

# Impact of continuous medical education among Filipino nurses working in Riyadh Saudi Arabia

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## ***Abstract***

The Saudi Commission for Health Specialties (SCFHS) expects health practitioners to meet a specific threshold of CME hours every year and upholds a crucial monitoring role over CPD activities to ensure adhering to the best quality and effectiveness possible. The aim of this literature is to assess the impact of continuous medical education programs for nurses in the medical complex located in the city center of Riyadh, KSA. The researcher used a quantitative non-experimental design employed in studies where variables are not altered and where neither an experimental nor a control group is present. Nurses chosen via convenience sampling were given the instrument for them to answer in the month of June - July 2024. It was statistically presented that all results are deemed to be on an average only with a result of “Agree” on all questions and in general. As seen on the results, participants were deemed to be impacted by the learning as indicated in the Level 3 of the Kirkpatrick Model.

***Keywords:*** continuous medical education, impact, nurses

## Impact of continuous medical education among Filipino nurses working in Riyadh Saudi Arabia

### 1. Introduction

In the fast-paced interdisciplinary and scientific world of the healthcare industry, health professionals are expected, if not required, to be up to date with their knowledge and skills in providing quality and efficient health care. Professional practitioners must build on their prior knowledge and experience and continue to learn throughout their lives in order to stay current with knowledge, technology, and clinical procedures. This can be achieved through Continuing Professional Development and Continuing Medical Education which is considered a part of the CPD, a more specific program targeting the healthcare professionals. They are frequently used interchangeably; most literature has now defined CME as being an ingredient of CPD.

In Saudi Arabia, healthcare professionals are required by Saudi Commission for Health Specialties (SCFHS) to participate in Continuous Medical Education as per Executive Rule No (23/A/27) dated (30/10/1427 H) Corresponding to (21/12/2006) with the aim to achieve continuous professional development. The Saudi Commission for Health Specialties establish guidelines and requirements for health professionals and nurses working in the country to take up CME courses to ensure that they provide the best possible care to the patients. Since, majority of the healthcare professionals working in KSA (Kingdom of Saudi Arabia) are expatriates, it is a fact that there is a variety of educational and cultural backgrounds. Since one of the Saudi government's top priorities has been the efficient and prompt provision of high-quality healthcare services to the general public, it will be a huge undertaking to follow a standardized quality care in accordance to the nation's legal and cultural demands. With the increase importance of CME among nurses, it is essential to explore and research its efficiency as it might lead to a more organized program and possibly check any gaps and other concerns to be addressed.

**Objectives of the Study** - The aim of this study is to evaluate and list the Continuous Medical education (CME) programs attended by Filipino Nurses at Riyadh, Saudi Arabia and utilize the Kirkpatrick model of valuation through a proposed training evaluation tool.

**Theoretical Framework** - The Knowles' adult learning theory is applied in this study. In 1984, Knowles suggested 4 principles that are applied to adult learning which are (1) Adults need to be involved in the planning and evaluation of their instruction; (2) Experience (including mistakes) provides the basis for the learning activities; (3) Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life; and (4) Adult learning is problem-centered rather than content-oriented. The theory serves as a basis for evaluating whether nurses find it appropriate and applicable to their professional development, as many nurses may rely on self-concept and determination to achieve personal growth. By drawing on their experiences and the typical issues they encounter in their work, the researcher hopes to assist the nurses in achieving the goals and objectives they have set for themselves. Assumptions to be drawn using the theoretical framework will help the researcher identify the best method in maximizing the efficiency and the application of CME among nurses.

#### Conceptual Framework



The Kirkpatrick Model will be used as a reference and as the conceptual framework of the study. According to Dr. Donald L. Kirkpatrick, it is a globally recognized method of evaluating the results of training and learning programs. It assesses both formal and informal training methods and rates them against four levels of criteria: reaction, learning, behavior, and results. It is the framework for assessing the success of your training programs such as the CME. For the purpose of this research, Level 3 (Behaviour) and Level 4 (Results) will be focused by the researcher since the respondents were already identified through their demographic inclusions.

