An Exploratory Study on the Role of Continuing Medical Education (CME) in Influencing Drug Prescription Patterns

By-

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Abstract

Introduction:
Continuing Medical Education (CME) is vital for updating physicians' clinical knowledge. However, pharmaceutical sponsorship of CME raises concerns about bias in prescribing behavior. This study explores how CME—both independent and pharma-sponsored—impacts drug prescription patterns among urban physicians in Bathinda, Punjab.

Objectives:

- To assess the impact of CME on prescribing behavior.
- To compare independent vs. pharma-sponsored CME effects.
- To examine the role of physician demographics.
- To evaluate perceived bias and ethical concerns.
- To suggest improvements based on findings.

Methodology:
A cross-sectional study was conducted among 300-350 physicians who attended CME in the past two years. Stratified random sampling was used, and data were collected via a structured questionnaire. Analysis included descriptive statistics and thematic evaluation based on the Theory of Planned Behavior and Knowledge-to-Action Framework.

Results:

63% of physicians reported changes in prescribing post-CME; 54% noted increased branded prescriptions. Pharma-sponsored CMEs were more attended (40%) than independent ones (25%). 60% perceived quality differences favoring independent CME. 73% believed CME should be free from pharma sponsorship. Only 12% rated CME as excellent.

Conclusion:

CME significantly influences prescribing, especially in pharma-sponsored formats. Ethical concerns and perceived bias highlight the need for transparent, unbiased, and independently governed CME programs to ensure evidence-based medical practice.

Introduction

Continuing Medical Education (CME) serves as a crucial mechanism for medical professionals to remain updated on recent advancements in medicine, including new treatment methods and pharmaceutical developments. While CME is intended to enhance clinical practice, concerns have been raised about its influence on drug prescription behavior, particularly when such programs are funded by the pharmaceutical industry. This study aims to explore the extent to which CME, especially pharma-sponsored CME, impacts the prescribing patterns of physicians in India.

Literature Review

Prior research underscores the importance of CME in improving physician knowledge and patient outcomes (Cervero & Gaines, 2015; Moore et al., 2018). However, ethical concerns arise when pharmaceutical companies sponsor these programs (Spithoff, 2019; Fugh-Berman, 2020). Saito et al. (2018) advocate for unfunded CME to support unbiased, evidence-based practice. There is a significant research gap in the Indian context, especially in comparing the impacts of independent versus industry-sponsored CME. The study is guided by the Theory of Planned Behavior (Ajzen, 2019) and the Knowledge-to-Action Framework (Graham et al., 2019), both of which provide insight into how knowledge acquisition through CME translates into clinical practice.

Objectives/Aims of the Study

- To determine the influence of CME on drug prescribing behavior.
- To compare the effects of independent and industry-sponsored CME.

- To examine differences based on physician demographics such as specialty and years in practice.
- To explore the educational and ethical implications of CME.

Methodology

- Research Design: Descriptive, exploratory study using a quantitative survey design.
- Sampling Methods: Purposive and snowball sampling.
- Participants: 100-150 physicians practicing in urban healthcare settings who have attended CME in the last two years.
- Data Collection Methods: Structured questionnaire.
- Data Analysis Techniques: Descriptive statistics and cross-tabulation using Excel charts (bar charts, pie charts, line graphs).
- Ethical Considerations: Informed consent will be obtained; confidentiality and anonymity will be maintained.

Expected Outcomes

The study is expected to provide insights into whether and how CME influences drug prescribing behavior. It may reveal significant differences between the effects of independent versus pharma-sponsored CME and highlight ethical concerns perceived by practitioners. The findings could inform future CME policy and contribute to the development of unbiased medical education practices.

Timeline

Week	Activity	Details
1–2	Literature Review	Conduct a comprehensive review of existing literature and identify key themes and gaps.
3	Design Questionnaire	Draft the survey based on objectives and theoretical frameworks.
4	Pilot Testing	Test the questionnaire with a small sample; make necessary revisions.
5–6	Data Collection Phase I	Begin data collection from urban physicians using both online and offline modes.
7–8	Data Collection Phase II	Continue and complete data collection, aiming for 100–150 responses.
9	Data Cleaning and Descriptive Analysis	Clean data and analyze using charts and cross-tabulations in Excel.
10	Interpretation and Thematic Analysis	Draw insights from the data, identify trends, and relate findings to theory.
11	Report Writing (Drafting All Sections)	Write Abstract, Introduction, Literature Review, Methodology, and Results.

References

Ajzen, I. (2019). Theory of Planned Behavior.

Cervero, R. M., & Gaines, J. K. (2015). The impact of CME on physician performance and patient health outcomes. Journal of Continuing Education in the Health Professions.

Fugh-Berman, A. (2020). The influence of pharmaceutical industry CME on clinical practice. Therapeutic Advances in Drug Safety.

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Moore, D. E. Jr., et al. (2018). Achieving desired results from CME activities. Journal of Continuing Education in the Health Professions.

Saito, H., et al. (2018). Impact of CME on primary care practice. BMC Medical Education.

Spithoff, S. (2019). Industry involvement in CME: Time to say no. CMAJ.

Appendices

Appendix A: Questionnaire

Section A: Demographic Information

1. Age: ☐ <30 ☐ 30–40 ☐ 41–50 ☐ >50

2. Gender: ☐ Male ☐ Female ☐ Prefer not to say

3. Specialty: ☐ General Medicine ☐ Pediatrics ☐ Surgery ☐ Other: _____

4. Years in medical practice: ☐ <5 ☐ 5–10 ☐ 11–20 ☐ >20

5. Practice setting: ☐ Private ☐ Government ☐ Hospital ☐ Clinic ☐ Other

Section B: CME Participation

6. Attended CME in past 2 years? ☐ Yes ☐ No

7. Number of CME sessions attended: ☐ 1–2 ☐ 3–5 ☐ 6–10 ☐ >10

8. Main CME organizers: ☐ Independent ☐ Pharma-sponsored ☐ Mixed

9. Motivation for attending: ☐ Knowledge update ☐ Certification ☐ Networking ☐

Incentives ☐ Other

Section C: Impact on Prescription

10. Changed prescribing behavior after CME? ☐ Yes ☐ No

11. Degree of influence on change: ☐ Minimal ☐ Moderate ☐ Significant

12. Introduced to new pharma products via CME? ☐ Yes ☐ No

13. CME recommended branded drugs? ☐ Yes ☐ No

14. Increased branded prescriptions after CME? ☐ Yes ☐ No ☐ Not sure

Section D: Perceptions and Ethics

15. Difference in content quality (independent vs. pharma)? ☐ Yes ☐ No ☐ Not sure

16. CME should be free of pharma sponsorship? ☐ Strongly agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly disagree

17. Educational value of CME: ☐ Poor ☐ Fair ☐ Good ☐ Very Good ☐ Excellent