Critical Appraisal of Competency Based Dental Education Depicted in Draft of Bachelor of Dental Surgery Program Regulations 2022 Notified by Dental Council of India as Against English Speaking Developed Countries-USA and UK and Proposing Structural Updated Model of Competency Based BDS Curriculum: A Study Protocol

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ABSTRACT

Purpose: To critically appraise and compare the Competency Based Dental Education draft of Bachelor of Dental Surgery (BDS) Program Regulations 2022 notified by Dental Council of India against those in English Speaking Developed Countries as in vogue in USA and UK and propose structural updated model of Competency Based BDS Curriculum in India availing comparative findings.

Methods: Through comprehensive systematic review, required studies were deciphered in the given area for the present descriptive comparative content analysis and competency mapping. The search modality for Medline, PubMed, ERIC, Web of Science, Scopus, Cochrane Library, Google Scholar, Research gate, and cross-references with relevant keywords as identifiers. 69 articles were deciphered through PubMed Database and seven more additional record through other database searches. Total 76 articles came to be included. The search modality with relevant keywords as identifiers are used. Nine articles identified for systematic review.

Result: The systematic review has revealed that during the proposed competency based dental education no study for comparison with the dental education as in vogue has been brought out, which has evoked Comparative Evidence Gap. New updated model of Competency Based Dental Education of Bachelor of Dental Surgery Program will be generated.

Conclusion: New updated model generated by identifying structural gaps evoked by the comparison undertaken in the present study of Competency Based Dental Education draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India could be availed by Higher Authorities for its utilization as a basal referral document for required policy making in consultation with the Government of India.

Keywords: Competency; Dental Curriculum; Choice Based; Electives; Outcome Based

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INTRODUCTION

The *'Dentistry'* is evolving, and the arena is one that appeals intellectual, innovative and striving students concerning an established patient care oriented profession. Current dentistry program could be revised in order to address a few underlying issues and shortcomings, including the congestion and fragmentation of the curriculum and the lack of '*comprehensive patient care model'* for clinical education, inadequate clinical applicability of basic science concepts and lack in competency based education as per Manoharan PS (2019).

The history of health professions education reflects a continuing effort to ensure that graduates are adequately prepared to meet the changing needs of patients, communities, and healthcare systems. Frenk J et al. (2019) and Tyler RW (1949) discussed about the educational reforms over the past centuries. These educational reforms have progressively shifted from the transmission of scientific knowledge toward the development of integrated professional competencies and, more recently, toward preparing health professionals who can contribute to the improvement of healthcare systems.

The evolution of health professions education is commonly described through three broad generations of reform by many authors- Chambers DW (1993), American Dental Education Association (2008), Tonni I (2020), World Federation for Medical Education (2020), Flexner A. (1910), Duffy TP (2011), Mitka M (2010), Barrows HS (1986), Harden RM (1984 and 2024), the Lancet Commissions (2010), Skochelak SE (2021) as:

- *Informative,*
- *Formative,* and
- *Transformative Education*

The first generation emphasized the acquisition of scientific knowledge and established a strong biomedical foundation. The second generation moved toward learner-centred and integrated educational approaches, emphasizing problem-solving, clinical reasoning, and professional development. The third generation expanded the purpose of education beyond individual competence to include leadership, teamwork, social accountability, health-system improvement, and the ability to respond to population needs. This progression has had a substantial influence on contemporary dental education. Modern dental curricula increasingly emphasize measurable learning outcomes, competency-based education, early clinical exposure, integrated learning, workplace-based assessment, reflective practice, evidence-informed care, professionalism, and patient-centred practice.

The introduction of Competency-Based Medical Education by the National Medical Commission provided an important precedent for competency-oriented reform across Indian health professions education (MCI 2018). Similar developments in allied health and nursing education further strengthened the movement toward competency-based approaches.

The development of a competency-based undergraduate dental curriculum under the National Dental Commission (NDC, 2023-2024) framework represents an important step in the modernization of Indian dental education. The emerging approach emphasizes clearly defined competencies, integration of biomedical and clinical sciences, early clinical exposure, competency-based assessment, communication, professionalism, ethics, reflective learning, self-directed learning, community orientation, research exposure, and certification of competence.

