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Faculty Perceptions of the Competency-Based Dynamic Curriculum (CBDC) for Homoeopathic Medical Education in India: A Pilot Study

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ABSTRACT

Background: Medical education in India is transitioning to a Competency-Based Education (CBE) framework, with the National Commission for Homoeopathy introducing the Competency-Based Dynamic Curriculum (CBDC) for the Bachelor of Homoeopathic Medicine and Surgery (BHMS) programme. The successful implementation of this new curriculum depends heavily on the preparedness and participation of faculty, yet the transition presents significant challenges. This pilot study was conducted to gather preliminary data on faculty perceptions before a larger investigation.

Objectives: To assess faculty perceptions regarding the effectiveness of CBDC in meeting educational goals, identify implementation challenges, gauge stress and workload implications, and collect recommendations for a smoother rollout.

Methods: This was a descriptive cross-sectional pilot study. A structured questionnaire with closed-ended and open-ended questions was administered to a purposive sample of 58 faculty members teaching first-year BHMS students. Quantitative data were analysed using descriptive statistics, and qualitative responses were analysed thematically.

Results: While over half of the faculty agreed that the CBDC effectively meets educational goals, a significant portion remained neutral on its success in integrating subjects. The implementation was widely perceived as too rapid and a moderate-to-high stressor. Key challenges identified were an acute shortage of faculty, inadequate and inconsistent training, and excessive documentation requirements. There was a strong consensus on the need for comprehensive pre-implementation training, increased staffing, and a phased rollout.

Conclusion: Despite general faculty acceptance, the implementation of CBDC faces substantial challenges related to training, workload, and resource allocation. The study highlights the critical need for targeted interventions, such as those recommended by the faculty, to ensure the sustainable success of the curriculum in homoeopathic medical education.

INTRODUCTION

Medical education worldwide is undergoing a significant transformation, moving towards Competency-Based Education (CBE) to produce graduates who possess not only theoretical knowledge but also the practical skills, ethical values, and critical thinking abilities required for modern healthcare systems[1]. In India, this aligns with the National Education Policy (NEP) 2020, which promotes a holistic, integrated educational framework.[2]

In line with these national directives, the National Commission for Homoeopathy (NCH) introduced the Competency-Based Dynamic Curriculum (CBDC) for the Bachelor of Homoeopathic Medicine and Surgery (BHMS) programme, effective from the 2022-2023 academic year. This curriculum represents a significant shift from traditional teaching methods towards the acquisition, application, and assessment of competencies. Developed by the Homoeopathy Education Board (HEB) under the NCH, the CBDC incorporates progressive features like early clinical exposure and innovative assessment methods, reflecting a commitment to high-quality medical education.[3]

The successful implementation of the new curriculum largely depends on the preparedness and active participation of faculty, especially those teaching first-year students. A smooth transition from established traditional methods to competency-based approaches is often hindered by challenges such as limited preparatory time and inadequate resources. Moreover, the process of syllabus designing at the university level, its alignment with the curriculum framework, and the proper dissemination of the intended meaning of the curriculum to faculty are equally critical. Understanding faculty perceptions in this context is essential for identifying both the opportunities and the

constraints in effectively adopting the Competency-Based Dynamic Curriculum (CBDC).

Recognizing the need for preliminary data before a large-scale study, this pilot study was conducted. It focuses on the perceptions of a small cohort of first-year BHMS faculty to test the methodology, refine the research instruments, and assess the feasibility of a broader investigation. The study aims to gather initial insights into the perceived effectiveness of CBDC, identify preliminary challenges, gauge associated stressors, explore opinions on resource adequacy, and document initial recommendations. The findings from this pilot will inform the design of a comprehensive, full-scale study.

2. Objectives

- To evaluate faculty perceptions of the effectiveness of the Competency-Based Dynamic Curriculum (CBDC) in achieving educational goals and its overall implementation process.
- To assess the challenges faced by faculty in adopting CBDC, including workload, training needs, availability of time, learning resources, and assessment methods, as well as the stress and pressure associated with the transition.
- To identify faculty-suggested measures and key steps that could support and facilitate smoother and more effective implementation of CBDC across institutions.

