

Assessment of pharmacists' perception toward continuing education

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ABSTRACT

Continuing education (CE) is a structured educational activity. Pharmacists must actively participate in CE and is an important part of developing the professional competency of pharmacists. This research focuses on measuring Saudi pharmacists' perception in CE, its impact on professional performance, and the barriers in CE. This was a cross-sectional study, conducted in 2020, using random sample of Saudi pharmacists working in all workplaces from different cities in Saudi Arabia using a questionnaire. The questionnaire consists of 15 questions that assess the perception of Saudi pharmacists toward CE and barriers that prevent them from CE. A total of 409 pharmacists participated in the study. Majority of pharmacists were working in government hospitals (48.4%) and have <2 years of practice experience (44.5%). More than 70% of respondents acknowledged that CE helps to increase their knowledge. The pharmacists mentioned that getting a certificate (23.37%) was the major reason for attending a CE event. The reasons that prevent respondents from attending live CE were cost and work responsibilities (23.59% and 24.57%, respectively). This study reported a subjective assessment of pharmacists' perception toward CE, their lifelong learning experience. Saudi pharmacists showed a great desire for CE because they believed that it greatly affects their professional performance.

Key words: Barrier, performance, pharmacists, Saudi

INTRODUCTION

Continuing education (CE) is a structured educational activity. Pharmacists must actively participate in CE and is an important part of developing the professional competency of pharmacists.^[1,2] CE is the main factor that portrays the pharmacists' learning after their educational qualification. Pharmacists should be aware of any updates

related to the practice of pharmacy. The knowledge which they gain as a student changes continuously. Updated guidelines and updated treatment protocols published confirm the importance of CE. Staying up-to-date with the information which influences the practice of pharmacy is of utmost importance.^[3,4]

CE is an important requirement of pharmacist licensing and improves professional competency.^[5] As per the Accreditation Council for Pharmacy Education, the definition of continuing pharmacy education is "educational activity designed to increase and maintain the competence of pharmacist or/and pharmacy technicians."^[6] Globally, CE is a leading approach to improve and strengthen the

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professional competencies of the existing health workforce.^[7] CE is a life-long learning process. Easily accessible activities are expected from the learner, which prioritize clinically relevant problem solving and facilitate knowledge synthesis.^[8] The prevalence of patient safety issues increases the interest in CE of pharmacists, and recently there is a positive relationship between participation in continuous education and relative self-motivation.^[9] Some pharmacists have a perception that CE event consumes most of their time.^[6] Motivation plays a role both as a barrier (lack of motivation) and a facilitator (will to learn).^[9] Poor performances of health-care professionals may be caused by insufficient professional development. Therefore, CE is needed to secure good and safe quality health care.^[10] CE is important throughout the life of a pharmacist, to update their knowledge and skills. In this lifelong learning activity, the quality of the pharmacists should be developed to maintain their professional competency.^[11]

Pharmacy profession is constantly changing and its complexity is increased. As new technologies are emerging, pharmacists must have the ability to apply these technologies in patient care.^[12] Emerging technologies and the shift of pharmacist's profession from product to patient portrays the importance of CE. To meet the emerging technologies, pharmacists should be updated throughout their career and should maintain their knowledge and competency.^[13]

Different types of CE activities include learning in-person and distance learning such as online learning through webinars.^[14] Still, which media methods in CE programs provide the best effective educational approach remains unclear. "Media method" refers to the method by which the CE activity is delivered.^[15] Any education activity that a pharmacist participates in should increase their competency to apply their knowledge into practice for the benefit of the patients.^[16]

CE ensures that the learning process is recorded or documented and it has a main focus on pharmacists' participation in training and education activities. Each CE activities have certain hours recorded.^[17] In Saudi Arabia, CE is mandatory for a pharmacist in getting their license. The credit hours will be calculated from their CE activities. Furthermore, these credit hours are required for renewing their license. However, this compulsion of CE credits may lead to a passive learning and would not guarantee an active learning. Pharmacists would not perceive the value of CE programs when there is no program evaluation. Furthermore, barriers such as lack of time would prevent pharmacists from attending CE.^[18]

To the best of our knowledge, there are no published literatures regarding pharmacists' attitudes toward CE in Saudi Arabia. Previously published literature has not assessed pharmacists' perception toward CE, their preferences, and the barriers that prevent them from

attending CE, in Saudi. Hence, this study was undertaken to measure the Saudi pharmacists' perception in CE, its impact on professional performance, and the barriers in CE.

