ORIGINAL RESEARCH

Relevance of Bridge Course from Bachelor of Dental Surgery to Bachelor of Medicine and Bachelor of Surgery—Is it a Valid Option to Aid Improve Rural Healthcare Scenario in India? A Questionnaire Study

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Abstract

The current rural healthcare scenario in India is extremely fragile with most of the healthcare facilities, and healthcare workers concentrated in the metropolitan cities. Rural India that forms the backbone of the Indian economy and contributes to a major segment of Indian population even today lacks the basic healthcare needs. Lack of infrastructure, low income, and poor quality of life are major factors that contribute to nonequitable distribution of the healthcare workers. On the contrary, increasing number of unemployed dental graduates is on a constant raise that seems to be a threat to the developing society. Bridge course for dental graduates seems to be a viable option to overcome these issues. However, this is an arduous task considering the current dental educational curriculum and the rural healthcare needs. The aim of the current paper was to determine the relevance of bridge course and assess its applicability in the current healthcare system for equitable distribution of the healthcare workers in the country.

Keywords: Bridge course for Bachelor of Dental Surgery, Healthcare worker distribution, Indian healthcare system, Rural health care in India.

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Introduction

Health care is one of the key indices in determining the nation's economic and societal well-being. India is one of the developing nations with a dearth in the population versus healthcare worker ratio. With increasing levels of privatization, health care is one of the mainstream departments that have seen drastic degrees of privatization with the best healthcare facilities centered in the urban areas. Currently, about 75% of the health infrastructure including manpower and medical resources is centered in the cities where only 28% of the Indian population resides.[1] Considering the large volume of the Indian population still residing in the rural/two-tier cities (82%), with a continual rise in the counts of contagious and noncontagious diseases, the demand for healthcare needs in these areas is seeing a steep increase. Though various strategies are being implemented by the government to improve the rural healthcare facilities, deficiencies still persist due to the alarming rate of increase in population in these regions as a result of which meeting these demands presents as a huge challenge. It is essential to provide the best of healthcare facilities in rural areas considering India being an agriculture-driven economy and humanitarian concern. Continual improvement in the economy, rural infrastructure, and access to technological advances is important to cater to the medical needs of the rural health population. However, lack of manpower to cater to the rural healthcare system has been a greater challenge to circumvent.

Irrespective of the volume of medical graduates exiting every year, the perennial dearth in the ratio of doctors to population is evident in the rural health setup with minimum doctors working in the rural areas.[2] Nonequitable distribution of the medical infrastructure with overcrowding of the urban areas has been considered the primary issue with a definite lack in the availability of medical graduates in the country. To circumvent the later issue, the proposal for introducing new medical courses in the form of Bachelors in Rural Health Care (BHRC) was put forth; however, it was not adequately supported considering the retrograde nature.[1]

To circumvent these foresaid issues, in 2016, the government had proposed the bridge course for Bachelor of Dental Surgery (BDS) graduates with an agenda to increase the manpower in the rural health sector. Though this proposal has received considerable opposition, it should not be ruled out considering the persistent dearth of healthcare workers at a grassroots level.

We consider that among all the medical/paramedical personnel, dental professionals could be well-suited beneficiaries for bridge course considering similar comprehensive training in basic and clinical medicine. However, this process of bridge course is extremely challenging considering the hurdles that include the

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additional medical subjects that they need to be trained in, ability to work in minimally equipped health center, the future of these graduates, and possibility of their interference with the career of medical graduates. Considering the foresaid facts, we thought an insight of the medical, dental practitioners and graduates on the pros and cons of the same, will be beneficial as they will provide baseline ideas and issues that need to be addressed prior to consideration of implementing bridge course. Thus, the aim of our study is to bring forward the opinions of the medical and dental fraternity and students on the bridge course for dental students to improve rural health care in India and analyze the pros and cons of the same for the both the fraternities and the beneficiaries (BDS graduates) and the healthcare system as a whole.

Materials and Methods

This study followed a cross-sectional study design conducted between May and August 2019. The objective was to generate the opinion of the medical and dental fraternity regarding the benefits, limitations, and hurdles of introducing "bridge course" to meet the shortage of doctors in the country, especially to serve in underserved areas. A questionnaire study was conducted that was answered by the fraternity and the trainees from medical and dental hospitals in government sector and private sector. These colleges were chosen randomly by drawing a lot from a list of dental and medical colleges. The staff, undergraduate, and postgraduate students formed the study population. After explaining the objective of the study, a predesigned, three-page questionnaire comprised of 19 questions (Table 1) was distributed to those who were willing to participate in the study. The data were then computerized and categorized on the basis of their field of practice. The questions were mainly based on the pros and cons involved in bridge course for dental graduates.