In Level 3, participants will be evaluated to determine whether they have been truly impacted by the learning and are applying what they have acquired. It is feasible to determine whether or not the skills were understood and whether it is practical to apply them in the workplace by evaluating behavioral changes. After which, Level 4, to measure direct results. An actionable measurement plan is created by applying the Kirkpatrick Model to clearly define objectives, track progress, and pinpoint areas of noteworthy impact. Organizations can assess the relationship between each level and the training outcomes by analyzing data at each level (Ardent Learning, 2020). As an added benefit, this analysis enables organizations to make necessary course corrections and plan adjustments throughout the learning process.

## 2. Literature Review

It is insufficient to simply state that you have a job, a bachelor's degree, and the corresponding master's and doctoral degrees. Continuous professional development is crucial for professionals because it guarantees that you will remain competent throughout your career, especially if you are actively practicing your profession (Rodriguez, 2021).

Professional practitioners must build on their prior knowledge and experience and continue to learn throughout their lives in order to stay current with knowledge, technology, and clinical procedures. In order to achieve this, the professional must have a Continuous Professional Development. Continuing, or continuous, professional development (CPD), can be broadly defined as any type of learning you undertake which increases your knowledge, understanding and experiences of a subject area or role (Nottinghamshire County Council, 2022). CPD is an ongoing and planned learning and development process. It focuses on what you learn and how you develop but may include a formal process of recording it (through supervision, submission of assignments etc.). The CPD is defined by American Nurses Association (ANA) as “a lifelong process of active participation by nurses in learning activities that assist in developing and maintaining their continuing competence, enhancing professional practice and supporting achievement of their professional goals”.

The concept of continuous professional development (CPD) is more expansive, encompassing a wider range of professional domains that is essential for high quality professional performance (Kandasamy et al., 2023). The American Academy of General Practice was the first organization to mandate continuing medical education (CME) attendance in order to become a member, back in 1947. It wasn't until 1955 that plans were made to create CME standards after an AAMC (Association of American Medical Colleges )-sponsored study predicted the need for both re-certification and required CME. Programs to voluntarily accredit providers were tested in 1961 and 1967, but formalization did not occur until 1977. Educational programs for post licensure health professionals have been categorized in many ways, including continuing professional development (CPD), continuing medical education (CME), workforce development, and continuing education (Samuel et al., 2020).

With this formalization in 1977, it was anticipated that an increasing number of nations will take proactive measures to establish a national CPD / CME framework for physicians, surgeons, nurses, and other medical professionals within their borders. Many nations have already established healthcare and medical industries including Saudi Arabia.

According to the Royal Decree No (M/2) dated 6/2/1413 H corresponding to (5/8/1992) and in relation to sound principles and standards for practicing health professions, establishing scientific societies for health specialties, the Saudi Commission for Health Specialties was established.

In Saudi Arabia, healthcare professionals are required by Saudi Commission for Health Specialties (SCFHS) to participate in Continuing Medical Education. The Board of Trustees at the Saudi Commission for Health Specialties has adopted this Executive Rule No (23/A/27) dated (30/10/1427 H) Corresponding to (21/12/2006) with the aim to achieve continuous professional development. The SCFHS establishes guidelines and requirements for health professionals working in the country to take up CME courses to ensure that they provide the best possible care to the patients. SCFHS expects health practitioners to meet a specific threshold of CME hours every year, and upholds a crucial monitoring role over CPD activities to ensure adhering to the best quality and effectiveness possible as monitored in their CPD Platform (Continuous Professional Development Platform, 2021).

Majority of the healthcare professionals working in KSA (Kingdom of Saudi Arabia) are expatriates. These are foreigners who work in the country with variety of educational and cultural backgrounds. It is a fact that they have widely different work experience and professional backgrounds and, predictably, different approaches to care-giving. Since one of the Saudi government's top priorities has been the efficient and prompt provision of high-quality healthcare services to the general public, it will be a huge undertaking to follow a standardized quality care in accordance to the nation's legal and cultural demands. It makes sense that disparities in cultural backgrounds between caregivers and patients could seriously affect how well the health care system as a whole operates. Requiring CPD and CME courses to be taken by the medical professionals can aid in the provision of unified healthcare services to their country. CME also helps healthcare professionals stay updated with the latest medical developments, research and clinical practices discovered to promote higher quality of healthcare services for Saudi Arabia (Alhurani, 2023). Not only is the CME a requirement but it is essential due to its benefits to the professional worker, the institution and the patient receiving care.