The Indian transition therefore represents a movement from a predominantly time-based and procedure-oriented model toward an outcome and competency-oriented framework. Its successful implementation will depend on faculty development, institutional preparedness, standardized assessment, infrastructure, digital systems, stakeholder engagement, and continuous quality improvement.

Today's need of dental professionals with a strengthened foundation to provide primary oral healthcare with competence. The current trend in education moves away from simply accumulating knowledge (Flexner,1910)

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towards developing specialized skills (SPICES, 1984) and fostering the adaptive, empathetic, and professional mind-set necessary for 21st Century healthcare (Lancet's Transformative model, 2010). Recent perspectives on health professions education emphasize the need for curricula that are socially responsive, competency-driven, technologically enhanced, and designed to support lifelong learning and interprofessional collaboration within evolving healthcare systems.

METHODOLOGY

Systematic Review of Literature

Through systematic review, required studies were deciphered in the given area for the present study. The search modality for Medline, PubMed, ERIC, Web of Science, Scopus, Cochrane Library, Google Scholar, ResearchGate, Textbooks and Cross-references with relevant keywords and MeSH Terms as identifiers was as under:

- Competency-Based Education,
- Competency-Based Dental Education,
- Competency-Based Health Profession Education,
- Comparison of dental education Worldwide,
- Critical appraisal of dental education,
- Choice Based Credit System in Dentistry,
- Dental Curriculum,
- Dental Education,
- Dental Education Reforms,
- Dental student's assessments,
- Dental Syllabus,
- Electives,
- Evidence-Based Dental Education,
- Indian dental curriculum,
- Learning outcome,
- National Education Policy of India,
- Student's Feedback

The reference lists were identified manually looking up pertinent articles and scanning them. Apart from the aforementioned, official websites were utilized as additional resources for the Review of Literature as below –

- DCI,
- UGC,

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- MUHS Nashik,
- National Institute of Health & Family Welfare, and
- Ministry of Education

This systematic review was conducted as per the guidelines of PRISMA-Preferred Reporting Items of Systematic Reviews and Meta-Analyses-(Moher D, 2009) as shown in Figure 1.

A systematic electronic search of PubMed was performed, limited to English-language articles. Prominence is given to the studies published in past 15 years between 2010-2024.

Boolean Operators- AND, OR used to combine terms effectively.

RESULT OF SEARCHES

79 articles were deciphered through PubMed Database and 17 more additional record through other database searches. As such, total 96 articles came to be included. Total nine studies included after excluding duplicates and irrelevant studies.