Results

A total number of 541 professionals took part in the survey with a major contribution from the medical graduates of 37.9% followed by BDS graduates of 30.0%, 22.9% of Master of Dental Surgery (MDS), and 8.9 % of medical postgraduates. A total of 91.3% of the population in consideration was aware of the proposal of bridge course for BDS graduates. About 53.1% of the population in consideration opines that there is a feasibility to train the BDS graduate to practice family medicine in rural areas. Most of the registrants opine that the current teaching (68%) of basic medical sciences at the dental colleges is inadequate and an additional training of 3 years (58%) is essential to enable a BDS graduate to practice family medicine. Gynecology, family medicine, and emergency medicine were considered the most important specialties that the graduates need to be trained in as a part of their curriculum that reveals that modifications in the medical curriculum are necessary to effectively utilize the training time frame. There is no definitive consensus over issues including legal bonding restricting the practice of bridge course graduates to rural areas and the adequacy of current rural healthcare setup to support the practice of family medicine by dentists. However, majority of the participants opined that the curriculum should be restricted to government institutions, and their admissions should be merit-based with even postgraduate dentists given the eligibility for the program (60.4%). A total of 64.7% of them support specialization benefits for these graduates.

Majority of the participants opined that both the statutory bodies of the Medical Council of India (MCI) and the Dental Council of India (DCI) should be responsible for endorsing these graduates and dealing with medicolegal consequences. Varied branches have been proposed to be added to the curriculum with gynecology and emergency medicine being the cornerstone of practice.

The foresaid results are summarized in Tables 2 and 3 and Figures 1 to 3, for easier comprehension. Majority (94.4%) of the participants considered that bridge course may be a good tool to provide equitable distribution of healthcare workers in rural areas.

Discussion

The healthcare system in India is extremely diverse with various forms of alternate medicine still in practice. Despite these, allopathy remains the cornerstone of the Indian healthcare system. The current Indian structure of public health care is a three-tier structure that was put forth in 1946 by the Bhore Committee regarding health.[3] The primary contention was to provide basic preventive and curative health to the rural and the urban population. The subcenters (1 center for 5,000 people/1 center for 3,000 people) form the primary building blocks of this system. Each subcenter is the most peripheral contact of the healthcare system that is manned by one male Health Worker and a female Auxiliary Nurse Midwife (ANM) or healthcare workers to attend to the healthcare needs of 5,000 people in a rural area or about 3,000 people in hilly/tribal areas that are difficult to access. These subcenters work under the directives of the Primary Health Centers (PHCs) which are under the directive of the Community Health Centers (CHCs) affiliated to the government district hospitals. The PHCs and CHCs are established by the state government and form an integral part of the minimum needs program/basic minimum services that aim at providing primary health care at rural levels. Each PHC is manned by 1 medical officer and 14 paramedical personnel and is the referral center for three subcenters with an inpatient facility of 4–6 beds. The CHC is the next referral center that is equipped with specialty medical services and 21 paramedical personnel and acts as a fully operational referral center.[4]

Over the years, the National Health Policy (NHP 1983) of India aimed at providing PHCs to all by 2000. This was further built up by NHP 2002 that aimed at provision of health care to all by decentralization and the use of private sector to meet the healthcare demands. This mixed healthcare system inclusive of public and private healthcare providers has become a double-edged sword. While the healthcare facilities are extremely advanced, in par with international standards in the urban areas, the status of the same in rural/tribal areas is still the same. The National Rural Health Mission that was launched in 2005 took multiple steps toward the development of the rural health status including the employment of 27,421 doctors at PHCs and 4,078 specialists in the CHCs by increasing the medical graduate capacity by 54% and postgraduate medical seats by 74% between 2005 and 2013.[4–6]

Despite these improvements in the healthcare system, the rural health has not seen the change that is envisaged in the urban healthcare facilities. Part of this may be attributed to the lack of ability to retain medical personnel in the rural health setup due to financial, lifestyle, and work pressure constraints.[7] Apart from this

inadequacy of medical personnel at the peripheral units leads to crowding of the tertiary referral centers, the CHCs and the district hospitals leading to a compromise in the quality of those can be provided for the patients.[7,8]