The purpose and benefits of CPD and CME among healthcare workers was shown in the previous studies which reported that the promotion of CPD for nurses in the clinical context was fundamental, due to its positive effect on patients, the professional and the organization (Vázquez-Calatayud et al., 2020).

A study conducted by Julian et al. (2020) regarding the perception of nursing educators about the importance, impact, and challenges of continuing professional development (CPD) reveals that the important CPD attributes and the impact of CPD programs can affect the success of the CPD programs. The study by Osei, et. al. (2019) showed that there was a moderate positive significant relationship between continuous professional development and job performance and that there was no significant difference in job performance when age, sex, and clinical experience are considered. This paper will also discuss those factors stated in their study. Addressing the common information gaps regarding the CPD law identified in the study of Oducado et al. (2020) may assist in increasing nurses' support in the implementation of the mandatory CPD among nurses and this was also the second study that indicated no significant differences in the awareness of nurses when grouped according to sex, age, civil status, position, salary, and length of work experience. The research of Haji et al., (2021) revealed that the most common barriers for CPD were last minute changes to work schedule, staff shortage and shift work. Worldwide, under-staffing has been repeatedly echoed as the common barriers which impede nurses and midwives to engage with CPD.

Mlambo et al. (2021) determined five overarching themes which are organizational culture shapes the conditions, Supportive environment as a prerequisite, Attitudes and motivation reflect nurse's professional values, Nurses' perceptions of barriers and Perceived impact on practice as a core value. Follow up, feedback, mentoring, and preceptorship are beneficial to enhance the competencies of new graduate nurses and facilitate their successful transition into the nursing workforce (Ubas-Sumagaysay et al., 2020). This same goes for everyone and not just the newly grads.

For the purposes of this paper, the researcher will be using the term CME for all educational initiatives aimed at improving patient outcomes and the practice of healthcare professionals particularly for the nurses included in the study. Continuing Medical Education (CME), in the context of Saudi Arabia and for the purpose

of this research, will be used since there is not a sharp difference between CPD and CME. CPD and CME is an international reality to be undertaken by a medical professional. As what the General Medical Council in UK stated that “Continuing Professional Development and Continuing Medical Education are frequently used interchangeably, most literature has now defined CME as being an ingredient of CPD. CPD is a process that includes continuing medical education. Many countries are now moving from a knowledge and skills-based CME system, towards a system that promotes the wide-ranging competencies needed to practice high-quality medicine” (CPD, 2020).

According to the research conducted by Aboshaiqah et al. (2023), Saudi Arabia's nursing research is still in its infancy, despite significant advancements over the previous five years. This was associated with a rise in the proportion of postgraduate nurses. Over the past year, there has been a steady increase in the quantity of scientific research papers published on Saudi nursing, thanks to the strong support of the Saudi government. In Saudi Arabia, a number of studies have conducted and reviewed the perception and experiences of the participants of CME. Some of the most recent literatures show that CME improves physician performance as well as patient health outcomes (Alkhazim et al., 2014). The attitude towards CMEs, barriers, and experiences were studied and reported in the literature conducted for physicians and pharmacists (Kandasamy et al., 2023). However, there is only very limited recent resources and literature regarding nurses in relation to CME. Thus, this paper was conducted for the purpose of assessing the impact of the Continuous Medical Education among nurses. Also, to determine their inclinations and the motivations behind conducting CME.

### 3. METHODS

#### *Research Design*

*Quantitative Research Design.* Quantitative Research (Survey) was used since questionnaires with rating scales were distributed, collected and numerical data was analyzed (Bhandari, 2020). Little is known about the study area in KSA, that is, the evaluation of the impact of CME practice by nurses in Riyadh. Since the primary goal will be to describe the phenomena in as much detail as is practical regarding how they are and also explore its perspectives in order to develop an evaluation tool, this type of study design was chosen. This study's environmental scan will help identify the body of knowledge regarding effective CME that can be used to link nurses' CME to better health services. It will be possible to pinpoint the people or organizations driving CME initiatives, the nature and standard of CME training, the methods and strategies used to deliver training, and the contribution of training to the advancement of healthcare. As they develop, themes will also be described.