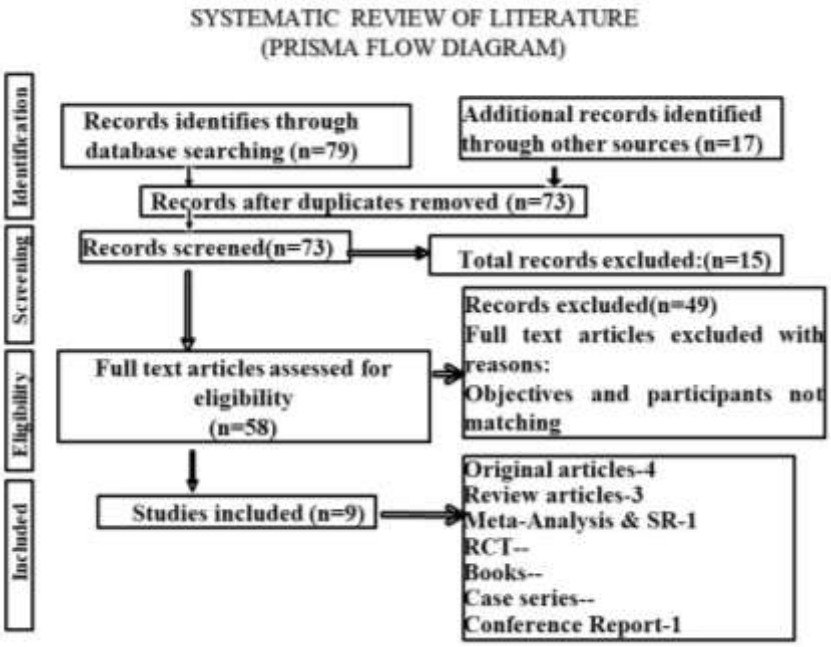

Figure 1. PRISMA Chart

Table 1: PRISMA-S EXTENSION

Topic	Item	Checklist item
Data base name	1	Medline, PubMed, ERIC, Web of Science, Scopus, Cochrane Library, Google Scholar, ResearchGate, Textbooks and Cross-references
Registries	2	-
MeSH Terms	3	Competency-Based Education, Competency-Based Dental Education, Competency-Based Health Profession Education, Comparison of Dental Education Worldwide, Critical appraisal of Dental Education, Choice Based Credit System in Dentistry,

		Dental Curriculum, Dental Education, Dental Education Reforms, Dental Student's Assessments, Dental Syllabus, Electives, Evidence-Based Dental Education, Indian Dental Curriculum, Learning outcome, National Education Policy of India, Student's Feedback
Search Strategies	4	MeSH terms, Keywords, headlines, terms and citations are used as search strategies to collaborate the data
Selection Process	5	Articles reporting on any one or more on Choice Based Credit System in Dentistry, Competency-Based Dental Education, Dental Curriculum, Comparison of dental education Worldwide.
Limits and Restrictions	6	Prominence is given to the studies conducted within the 15 years. Studies before this period were used to describe the historical evidences.
Search Filters	7	Studies does not address research question, Incomplete abstracts and studies with weak methodology are filtered.
Total Records	8	Regulatory documents, SR & meta-analyses, journal Original Research and Review articles, Conference Report. A total of 9 review of literature was the part of the study.

Table 2: Research Articles Included

Sr. No	**Type of article**	**Total**
1	Original Article	4
2	SR & MA	1
3	RCT	-
4	Review	3
5	Books	-
6	Dissertations	-
7	Conference Report	1
Grand Total		**9**

Table 3: Research Gap Analysis

S.N.	**Title of the Article/ Author/ Year of Publication**	**Research Focus**	**Conclusion by the Author**	**Remarks of the Scholar (Type of Research Gap)**
1	*Virdi MS. Reforming undergraduate dental education in India: introducing a credits and semester system.* *J Dent Educ. 2011 Dec;*	**Original Research-** • Explores the potential benefits and implications of implementing	• Provide greater flexibility, • Enhance student-learning experiences, • Better prepare graduates	• Method of calculation of educational hours & credit points not addressed-equal credit of 1 given with 10 semesters without internship

	75(12):1596-602. PMID: 22184599.	'*credits and semester system'* within dental school**.**	for professional practice. • This system could address several current shortcomings in the traditional educational structure, such as rigidity and a lack of alignment with modern educational practices.	• Disparity in Alignment with Global Standards • Insufficient data about Educational Outcomes • **(Knowledge Void Gap)**
2	*Rao LN, Hegde MN, Hegde P, Shetty C. Comparison of dental curriculum in India versus developed countries. NUJHS 2014; 4:121-4.*	**Review Article-** • Comparison of dental curriculum in India versus developed countries. • Evaluate the differences in curriculum structure, content, and educational methodologies. • (DMD degree in Penn University, Pennsylvania, USA & Kings College of London, UK)	• Provided early clinical exposure to integrate theoretical and practical dental knowledge • There are significant differences between the dental curricula of India and those of developed countries. • Developed countries typically have more advanced and comprehensive curricula that include a greater emphasis on clinical skills, research, and technological advancements. • Indian dental education could benefit from incorporating some of these elements to enhance the overall quality of training and align it more closely with international standards. • Rural posting-Indian Curriculum	• Disparity between the current status of dental education in India and that in developed countries • Curriculum Content not described in detail including T-L Methods, assessments and grading system. • **(Knowledge Void Gap)**
3	*Manivasakan S, Sethuraman KR, Narayan KA. The Proposal of a BDS Syllabus Framework to Suit Choice Based Credit System (CBCS). J Clin Diagn Res. 2016 Aug; 10(8):JC01-5. doi: 10.7860/JCDR/2016/19 529.8279. Epub 2016*	**Original Research-** • Propose a new framework for the Bachelor of Dental Surgery (BDS) syllabus that aligns with the Choice Based Credit System	• The proposed BDS syllabus framework based on CBCS can improve the educational experience for dental students by providing them with greater flexibility in their course selection. • Enhance their learning	• Lack of a structured approach to incorporating CBCS into the BDS curriculum including eight semesters. • Absence of Evidence of such an adaptable framework in current dental education systems.