MATERIALS AND METHODS:

3. Methods

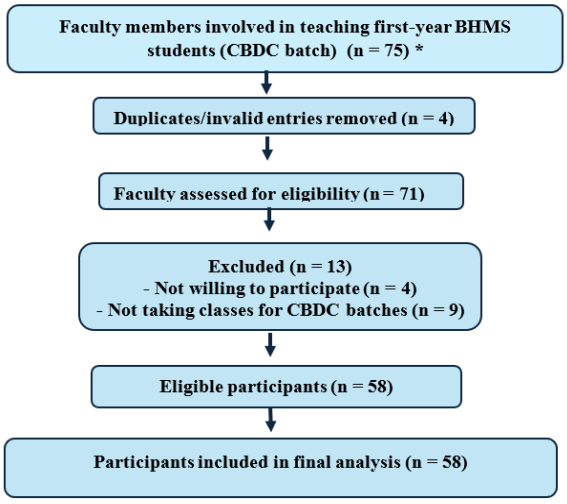
3.1 Study Design : This was a descriptive cross-sectional pilot study conducted to assess the feasibility and refine the methodology for a larger-scale investigation. The study utilized a descriptive survey to gather quantitative and qualitative data on faculty perceptions of the Competency-Based Dynamic Curriculum (CBDC) during its initial implementation.

3.2 Study Population and Sample: The study population included faculty members involved in teaching first-year Bachelor of Homoeopathic Medicine and Surgery (BHMS)

3.3 Sample size. An a priori power analysis based on the target effect size ($r = 0.35$), type-I error $\alpha = 0.05$, and power $(1-\beta) = 0.80$ indicated a required sample of $N = 46$ for this cross-sectional study. Allowing 20% non-response/attrition, the sample was inflated to 58 participants

A purposive sample of 58 faculty members was selected from homoeopathic medical colleges in India. The inclusion criteria for participation were faculty currently teaching first-year BHMS students; a minimum of six months of teaching experience under the CBDC framework; and willingness to provide informed consent. Faculty not involved in first-year teaching or those who had not experienced CBDC implementation were excluded (Figure 1).

Figure 1 - STROBE Flow Diagram - Participant Inclusion and Exclusion



3.4 Data Collection Tool: A structured questionnaire was developed to collect data, consisting of 17 closed-ended questions and 2 open-ended questions. The questionnaire was designed to capture a range of information, including demographic details (designation, years of teaching experience, institution), perceptions on effectiveness of CBDC, challenges in implementation, training and resource needs, stress and workload implications, and suggestions for improvement. The questionnaire items were systematically grouped into seven overarching themes: Perceived Effectiveness of CBDC, Faculty Stress and Adaptation, Faculty Strength and Resources, Professional Development and Training, Curriculum and Time Management, Teaching Methods and Feedback, and Implementation Challenges. The instrument was developed to be administered both online (via Google Forms) and offline to ensure a broader reach within the selected sample.

3.5 Validation: Content validity was established using the Content Validity Index (CVI) by two Medical Education Unit experts, with a CVI score of 0.8, indicating 80% agreement on item relevance.

3.6 Data Collection Procedure: Data were collected between February 2024 and March 2024. An invitation to participate was extended to the selected faculty members, providing them with a clear time frame to complete the survey. Written informed consent was obtained from all participants before their participation. The confidentiality and anonymity of all responses were strictly maintained throughout the data collection process to ensure unbiased and honest feedback.

3.7 Data Analysis: Quantitative data from the closed-ended questions were analysed using descriptive statistics (percentages). Qualitative responses from the open-ended questions were analysed thematically to identify recurring challenges, needs, and suggestions for improvement. The questionnaire items were systematically grouped into seven key themes: Perceived Effectiveness of CBDC, Faculty Stress and Adaptation, Faculty Strength and Resources, Professional Development and Training, Curriculum and Time Management, Teaching Methods and Feedback, and Implementation Challenges. This thematic framework allowed to analyse related questions in context, rather than in isolation, and provided a clear structure for our analysis.