*Respondents of the Study* - Inclusion Criteria: Nurses (22-40 years old) working in the medical complex having the qualification certificate as a clinic nurse registered as a nursing technician and participating in clinical nursing work in a medical center. All recruited participants have CME credits. Participants: Nurses chosen via convenience sampling will be given the instrument for them to answer on their most convenient time and conducted in the month of June-July 2024.

*Instrument of the Study* - A structured, self-administered questionnaire was distributed among the respondents. The questionnaire was divided into the following sections: (A) Objectives of the CME topic, (B) Planning of the CME topic, (C) CME Method, (D) The CME Learning Classes Atmosphere, (E) CME Educators, (F) Time Management, (G) Impact of CME and 4 open-ended questions. Likert-type questions about professional experience concerning CME and to re-validate the respondents. Questions were tailored to include the Kirkpatrick Level 3 evaluation of behavior change in the field setting which is based on having a sound knowledge of the training objectives, content, techniques used in the training, and findings from prior Level 1 and Level 2 evaluations. A sound understanding of research methods, particularly in the area of tests and measurements, is necessary. Kirkpatrick Level 4 evaluations seek to measure the degree by which targeted outcomes and changes in performance are attributed to application of knowledge and skills gained as a result of the training. At the individual level, results evaluations are not particularly challenging. However, the ability to

determine which results and organizational impact occurred due to training participation make measuring results at the organizational level challenging. Thus, changes should yield measurable results that directly contribute to the organization's mission and goals. Data collection and analysis will be done using a self-designed questionnaire. Statistical analysis was done using the Statistical Package for Sciences (SPSS v 28).

**Data Gathering Procedure and Analysis** - Evaluation of the program based on the Kirkpatrick model was carried out for its four levels: reaction, learning, behaviour. The process of gathering and analyzing information or data from various sources in order to assess results, forecast trends and probabilities, and find solutions to research problems is known as data collection. It is a crucial stage in all kinds of analysis, research, and decision-making, including work in the business, social sciences, and medical fields. To guarantee quality control and maintain research integrity, accurate data collection is essential. The researcher has to identify the data types, data sources, and methods during the data collection process. (Simplilearn, 2023). Data analysis is the methodical process of gathering, organizing, transforming, characterizing, modeling, and interpreting data. Statistical techniques are typically used in this process. Scientific research and business, where there has been an increase in demand for data-driven decision making in recent years, both depend heavily on data analysis. Through the use of data analysis techniques, useful insights are extracted from data sets that can inform future research or be used to inform operational decisions. (Eldridge, 2023). The researcher obtained the services of a statistician to assist in analyzing the data collected. The results are presented as descriptive statistics by means of frequencies, percentages, graphs and tables.

**Ethical Consideration** - Ethical considerations were voluntary participation, informed consent, anonymity, confidentiality, potential for harm and results communication. The study was explained to the participants, and after it was made clear that participation was entirely voluntary. The results will then be relayed to the participants. The data was only accessible to the researcher and her research group since a statistician is necessary in this paper.

**Data Collection and Gathering** - Data collection was done through survey questionnaires distributed to Filipino Nurses working in Olaya, Riyadh, KSA around the months of June and July 2024. Nurses working in the medical complex having the qualification certificate and participating in clinical nursing work in a medical center. All recruited participants have CME credits. Convenience Sampling which involves selecting the participants based on their accessibility and availability to the researcher was utilized. A total of 150 nurses chosen via convenience sampling participated in taking the survey questionnaire with a retrieval rate of 100% achieved through waiting for each participant to finish the questionnaire and retrieve it right after. The participants were gathered, informed of the purpose of the study and were handed over with the hard copy of the questionnaire and the researcher was there to entertain any clarifications. The results were precisely recorded and analyzed. The researcher obtained the services of a statistician to assist in analyzing the data collected. The results are presented as descriptive statistics by means of frequencies and tables. All analyses were performed using the Statistical Package for Sciences (SPSSv28). The weighted mean and rank were used to assess the impact of continuous medical education.