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	Aug 1. PMID: 27656467; PMCID: PMC5028490.	(CBCS). • Focus on how to redesign the BDS curriculum to make it more flexible and adaptable to the needs of students and the evolving demands of the dental profession with structured BDS syllabus	outcomes • Better, prepare students for their professional careers. • Help in accommodating diverse learning needs and preferences • Contributing to a more tailored and effective education in dentistry.	• **(Comparative Evidence gap)**
4	*Manivasakan, S., Sethuraman, K., & Adkoli, B. Acceptability and feasibility of Choice based credit system in BDS Syllabus. International Journal for Innovation Education and Research, (2016) 4, 73-80.*	**Original Research-** **opinion survey-** • Evaluate the acceptability and feasibility of implementing a Choice Based Credit System (CBCS) within the Bachelor of Dental Surgery (BDS) syllabus.	• CBCS is both acceptable and feasible to varying extents, with a focus on practical implementation and stakeholder's perceptions. • Several gaps related to curriculum development, implementation, flexibility, and stakeholder's acceptance in the context of aligning dental education with a more modern and adaptable credit system.	• Need more clarity about integration of the CBCS effectively. • Perspectives of various stakeholders regarding CBCS in dental education not explored sufficiently. • **(Comparative Evidence and Population Gap)**
5	*Terry R, Hing W, Orr R, Milne N.* *Do coursework summative assessments predict clinical performance? A Systematic Review. BMC Med Educ. 2017 Feb 16;17(1):40. doi: 10.1186/s12909-017-0878-3. PMID: 28209159; PMCID: PMC5314623.*	**Systematic Review-** • The relationship between coursework summative assessments (exams and written assignments) and clinical performance (practical skills and competencies) in medical education. • Determining whether the results from coursework	• *'Objective Structured Clinical Examination'* (OSCE) is proper summative assessment tool. • Limited evidence supports a strong predictive relationship between coursework summative assessments and clinical performance. • Variability in the quality and design of studies. • The need for more robust and well-designed research to clarify the extent to which summative assessments can predict clinical	• Lack of strong, consistent evidence linking coursework summative assessments to clinical performance in terms of Quality of Evidence, Variability in Results & Study Design • Inadequate Predictive Models • Need Longitudinal Studies and Standardization of Metrics • **(Comparative Evidence Gap)**

		assessments can be reliably used to predict how well students perform in clinical settings.	performance.	
6	*Biswas, S. (2018) Choices Based Credit System(CBCS)— An analytical study. IJRAR-International Journal of Research and Analytical Reviews VOLUME 5 I ISSUE 3 I JULY– SEPT 2018] E ISSN 2348 –1269, PRINT ISSN 2349-5138*	**Analytical Study/ Review** • Intended to emphasize the analysis of the Choice-Based Credit System. • Strengths, weaknesses, implementation challenges of CBCS discussed.	• The implementation of CBCS system beneficial for Student-centric approach of education Creates interest and applicability in the scope of study. • CBCS enhances flexibility and learning autonomy; challenges include assessment standardization • Calls for clear guidelines and faculty development for successful implementation • Introducing critical thinking and analysis, which leads to creativity and innovation in the educational system	• No empirical data; analytical only • **(Empirical gap)**
7	*Tonni I, Gadbury-Amyot CC, Govaerts M, Ten Cate O, Davis J, Garcia LT, Valachovic RW. ADEA-ADEE Shaping the Future of Dental Education III: Assessment in Competency-Based Dental Education: Ways forward. J Dent Educ. 2020 Jan;84(1):97-104. doi: 10.1002/jdd.12024. PMID: 31977092.*	**ADEA-ADEE Conference 2019 Association Report-** • Exploring and analysing the assessment strategies within Competency-Based Dental Education (CBDE).	• Dental education has had challenges implementing effective assessment systems. • While there have been advancements in the assessment strategies for CBDE, there are still several challenges that need to be addressed.	•Need for more robust and validated assessment tools •Feedback Mechanisms inadequate •Lack of guidelines related to integrating assessment methods into the curriculum •**(Empirical Gap)**
8	*Kakodkar PV, Manivasakan S. National Education Policy 2020 Compliant Multidisciplinary Education and Research Universities for Dental Education in India - A*	**Review Article-** • It investigates the framework for establishing Multidisciplinary Education and Research	• Integrating multidisciplinary education can significantly improve the quality and relevance of dental training. • The paper outlines a	•Practical challenges in implementation of NEP 2020 in dental education •Lack of empirical evidence demonstrating the effectiveness of multidisciplinary