3.8 Ethical Considerations: Approval was obtained from the Institutional Ethics Committee (No. IEC/02/24-25) before the commencement of the study. All participants were provided with a detailed information sheet about the study and gave their informed consent. All collected data were handled with strict confidentiality, and participant anonymity was ensured.

4. Results

A total of 58 faculty members from Government, Grant-in-Aid, and Private Homoeopathic medical institutions participated in a cross-sectional study, providing both quantitative ratings and qualitative feedback on the Competency-Based Dynamic Curriculum (CBDC) (Figure 1). The participants belong to the Professor, Associate professor, and Assistant professor categories (Figure 2). The analysis grouped 19 questionnaire items into seven key themes to provide a comprehensive view of faculty perceptions, operational challenges, and resource needs (Table 1 and Table 2).

Table 1 - Pre-validated 19 Item Questionnaire

Sl no	19 Item Questionnaire
1	How do you perceive the effectiveness of a Competency-based dynamic curriculum (CBDC) in meeting educational goals and preparing students for real-world challenges?

2	To what extent do teachers perceive the Competency-Based Dynamic Curriculum (CBDC) as a stressor in their professional responsibilities?
3	To what extent do you perceive the need for additional teachers in your department...?
4	To what extent do teachers perceive that the implementation of the Competency-Based Dynamic Curriculum (CBDC) is occurring 'too quickly' and incorporating 'too much' change?
5	To what extent do you find it challenging to complete the competencies in the Competency-Based Dynamic Curriculum (CBDC) and to locate appropriate learning resources?
6	To what extent do you believe that the training curricula and assessment tools are well defined in the Competency-Based Dynamic Curriculum (CBDC)?
7	How do you perceive the impact of the current duration and contents of the foundation course to evoke interest in medical profession?
8	To what extent do you agree with the proposition that introducing students to clinical scenarios in the early phase enhances basic medical science learning?
9	To what extent do you agree with the statement that there is a need for training teachers.
10	To what extent do you perceive pressure within the faculties to change teaching and learning methods to align with the Competency-Based Dynamic Curriculum (CBDC)?
11	How do you rate the sufficiency of time provided to complete syllabus in Competency-Based Dynamic Curriculum (CBDC)?
12	To what extent do you believe that the Competency-Based Dynamic Curriculum (CBDC) allows for a comprehensive assessment of all domains, including knowledge, skills, and attitudes?
13	How well do you believe students can comprehend the material if the curriculum focuses more on "Must know" concepts?
14	To what extent do you perceive constructive feedback is helpful in modifying teaching methods within the context of the Competency-Based Dynamic Curriculum (CBDC)?
15	To what extent do you believe that students' performance is better in the Competency-Based Dynamic Curriculum (CBDC) compared to traditional curricula?
16	How challenging do you find the transition from conventional teaching methods to the Competency-Based Dynamic Curriculum (CBDC)?
17	To what extent do you perceive that CBDC has successfully bridged the gap between pre-clinical, para-clinical, and clinical subjects, creating a more clinically relevant and vertically integrated curriculum?
18	In your experience or perception, in what aspects have you faced, or do you expect to face challenges in the implementation of Competency-Based Dynamic Curriculum (CBDC)?
19	In your opinion, what do you believe is the most important step to facilitate the implementation of Competency-Based Dynamic Curriculum (CBDC)?