#### **4. Results and discussion**

The results were divided into seven tables showing seven clusters namely objectives of the continuous medical education, planning, method, learning atmosphere, CME educators, time management and CME's impact. Discussion will be shown in each table as follows.

Table 1 provides insights into how well the objectives of the CME courses were understood and achieved by participants. With a composite mean of 4.26, the data suggests that the participants generally agreed that the objectives were well communicated and relevant to their professional needs. The highest-ranked item, "The objectives of the course were achieved" (4.29), highlights that participants felt the CME met its intended goals. This suggests that the course content was designed and delivered effectively, enabling participants to meet the

learning outcomes. It reflects positively on the program's ability to provide applicable knowledge and skills that align with the participants' expectations.

**Table 1**

*Objectives of the Continuous Medical Education topic*

Indicators	WM	VI	Rank
1. I was given sufficient information on the objectives of the CME course prior.	4.23	Agree	3.5
2. The CME course encouraged exchange of information and expression of ideas successfully.	4.23	Agree	3.5
3. The course covered the topics I needed to learn about.	4.28	Agree	2
4. The objectives of the course were achieved.	4.29	Agree	1
Composite Mean	4.26	Agree	

Legend:4.50-5.00=Strongly Agree;3.50-4.49=Agree;2.50-3.49=Moderately Agree;1.50-2.49=Disagree;1.00-1.49=Strongly Disagree

Both the statements "I was given sufficient information on the objectives of the CME course prior" and "The CME course encouraged exchange of information and expression of ideas" received a rating of 4.23. These scores indicate that participants appreciated being informed about the course objectives ahead of time and felt that the course fostered an environment conducive to open communication and idea exchange. This points to the value of setting clear expectations at the outset, which can enhance participant engagement and overall satisfaction with the learning experience. However, the marginal differences between the scores indicate that there could be further room for improvement in providing even more opportunities for interaction during the sessions. While participants agreed that they were encouraged to share ideas, expanding such interactive elements could deepen the learning experience. The data from Table 1 suggests that the CME courses are largely meeting participants' expectations regarding learning objectives and professional development. The alignment between the course content and the learners' needs ensures that healthcare professionals feel their time is well spent, reinforcing the importance of ongoing education in maintaining high standards of patient care.

**Table 2**

*Planning of the Continuous Medical Education topic*

Indicators	WM	VI	Rank
1. I feel that the programme drawn up for the course took into account what participants considered important to learn	4.23	Agree	

Legend:4.50-5.00=Strongly Agree;3.50-4.49=Agree;2.50-3.49=Moderately Agree;1.50-2.49=Disagree;1.00-1.49=Strongly Disagree

Table 2 focuses on the participants' perceptions of the planning and relevance of the CME program, specifically how well it aligned with their learning needs and professional goals. The single indicator, "I feel that the programme drawn up for the course took into account what participants considered important to learn," received a weighted mean (WM) of 4.23, which falls within the "Agree" range.

This score suggests that participants generally felt the CME program was well planned, taking into consideration the essential topics and skills relevant to their professional development. The relatively high score reflects a positive assessment of the course's ability to meet participants' learning expectations, indicating that the program design and content were aligned with the practical and immediate needs of healthcare professionals. The fact that participants felt the program addressed important areas signifies that the planning process involved a careful analysis of their professional roles and challenges. However, the score also suggests that there may still be room for improvement in tailoring the content more precisely to individual needs, as the rating is short of the "Strongly Agree" range. This finding highlights the importance of continuously reviewing and updating CME programs to ensure that they remain relevant to the dynamic nature of healthcare practices. It also underscores the value of involving participants more actively in the course planning process to better align with their specific needs and interests.