	Road map. Journal of Medical Evidence. (2022). 3. 10.4103/JME.JME_107_21.	Universities (MERUs) that align with NEP 2020's vision. • Explores how such Universities could enhance dental education through multidisciplinary approaches, promoting both academic and research excellence.	roadmap for implementing NEP 2020's principles in dental education. • Emphasizing the need for structural and curricular reforms to facilitate a more holistic and research-oriented educational environment.	approaches in improving dental education outcomes. •Need for faculty training and development to support new pedagogical methods aligned with NEP 2020 not fully addressed. •Absence of detailed analysis regarding the infrastructure and resources required. • **(Empirical gap)**
9	*Kabra L, Santhosh VN, Sequeira RN, Ankola AV, Coutinho D. Dental curriculum reform in India: Undergraduate students' awareness and perception on the newly proposed choice based credit system. J Oral Biol Craniofac Res. 2023 Sep-Oct;13(5):630-635. doi: 10.1016/j.jobcr.2023.08.003. Epub 2023 Aug 11. PMID: 37637854; PMCID: PMC10448454.*	**Cross-sectional survey** • Assess the awareness and perception of the CBCS among dental undergraduate students in Belagavi City, India	• Newly proposed CBCS Syllabus • Awareness, perception, acceptance • Moderate awareness (~60%); mixed perceptions on CBCS benefits	• Need for better communication and orientation programs for students • Single institution; limited generalizability • Important for stakeholder engagement **(Comparative Evidence and Population Gap)**

Summary of Research Gap Identified

In Tables 1-3, the systematic review has revealed that during the proposed competency based dental education no study for comparison with the dental education as in vogue has been brought out, which has evoked Comparative Evidence Gap.

The present study therefore, in the context of perceived needs would be an attempt to bridge the revealed Research Gaps in an attempt to evolve a competency based model conforming to Global standards for the Proposed Model of Competency Based Dental Education Curriculum of Bachelor of Dental Surgery in India.

Research Gaps: Comparative Evidence Gap

In India, Competency Based Medical Education (CBME) introduced in 2019 by the National Medical Commission (NMC) for undergraduate medical education. The Dental Council of India is a Statutory Body, regulating dental education and the dental profession throughout the India. The DCI has notified draft of BDS (Bachelor of Dental Surgery) Program Regulations, 2022 which is compatible with the Competency Based Dental Education inspired by the ADEA and EDEA to meets international standards. The new curriculum was designed to strike the best possible balance between traditional hands-on training, the “choice-based credit system (CBCS-NDC, 2023-24), National Education Policy (NEP, 2020), and education 4.0". All over the

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world, there is an increasing awareness among many institutions regarding the 'Outcome Based' and 'Competency Based Dental Education' (CBDE) over the last two decades.

There is an urge in dentistry education to begin internationally recognized competences and quality standards. The curriculum should be subject-wise integrated, operational competency-based model, and comprehensive patient care model with the incorporation of Core, foundation and electives courses systematically.

But, new Draft lacking in Universal Course Outline (not mentioned Foundation Course), a 'comprehensive patient care model' for clinical education, the clinical applicability of basic science concepts and Operational model for implementation of Curriculum. This Draft apply choice based credit system to Core Courses along with Elective subjects. However, its implementation will create lots of misperception and complications in faculties and students. Therefore, there is a need to implement Universal structural updated CBDE in Indian dental education system to maintain global standard.