Figure 1 - Distribution of type of Homoeopathic colleges

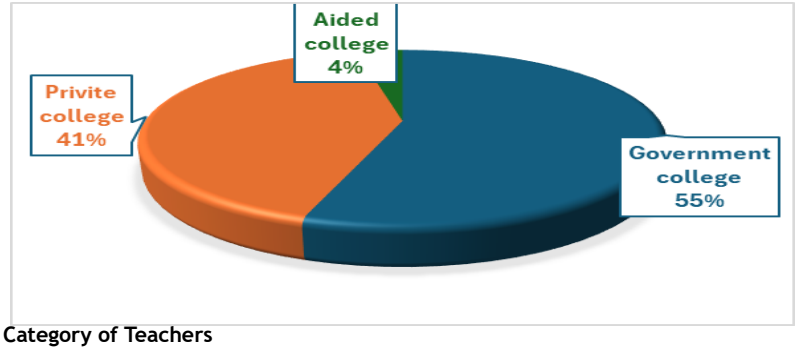


Figure 2 - Category of Teachers

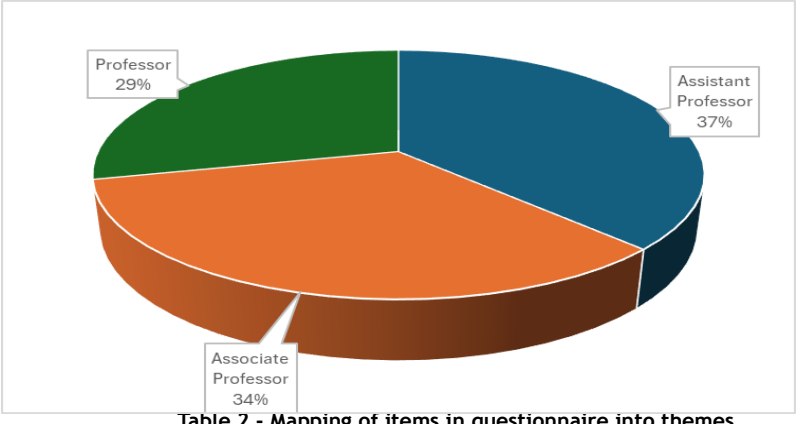


Table 2 - Mapping of items in questionnaire into themes

Theme	Questionnaire Items
Perceived Effectiveness of CBDC	1,4,5,10,12,13,17, 18,19.

Faculty Stress, Pressure & Adaptation	2,3,8,14,15, 18, 19.
Faculty Strength and Resource Availability	6,18,19.
Professional Development and Training Need	7, 16,18,19
Curriculum Structure & Time Management	9,18,19
Enhancement of Teaching Methods through Feedback	11, 18,19.
Implementation Challenges & Suggestions	18,19.

4.1 Perceptions of CBDC Effectiveness:

Over half of the respondents—46.43% agreeing and 10.71% strongly agreeing—perceived the CBDC as effective in meeting educational goals and preparing students for real-world challenges. However, a significant portion of faculty felt the rollout was too rapid, with 44.64% agreeing and 17.86% strongly agreeing that implementation was occurring "too quickly". Perceptions were mixed regarding the vertical integration of pre-clinical, para-clinical, and clinical subjects, as 44.64% of faculty remained neutral on this point, while 33.93% agreed and 7.14% strongly agreed that the curriculum successfully bridged this gap.

4.2 Implementation Challenges:

Qualitative feedback identified several recurrent challenges to CBDC implementation. These included a faculty shortage and the difficulty of handling large class sizes. Inadequate and inconsistent training was another major concern, with many faculty members untrained and only one or two per college having attended workshops. Respondents also cited heavy documentation requirements, which took time away from teaching, and insufficient time to complete the syllabus. Additional issues included a lack of proper facilities for skill-based training, limited IT support, and a misalignment between teaching hours and content requirements.

4.3 Faculty Stress and Workload:

The implementation of the CBDC was widely perceived as a moderate-to-high occupational stressor. The majority of faculty—42.86% and 21.43% respectively—rated it as "moderately a stressor" or "very much a stressor". The need for additional faculty was strongly endorsed by 48.21% of respondents who "strongly agreed" and 30.36% who "agreed". Furthermore, a substantial majority of faculty felt pressure to change teaching methods to align with the new curriculum, with 44.64% agreeing and 32.14% strongly agreeing with this statement.

