C., et al., 2019). and simple language

The participants reported that the use of bullet points is the best way for written education material, also using mind map forms. This finding is in agreement with the previous studies which showed using the bullet is the effective way for organization. (Lau, X. C., et al., 2019.; Ahmed, A. I., & Mohamed, R. A., 2019).

Participants of the present study reported that careful and good design of educational materials can help readers to

understand easily. This finding is in agreement with the previous studies which showed consideration of educational framework. (Phillips, A. C., et al., 2014).

6. Conclusion

The study concluded that: healthcare professionals prefer clear, and interactive web-based education.

7. Recommendations

Based on the findings of the study the following recommendations are concluded:

1. A web- based module for teaching evidence- based practice included the important information of EBP
2. Interactive educational methods are recommended for web- based education on EBP.

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