Hence, it becomes imperative to analyse the curriculum of developed English-speaking countries (USA and UK) with the draft of BDS (Bachelor of Dental Surgery-Proposed CBCS-CBDE, 2022) Program Regulations, 2022 which has been notified by Dental Council of India.

After reviewing the literature, it has revealed that no study in India was compared above Dental Draft Curriculum with the English-speaking Developed Countries Dental Curriculum, which has evoked Comparative Evidence Gap. Some of the studies on this draft were based on faculties and student's perceptions about new dental curriculum. Therefore, it becomes imperative to compare and critically appraise the new curriculum draft of India with that of developed English-speaking Countries (USA and UK), as the Dental Curriculum of USA and UK is applicable Universally. Hence, it is necessary for further modifications in this new draft curriculum in future for maintaining global standard of dental education in India.

The present study, therefore in the context of perceived needs would be an attempt to bridge the revealed Research Gaps in an attempt to evolve the Proposed Structural Updated Model of Competency Based Dental Education Curriculum of Bachelor of Dental Surgery in India to conforming the Global standards. Hence, a descriptive comparative content analysis and competency mapping study is undertaken to compare and critically analyse the draft Curriculum of India notified by DCI with that of English-speaking Developed Countries-USA and UK.

Research Question

- Is the Competency Based Dental Education depicted in draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India (now, National Dental Commission-NDC) comparable and critically appraise with the Competency Based Dental Education in English speaking developed countries as in vogue in USA and UK?
- Whether comparative and critical appraisal of draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India with that of Competency Based Dental Education in English speaking developed countries as in vogue in USA and UK would result in generation of Proposed Structural Updated Model of Competency Based BDS Curriculum in Conformity with the said curricula?

Phases of the Study

The study conducted in two phases.

Phase-1 & Phase-2

Phase-1

Research Question - Is the Competency Based Dental Education depicted in draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India comparable and critically appraise with the Competency Based Dental Education in English speaking developed countries as in vogue in USA and UK?

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Aim:

- To compare and critically appraise the Competency Based Dental Education draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India against those in English Speaking Developed Countries as in vogue in USA and UK.

Objectives:

- To review the Competency Based Dental Education draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India.
- To review the Competency Based Dental Education Curriculum of Bachelor of Dental Surgery as in vogue in USA.
- To review the Competency Based Dental Education Curriculum of Bachelor of Dental Surgery as in vogue in UK.
- To compare the Competency Based Dental Education draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India against those in English Speaking Developed Countries as in vogue in USA and UK respectively.
- To critically evaluate the Competency Based Dental Education draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India against those in English Speaking Developed Countries as in vogue in USA and UK respectively.

Phase-2

Research Question –

Whether comparative and critical appraisal of draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India with that of Competency Based Dental Education in English speaking developed countries as in vogue in USA and UK would result in generation of Proposed Structural Updated Model of Competency Based BDS Curriculum in Conformity with the said curricula?

Aim:

- To critically appraise the draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India with that of Competency Based Dental Education in English speaking developed countries as in vogue in USA and UK for proposing Structural Updated Model of Competency Based BDS Curriculum in India availing comparative and critical evaluation findings.

Objective:

- To generate a Structural Updated Model of Competency Based BDS Curriculum upon comparison and critical appraisal of draft of Bachelor of Dental Surgery Program Regulations 2022 with that in vogue in English speaking countries namely USA and UK.

Research Design

- **Type or Nature of Study -** A Systematic Review with Descriptive Comparative Content Analysis and Competency Mapping Study
- **Sample Size -** Not applicable
- **Commensurate Sample Size -** Two developed English speaking Countries, USA and UK compared for curriculum with Indian Dental Draft.

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Selection Criteria:

- **Inclusion criterion:**

  - Competency Based Dental Education draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India
  - Dental Curriculum of USA and UK

(Official documents duly notified by the above Competent designated statutory authorities).

- **Exclusion criterion:**

  - Dental Curriculum of all the countries excluding USA and UK.
  - The Curriculum of non-English- speaking countries are not taken into consideration for the study.
  - The Studies does not address research question, incomplete abstracts and studies with weak methodology.