**Table 3***Continuous Medical Education Method*

Indicators	WM	VI	Rank
1. I found the different CME course methods listed below to be relevant and of good quality:			
a) Lectures	4.36	Agree	1
b) Whole group discussion/brainstorming	4.17	Agree	4
c) Small group discussion	4.18	Agree	3
d) Role-play	4.06	Agree	6
e) Review and revision	4.16	Agree	5
2. The language used in the CME sessions was easy to understand.	4.29	Agree	2
Composite Mean	4.20	Agree	

Legend: 4.50-5.00=Strongly Agree; 3.50-4.49=Agree; 2.50-3.49=Moderately Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

Table 3 examines the effectiveness of various methods used in the CME courses, including lectures, group discussions, role-plays, and review sessions. The composite mean of 4.20 indicates that the participants generally agreed that the methods used were relevant and of good quality. Lectures received the highest score (4.36), suggesting that this traditional teaching method remains the most preferred and effective for the participants. This could be due to the clear structure and direct delivery of information that lectures provide, making them a reliable method for knowledge dissemination. The second highest rating was for the clarity of language used in the sessions (4.29), which shows that participants found the language accessible and easy to understand, an essential factor in effective learning, particularly in a diverse setting with international instructors.

Group discussions, both in whole group (4.17) and small group formats (4.18), were also positively rated, though slightly lower than lectures. This reflects participants' appreciation for interactive methods that allow for idea exchange and collaborative problem-solving, which can deepen understanding and retention of information. However, role-play, a more interactive and experiential learning method, received the lowest rating (4.06). While still within the "Agree" range, this suggests that participants may not have found role-play as relevant or effective as other methods. This could be due to discomfort with the method or a perceived lack of applicability to their professional practice. While all methods were generally well-received, lectures were favored over more interactive approaches like role-play. This shows that participants may value structured, content-rich sessions more highly than hands-on, experiential learning activities.

**Table 4***The Continuous Medical Education learning/classes atmosphere*

Indicators	WM	VI	Rank
1. The general atmosphere during the course enhanced the learning process.	4.23	Agree	1
2. The course fostered teamwork and cooperation among participants.	4.15	Agree	2
Composite Mean	4.19	Agree	

Legend: 4.50-5.00=Strongly Agree; 3.50-4.49=Agree; 2.50-3.49=Moderately Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

Table 4 explores the atmosphere of the CME classes and its impact on the participants' learning experience. With a composite mean of 4.19, participants generally agreed that the learning environment was conducive to effective education. The highest-rated indicator, "The general atmosphere during the course enhanced the learning process" (4.23), suggests that the participants felt comfortable and supported in the learning environment. A positive atmosphere is crucial in adult education, as it allows participants to feel engaged, open to sharing, and confident in expressing their ideas. Such an environment fosters better knowledge retention and application. The second indicator, "The course fostered teamwork and cooperation among participants" (4.15), shows that while participants generally agreed that teamwork and collaboration were encouraged, there is slightly less enthusiasm compared to the overall atmosphere rating. This may indicate that, although the learning environment was favorable, there could be opportunities to further enhance cooperation and interaction among participants. Overall, the learning atmosphere received positive feedback, indicating that the participants felt that the environment was supportive of their learning and promoted engagement and collaboration.



**Table 5***CME Educators*

Indicators	WM	VI	Rank
1.They have sufficient knowledge.	4.38	Agree	1
2.They communicate well.	4.30	Agree	3
3.They are open, honest and fair to all	4.32	Agree	2
Composite Mean	4.33	Agree	

Legend:4.50-5.00=Strongly Agree;3.50-4.49=Agree;2.50-3.49=Moderately Agree;1.50-2.49=Disagree;1.00-1.49=Strongly Disagree

Table 5 evaluates the participants' perceptions of the CME educators in terms of their knowledge, communication skills, and fairness. With a composite mean of 4.33, the participants generally agreed that the educators were effective in delivering the content and creating a conducive learning environment. The highest-ranked item, "They have sufficient knowledge" (4.38), suggests that the participants had confidence in the educators' expertise. This reflects the importance of having well-informed instructors who can effectively convey up-to-date information and answer questions with authority, particularly in a healthcare setting where the content must be accurate and reliable.