4.4 Time, Learning Resources, and Assessment:

Faculty opinion was evenly split on the sufficiency of time provided to complete the syllabus, with 33.93% rating it as "sufficient" and an equal percentage rating it as "insufficient". Completing competencies and locating appropriate learning resources was described as "moderately difficult" by 58.93% of respondents. In terms of assessment, 44.64% agreed and 7.14% strongly agreed that the CBDC allows for comprehensive evaluation of knowledge, skills, and attitudes. However, 35.71% remained neutral, suggesting mixed perceptions.

4.5 Professional Development Needs:

There was near-unanimous agreement on the necessity for systematic faculty training, with a combined 89.29% of respondents either "agreeing" or "strongly agreeing" on this point. The transition from conventional teaching methods to the CBDC was considered "slightly difficult" by 39.29% of faculty and "moderately difficult" by 33.93%. While the foundation course was generally well-received, with 51.79% of faculty liking it and 7.14% strongly approving, constructive feedback was also highly valued. A significant portion of respondents rated constructive feedback as "very helpful" (48.21%) or "extremely helpful" (14.29%) for modifying teaching methods.

Overall, faculty and staff expressed a more positive view of their professional development and training, as well as their teaching methods and feedback. Responses for both of these areas leaned heavily toward positive descriptions like "agree," "helpful," and "like". The perceived effectiveness of the CBDC and faculty's ability to adapt to stress and pressure received slightly more positive feedback than negative. However, a significant number of people felt neutral about the effectiveness of the CBDC. Regarding faculty strength and resource availability, opinions were fairly mixed, with a slight majority of responses being neutral. The most negative feedback was related to curriculum structure and time management, which received the highest percentage of negative responses, indicating that many found these aspects to be difficult or stressful (Table 3).

Table 3 – Summary of responses according to theme

Theme	Positive (%)	Neutral (%)	Negative (%)
Perceived Effectiveness of CBDC	51	33	16
Faculty Stress, Pressure & Adaptation	54	18	28
Faculty Strength & Resource Availability	38	45	17
Professional Development & Training	76	12	12
Curriculum Structure & Time Management	34	16	50
Teaching Methods & Feedback	63	23	14

- Positive = Agree/Strongly Agree, Like/Strongly Like, Sufficient, Helpful.
- Neutral = Neutral, Moderately, Slightly (when indicating balanced response).
- Negative = Disagree/Strongly Disagree, Insufficient, Very/Extremely difficult/stressful, Not helpful.

4.6 Recommendations for Smoother Implementation:

Qualitative data revealed a strong consensus on several measures to enhance CBDC implementation. These included:

- Comprehensive pre-implementation training for all faculty, rather than selected representatives.
- Recruitment of additional teaching staff in line with curriculum demands.
- Phased implementation, beginning with human resource development and training, followed by infrastructure enhancement, and culminating in full-scale rollout.
- Streamlining of documentation processes to reduce administrative burden.
- Upgrading facilities for skill-based learning and IT/MET support.
- Regular workshops and Training of Trainers (TOT) programmes, preferably coordinated by AYUSH.
- Systematic workload analysis to ensure equitable distribution, particularly in high-content disciplines such as Materia Medica and Organon.

DISCUSSION

The findings of the present study align with and expand upon existing literature concerning the challenges and perceptions of implementing Competency-Based Medical Education (CBME). Our results, which highlight faculty concerns regarding workload, inadequate resources, and the need for comprehensive training, resonate strongly with observations from other recent studies in India and globally. It is important to note that, to our knowledge, there are no published studies specifically related to faculty perspectives on the Competency-Based Dynamic Curriculum (CBDC) in Homoeopathic medical education. This study, therefore, provides a crucial preliminary perspective from this specific sector.