A detailed PICO framework for inclusion and exclusion criteria shown in Table No. 4. A modified PICO search was defined for Population/Participants, Intervention/Method, Comparison/Control and Outcome/Interest.

Studies does not address research question, incomplete abstracts and studies with weak methodologies were excluded.

Table 4: PICO Framework: Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Population	Undergraduate Dental Students, All Stakeholders and Dental Institutions in India, USA and UK	Postgraduate or Other Health Professions Students
Intervention	Competency Based Dental Education Curriculum proposed by Dental Council of India (Now, NDC)	Traditional Current Indian Dental Curriculum
Comparison	USA and UK Competency Based Dental Curriculum	Dental Curriculum of all the countries excluding USA and UK.
Outcomes	Academic/ Program Outcome- Core Competencies achieved by students (Competent Dental Practitioners with holistic development)	Non-academic outcomes only
Study Design	Quantitative, Qualitative, mixed-methods, Systematic Reviews, Comparative Reviews, Descriptive/Opinion studies, Conference Proceedings	Editorials, Books and Document and Clinical Trials
Publication range	2010-2024 (15 years data)	Pre-2010 Publications
Language	English studies	Non-English Studies

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Quality Assessment Tool: JBI Critical Appraisal Tool

Methods with Justification

Methodology for Curriculum Analysis

After the ethical committee clearance, the online search for Bachelor of Dental Surgery curriculum of Two English-speaking developed countries was undertaken i.e. United States of America and United Kingdom. In current scenario, most international accreditation bodies recommended dental curriculum based on Outcome-Based and Competency Based Dental Education. Dental Council of India has given a set of program outcomes that are compatible with the requirements based on the ADEA (American Dental Education Association) and EDEA (European Dental Education Association).

Steps undertaken for selection of curriculum to be studied-

Steps involved-

- **Step 1- Procurement** of the official document on Competency Based Dental Education draft of Bachelor of Dental Surgery Program Regulations 2022 notified by the Dental Council of India, New Delhi.
- **Step 2- Procurement** of the Competency Based Dental Education Curriculum downloaded from official website of United States of America.
- **Step 3- Procurement** of the Competency Based Dental Education Curriculum downloaded from official website of United Kingdom.
- **Step 4- Comparison** and **Critical Appraisal** of the Competency Based Dental Education draft of India with operational model of Competency Based Dental Education Curriculum of USA and UK respectively.
- **Step 5- Evolving and Proposing** Structural Updated Model for Competency Based Dental Education of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India.

Parametric Structural Analysis

The comparison for identification of structural gaps in terms of: -

1. Eligibility
2. Course structure
3. Syllabic inclusions and non-inclusion and Integration of course topics
4. Number of Competencies
5. Credit Hours System
6. Teaching-Learning methods (Innovative Teaching-Student's Engagement-Early Clinical Exposure, Hybrid Learning etc.)
7. Modes of Assessment-Formative and Summative including OSPE/OSCE, AETCOM, Entrustable Professional Activities (EPA)
8. Electives
9. Alternative Degrees

10. Exit test

Expected Result/ New Knowledge Generation (In Anticipation)

New updated model generated by identifying structural gaps evoked by the comparison undertaken in the present study of Competency Based Dental Education draft of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India, which can then be communicated to policymakers for appropriate action**.**

CONCLUSION

Translatory Component (Conceptualized)

The structural updated model so generated out of the present study by comparing Core courses and electives, teaching-learning methods, assessment, alternative degrees and exit test may be utilized to devise an updated model of the Competency Based Dental Education of Bachelor of Dental Surgery Program Regulations 2022 notified by Dental Council of India so as to place on par with the model in English speaking developed countries in vogue in USA and UK respectively and thereby conforming to the Global governing guidelines.

The structural updated model so proposed will be submitted to Higher Authorities for its utilization as a basal referral document for required policy making in consultation with the Government of India.

Limitations

Lack of evidence about Planning, Stakeholders opinions, Infrastructure requirements and Capacity Building. Lack of prior research in dentistry in relation to Competency Based Dental Education BDS Program Regulations 2022, limits detailed discussion of the study.

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