The second-highest indicator, "They are open, honest and fair to all" (4.32), highlights that participants valued the educators' ethical approach and interpersonal skills. This suggests that educators were approachable and treated all participants equitably, creating an inclusive learning environment. The slightly lower score for "They communicate well" (4.30) still falls within the "Agree" range, indicating that while communication was generally effective, there may be room for improvement in how the educators relay information, especially considering the potential language and cultural differences in a multinational setting like Saudi Arabia. In general, the educators were well-regarded by the participants, with their knowledge and fairness standing out as strong points.

**Table 6***Time Management*

Indicators	WM	VI	Rank
1. Enough time was devoted to each module.	4.22	Agree	1
2. Enough time was given for feedback from the participants.	4.07	Agree	2
Composite Mean	4.14	Agree	

Legend:4.50-5.00=Strongly Agree;3.50-4.49=Agree;2.50-3.49=Moderately Agree;1.50-2.49=Disagree;1.00-1.49=Strongly Disagree

Table 6 evaluates the participants' perceptions of time management within the CME courses. The overall composite mean of 4.14 indicates that participants generally agreed that the time allocated for each module and feedback was sufficient. The highest-ranked item, "Enough time was devoted to each module" (4.22), shows that participants felt the duration of each module was appropriate for effectively covering the content. This suggests that the course was well-structured, allowing participants to absorb the material without feeling rushed or overwhelmed.

The second indicator, "Enough time was given for feedback from the participants" (4.07), while still in the "Agree" range, received a slightly lower score. This indicates that while participants were generally satisfied with the time allocated for feedback, there may be some room for improvement. Feedback is a critical component of continuous learning, as it allows participants to clarify concepts, raise concerns, and share insights. A slightly lower score here may suggest that more time or opportunities for feedback would be beneficial in enhancing the overall learning experience. Participants generally felt that the time management of the CME courses was effective, but there may be a need for additional time to facilitate more interactive feedback sessions.

**Table 7***Impact of CME Courses*

Indicators	WM	VI	Rank
1. Information gained from the courses result in enhancing optimal patient care.	4.30	Agree	1
2. I am highly confident in implementing these changes.	4.19	Agree	3
3. The courses meet the expectations in accomplishing the stated educational objectives.	4.14	Agree	4
4. I am committed in developing the skills acquired and learned through CME Courses.	4.20	Agree	2
5. The evaluation post training/course is in accordance to the educational objectives.	3.60	Agree	6
6. I feel a need for additional training after taking up a specific topic or CME course.	3.97	Agree	5
Composite Mean	4.07	Agree	

Legend:4.50-5.00=Strongly Agree;3.50-4.49=Agree;2.50-3.49=Moderately Agree;1.50-2.49=Disagree;1.00-1.49=Strongly Disagree

Table 7 explores the participants' perceptions of the impact of Continuous Medical Education (CME) courses on their professional development and patient care. The overall composite mean of 4.07 indicates that participants generally agreed that the CME courses had a positive impact on their skills, knowledge, and confidence. The highest-ranked item, "Information gained from the courses results in enhancing optimal patient care" (4.30), shows that participants felt the CME courses directly contributed to improving the quality of care they provide. This highlights the effectiveness of CME programs in delivering valuable information that can be applied in clinical settings to improve patient outcomes. The second-highest rating, "I am committed to developing the skills acquired and learned through CME courses" (4.20), reflects participants' dedication to further developing the skills they learned, showing that the courses inspire continued professional growth. However, the slightly lower scores for "Evaluation post-training/course is in accordance with the educational objectives" (3.60) and "I feel a need for additional training after taking up a specific topic or CME course" (3.97) suggest that there may be room for improvement in post-course evaluations and follow-up training. The lower score for post-training evaluation indicates that participants might not feel fully satisfied with how the effectiveness of the training is assessed. The desire for additional training also suggests that the CME courses may not cover certain topics in sufficient depth, or that participants feel a need for more practical application. Overall, while the participants recognized the positive impact of the CME courses, there is potential to improve post-course evaluations and provide more opportunities for further training.