MATERIALS AND METHODS

This was a cross-sectional study, conducted in 2020, using a random sample of Saudi pharmacists working at different places from different cities in Saudi Arabia. Ethical approval was obtained from the Administration of Academic Affairs and Training in Tabuk city (TU-077/020/045). An 8-min self-administered electronic questionnaire, developed by the researchers based on literature review, was used to achieve the objective of the study, after getting their consent.^[11] The questionnaire consists of 15 questions, first three questions were about demographic data, the next four questions about the preference of pharmacists toward value and interests of CE and its effect on practice and knowledge, and the rest of questions measure the reasons that encourage or prevent the pharmacists from attending the CE events. The last part of the questionnaire mainly assesses the desire of Saudi pharmacists toward CE. The data were expressed as mean and standard deviation and as percentage. Data were analyzed using SPSS Armonk, NY: IBM Corp. database version 24. ANOVA, *t*-test, and Pearson correlation were used for inferential analysis.

RESULTS

This study was conducted to find out the perception of Saudi pharmacists toward CE. A total of 409 pharmacists participated in the study. Among this, 54.3% of respondents were male, whereas 45.7% were female. Majority of pharmacists were working in government hospitals (48.4%) and have <2 years of practice experience (44.5%).

Table 1 depicts the perception of pharmacists toward CE where almost 50% of the respondents agreed that their employers show more interest regarding their CE participation. The pharmacists had high perception toward knowledge acquired from CE (mean = 4.28 out of 5).

The pharmacists' level of satisfaction toward different CE activities is shown in Table 2. Almost half of the participants tend to agree toward the suitability of CE activities. However, the mean scores showed that respondents had high perception toward interactive workshops (mean = 3.83 out of 5).

The reasons for attending CE events are shown in Figure 1. The pharmacists mentioned that getting a certificate (23.37%) was the major reason for attending a CE event.

The type of CE the respondents used in the past and preferred in future is depicted in Table 3. Majority used the live in-Person (30.15%). In response to CE preferred in

Table 1: Pharmacists' perception toward continuing education (n=409)

Pharmacist's perception	Count (%)					Mean	SD
	DS	D	N	A	AS		
The value of the employer places on his participation in continuing education	21 (5.1)	34 (8.3)	147 (35.9)	108 (26.4)	99 (24.2)	3.56	1.099
Your interest in/value of continuing education	11 (2.7)	26 (6.4)	70 (17.1)	143 (35.0)	159 (38.9)	4.01	1.029
Continuing education affects the way you practice	13 (3.2)	38 (9.3)	85 (20.8)	136 (33.3)	137 (33.5)	3.85	1.086
Continuing education helps increase your knowledge	14 (3.4)	14 (3.4)	46 (11.2)	106 (25.9)	229 (56.0)	4.28	1.022

DS: Strongly disagree, D: Disagree, N: Neutral, A: Agree, AS: Strongly agree, C: Count, SD: Standard deviation

Table 2: Pharmacists' level of satisfaction toward continuing education activities (n=409)

Types of CE	Count (%)					Mean	SD
	DS	D	N	A	AS		
Live in-person	17 (4.2)	28 (6.8)	139 (34.0)	140 (34.2)	85 (20.8)	3.61	1.021
Computer/Internet based (online)	18 (4.4)	24 (5.9)	118 (28.9)	148 (36.2)	101 (24.7)	3.71	1.041
Interactive workshop	12 (2.9)	22 (5.4)	102 (24.9)	159 (38.9)	114 (27.9)	3.83	0.991
Medical search engines	18 (4.4)	22 (5.4)	140 (34.2)	146 (35.7)	83 (20.3)	3.62	1.008

DS: Strongly disagree, D: Disagree, N: Neutral, A: Agree, AS: Strongly agree, C: Count, SD: Standard deviation, CE: Continuing education

Table 3: Comparison of type of continuing education used in the past (n=680) and preferred in the future (n=687)