Consistent with the findings of Rustagi et al. and Agrawal et al., a significant proportion of faculty in our study lacked confidence in their preparedness for the new curriculum. While Rustagi et al. (2019) reported that 87.9% of faculty were aware of CBME, only 51.7% felt it would produce better doctors, an ambiguity also reflected in our finding that a considerable proportion of respondents remained neutral on the effectiveness of the curriculum.[4] Similarly, Agrawal et al. (2024) noted that 20% of their respondents were still confused about the complexities of CBME, which is consistent with the unclear understanding theme that emerged from our qualitative data.[5] The near-unanimous agreement (89.29%) among Homoeopathic faculty on the need for systematic training echoes the conclusions of Ai Li E et al. (2023) and Tannenbaum et al. (2020), who both emphasized that professional development is a priority for a successful transition.[6,7] The suggestion from Homoeopathic faculty for comprehensive pre-implementation training for all teachers, rather than a few representatives, directly addresses the issue of inconsistent training noted by Agrawal et al.[5]

The issue of faculty shortage and increased workload was a prominent concern in our study, with 78.58% of respondents agreeing or strongly agreeing on the need for more teachers. This finding is reinforced by the study by Ramanathan et al. (2023), which found that over 80% of faculty in their study opined that faculty numbers were inadequate for successful CBME implementation.[8] The qualitative feedback from our study also pointed to issues such as overloaded teaching hours and parallel batches, further illustrating the strain on existing staff. Tannenbaum et al. (2020) and Ai Li E et al. (2023) also cited time constraints and faculty time commitment as significant challenges in their respective contexts.[6,7]

In contrast to some earlier studies, our findings on curriculum structure showed mixed perceptions. While Agrawal et al. (2024) and Ramanathan et al. (2023) found that a majority of faculty welcomed horizontal integration, our study indicated mixed perceptions about vertical integration, with 44.64% remaining neutral on its success in bridging the gap between subjects.[5,8] The perceived rapid rollout of the curriculum, with 62.5% of Homoeopathic faculty agreeing or strongly agreeing that it was happening too quickly, aligns with a key implementation challenge identified in the literature, reinforcing the need for a phased approach as suggested by our faculty.

Finally, our study highlighted the importance of feedback and infrastructure. Our respondents highly valued constructive feedback, with over 62% rating it as very helpful or extremely helpful. This contrasts with the findings of Ai Li E et al. (2023), who found that faculty were less certain about how feedback should be delivered.[7] The lack of adequate infrastructure, particularly for skill-based training and IT support, was a common challenge noted in our study, a point also raised by Agrawal et al. (2024).[5]

In conclusion, our findings support the widespread challenges of implementing CBME, particularly in the areas of faculty training, resource allocation, and workload management. The study provides a crucial perspective from the Homoeopathic medical education sector, revealing that despite a general acceptance of the new curriculum, significant operational and logistical hurdles remain. Addressing these issues through targeted interventions, such as those recommended by Homoeopathic faculty, is critical for the successful and sustainable implementation of CBME.

This study has some limitations, primarily due to its nature as a pilot study conducted to gather preliminary data before a large-scale investigation. The findings are based on a small cohort of first-year BHMS faculty and therefore may not be generalizable to the entire population of faculty across all institutions. The purpose of this pilot was to test the methodology, refine the research instruments, and assess the feasibility of a broader investigation, with the results informing the design of a comprehensive, full-scale study.

CONCLUSION

Despite general faculty acceptance of the new Competency-Based Dynamic Curriculum (CBDC) for the BHMS program, its implementation faces significant challenges, as revealed by this pilot study. A majority of the faculty found the rollout of the curriculum to be too rapid and perceived it as a moderate to high stressor. Key hurdles identified include an acute shortage of faculty, inadequate and inconsistent training, and excessive documentation requirements. While over half of the respondents agreed the CBDC effectively meets educational goals, a substantial portion remained neutral on its success in integrating subjects, indicating mixed perceptions. The study highlights a strong consensus on the need for comprehensive pre-implementation training, increased staffing, and a phased rollout to ensure the curriculum's sustainable success.

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8. Conflicts of interest: There are no conflicts of interest.

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