## 5. Conclusion and recommendations

The composite mean of 4.26 in Table 1 indicates that the participants generally agreed that the objectives of the CME courses were clear, relevant, and well understood. The high rating suggests that the objectives of the course were effectively communicated and successfully achieved. The participants recognized the value of the CME courses, not just as a formal requirement but as an important part of their professional development. In Table 2, the participants generally agreed that the planning of the CME courses was well thought out and relevant to their professional needs. However, there was a slight variation in perceptions about the relevance of certain topics, which may reflect differing individual needs within the group. The overall agreement with the CME methods in Table 3 shows that participants found the various instructional approaches, such as lectures, group discussions, and role-play, to be effective. However, some methods, such as role-play, received lower ratings, suggesting that they may not be as impactful as other methods.

The results in Table 4 indicate that the participants were generally satisfied with the learning atmosphere in the CME classes, with a composite mean of 4.19. A positive, conducive learning environment was viewed as enhancing the learning process and fostering collaboration among participants. This indicates that the CME sessions succeeded in creating a supportive educational environment, which is critical for effective adult learning. In Table 5 the participants rated the educators highly, with a composite mean of 4.33, indicating that they found the instructors knowledgeable, effective communicators, and fair in their approach. This reflects the educators' ability to deliver the course content despite potential cultural or educational differences. The participants agreed that the CME courses were well-paced (see Table 6), with sufficient time allocated for each module and feedback. However, the slightly lower score for feedback suggests that there may be an opportunity to further optimize this

aspect of the course to enhance participant engagement and learning. The participants generally agreed that the CME courses positively impacted their ability to provide optimal patient care and contributed to their professional development. However, the relatively lower scores for post-course evaluation and the need for further training suggest that improvements can be made in assessing the effectiveness of CME courses and providing additional learning opportunities.

To maintain the clear communication of course objectives in future CME programs. Organizers should continue to ensure that the objectives are directly aligned with the participants' professional needs. Additionally, periodic feedback from participants should be gathered to refine and improve the alignment of course objectives with the practical needs of healthcare professionals. Future CME planning should include a wider range of topics to accommodate diverse career stages and specialties among healthcare professionals. Engaging participants in the planning phase, perhaps through surveys or needs assessments, could improve the relevance of course content. Offering flexibility in course selection or modular options may enhance the overall satisfaction with the planning process. To continue using a mix of instructional methods while placing more emphasis on those that participants find most effective, such as lectures and small group discussions. The role-playing component should be re-evaluated and adapted to make it more relevant and practical for participants. Gathering specific feedback on these methods could help refine the approaches used in future CME sessions. To further enhance the learning atmosphere, organizers should continue fostering collaboration and interaction among participants. Future programs should prioritize creating an inclusive environment that supports open communication and teamwork. Additionally, offering more opportunities for peer-to-peer learning and interaction during the courses may further improve the learning atmosphere. Educators for the CME programs should not only knowledgeable in their fields but also skilled in communicating with diverse audiences. Continuous professional development opportunities for educators, particularly in the areas of cross-cultural communication and adult learning principles, may further enhance their effectiveness.

Regular evaluations of educator performance should be conducted to ensure high standards are maintained. To maintain and improve the effectiveness of time management in CME courses, organizers should continue to carefully plan the duration of each module to ensure that the content is delivered efficiently without overwhelming participants. Providing more opportunities for feedback and discussion during and after the sessions may further enhance participant engagement and learning. Additionally, it may be helpful to build some flexibility into the schedule to accommodate varying levels of topic complexity. An actionable measurement plan is created by applying the Kirkpatrick Model to clearly define objectives, track progress, and pinpoint areas of noteworthy impact as described in the model's 4<sup>th</sup> Level. On that note, below is a proposed general evaluation tool for an assessment post training or post lecture that the institution can use to gauge the knowledge and impact of the CME course. Since participant responses aren't objective, they can't be used to determine how effective a training program was. This is a valid critique, which is why participant surveys are only a small portion of a much more extensive training evaluation process. Gaps were identified such as the specific nationality of the participants and the need to explore the underlying cause and reason for a certain behaviour or response. Since this research is limited only to being quantitative which can attain greater knowledge and understanding, it is still fixed and universal. Future researchers may be able to do a quali-quantitative or descriptive type of research to help us understand why, how or what happened behind certain behaviours.

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