Types of CE	Count (%)	
	Type of CE used in the past	Type of CE preferred in the future
Live in-person	205 (30.15)	190 (27.66)
Computer/Internet based	153 (22.5)	206 (29.99)
Interactive workshop	138 (20.29)	143 (20.82)
Medical search engines	184 (27.06)	148 (21.54)

CE: Continuing education

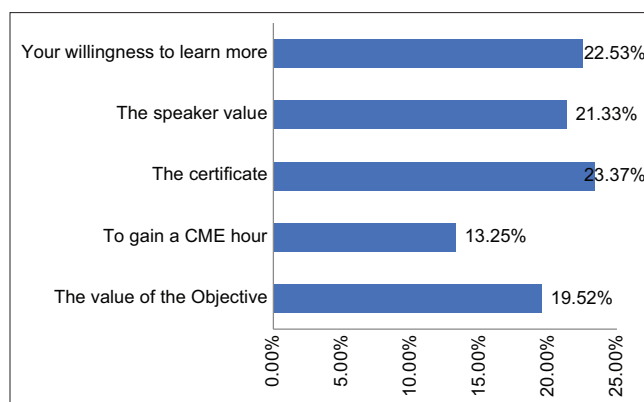
the future, 29.99% of pharmacists prefer to use computer/Internet-based CE.

The reasons that prevent (or has prevented) respondents from attending live CE include cost and work responsibilities (23.59% and 24.57%, respectively), followed by distance travel and interest of topics (16.5% and 15.16%, respectively).

DISCUSSION

This study showed the perception of Saudi pharmacists toward CE, the type they preferred, and the barriers that prevent them from taking these activities. This study reported the positive perception of Saudi pharmacists toward CE. Computer/Internet-based and live-in person CEs were the methods that the Saudi pharmacists prefer. This was similar to other studies.^[1,19,20] The reason for preference of online CE may be that they can accomplish their requirements during their leisure time and also the program cost and travel cost would be reduced or negligible. This fact was reported in the published literature.^[21]

Getting a certificate and willingness to learn more were the major reasons for attending a CE event. Similar results have

**Figure 1: Reasons for attending continuing medical education events**

been observed in a Flemish study.^[22] Schindel *et al.* published a study in 2019 to identify pharmacists professional learning needs to support expanded roles in practice and most respondents took CE activities because of personal interest or because it was necessary for their current role.^[23] Even though in Saudi Arabia, credit hours from CE are required for renewing their license, gaining CE hours was the least reason for attending CE events. This may be due to the fact that the credits would be mentioned in the certificate itself and that were mentioned as the major reason.

The major barrier for Saudi pharmacists from attending live CE events was work responsibilities. They were in accordance with other studies.^[1,24,25] This barrier was reflected in the pharmacists' least perception toward their employers placing more interest in their CE participation. Poor quality and method of CE delivery, time deficit, uninteresting topics, family commitment, distance travel, and timing of talk were the commonly reported barriers for attending CE in various countries.^[1,22,26-28] Other researchers have also identified various barriers to CE among pharmacists.^[29]

In 2018, there was an integrative review about the barriers and solutions to online learning in medical education. One of the key barriers that mentioned there were poor technical skills. This barrier was diminished over time with the daily need to use the Internet these days. This was evident from the fact that our participants preferred to use CE based on computer/Internet.^[30] In 2020, a Chinese study put a light on continuing medical education and work commitment among rural health-care workers. Doctors and nurses were enrolled in the study and unfortunately, the pharmacists were not enrolled.^[7] Hence, this study focussed mainly on pharmacists.

Regular and compulsory CE programs will make the pharmacists used to it and will become a regular practice. However, making a compulsory CE might result in passive participation rather than active participation.

Strengths and limitations

This study has explored the different barriers which make pharmacists reluctant from participating in CE activities. Henceforth, focussing on these barriers and resolving them could result in improving their participation in CE. The data from all sectors of pharmacists ensured the generalization of results.

The major drawback of this study is selection bias. Convenience sampling would limit the generalization of results. Moreover, these survey-based data were based on self-reported information. This would have led to an information bias.

CONCLUSION

Saudi pharmacists showed a great desire for CE because they believed that it greatly affects their professional performance. There should be opportunities provided by workplaces to obtain CE, in addition, to ensure professional development of workers, including pharmacists.

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Conflicts of interest

There are no conflicts of interest.

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