A recent congress *WONCA World Rural Health Conference* held in New Delhi 2018 followed by consultation with various practitioners/academicians from India and abroad had proposed a four-point strategy to improve the rural healthcare setup which include a family-centered healthcare system, higher investments in health care, state-funded insurances for health care extended to PHCs, and empowerments of healthcare teams. Increasing the manpower, providing good wages, and access for continual improvement may aid in retaining trained medical professionals in rural health setup.[9]

Table 1: Survey questionnaire

Name
Age
Degree:
1. Are you aware of the proposal regarding "MBBS bridge course" by the Ministry of Health, Government of India?
Yes/No
2. Do you think that practicing family medicine by a dentist is feasible?
Yes/No
3. Do you consider that current teaching of medical subjects in dental colleges at the undergraduate level is adequate?
Yes/No
4. How many years of training do you think is required to accomplish the same?
5. Do you think that there should be a legal bond that will restrict their practice only to rural areas?
Yes/No
6. Do you think these practitioners should be allowed to practice general dentistry?
Yes/No
7. Do you think the current condition prevailing in the rural PHCs is conducive for a dentist-family medicine doctor to practice medicine?
Yes/No
8. Which council do you think should recognize the degree?
MCI/DCI/Both
9. Who do you think should address the medicolegal concerns with a family dentist practicing medicine?
MCI/DCI/Both
10. Do you think there should be a restriction on the branches of medicine that should be practiced by general dentists trained in family medicine?
11. Do you think these doctors should be allowed for further training [superspecialities of medicine (MD/MS/MCH)]?
Yes/No
12. Do you think there will be insecurity at patient level when being treated by dentist-trained medical professional?
Yes/No
13. Do you consider that accident and emergency medicine should be a part of the curriculum?
Yes/No
14. Do you consider training in gynecology is essential?
Yes/No
15. What do you think about the pay scale for these doctors compared to MBBS doctors?
Similar to MBBS graduates/Less/More
16. Should this program be centralized only to government universities or should be extended to deemed universities?
Only government/also to private universities
17. Should postgraduate dentists also eligible for this bridge course?
Yes/No
18. Do you consider that admissions should be based on merit?
Yes/No
19. Should there be a legal bonding for the doctors from bridge course to practice only in rural areas?
Yes/No
20. Do you favor the proposal?
Yes/No

Table 2: Survey response

	N	*%*
Age-group		
21–23 years	299	63.5%
>23 years	172	36.5%
Gender		
Male	281	51.9%
Female	260	48.1%
Total	541	100.0%
Degree		
BDS	164	30.3%
MDS	124	22.9%
MBBS	205	37.9%
MD	48	8.9%
Total	541	100.0%
Awareness of the proposal regarding "MBBS bridge course"		
Yes	496	91.7%
No	45	8.3%
Total	541	100.0%
Feasibility of practice for these graduates		
Yes	287	53.1%
No	253	46.9%
Total	540	100.0%
Adequacy of current BDS teaching		
Yes	168	31.1%
No	373	68.9%
Total	541	100.0%
How many years of training do you think is required to accomplish the same?		
6 months	109	20.3%
1 year	117	21.7%
3 years	312	58.0%
Total	538	100.0%
Legal bonding on practice restriction		
Yes	277	51.4%
No	262	48.6%
Total	539	100.0%
Do you think these practitioners should be allowed to practice general dentistry?		
Yes	312	57.8%
No	228	42.2%
Total	540	100.0%
PHCs status for conducive practice		
Yes	269	51.2%
No	256	48.8%
Total	525	100.0%
Which council do you think should recognize the degree?		
MCI	115	21.4%
DCI	66	12.3%
Both	356	66.3%
Total	537	100.0%

Who do you think should address the medicolegal concerns with a family dentist practicing medicine?		
MCI	130	24.3%
DCI	70	13.1%
Both	335	62.6%
Total	535	100.0%
Do you consider there should be a restriction to the branches of medicine that can be practiced by general dentists trained in family medicine?		
Yes	334	62.7%
No	199	37.3%
Total	533	100.0%
Eligibility for superspecialty (MD/MS/MCH)		
Yes	347	64.7%
No	189	35.3%
Total	536	100.0%
Insecurity at patient level when being treated by dentist-family medicine		
Yes	330	61.3%
No	208	38.7%
Total	538	100.0%
Do you think that accident and emergency medicine should be a part of the curriculum?		
Yes	394	74.3%
No	136	25.7%
Total	530	100.0%
Do you think gynecology training is essential?		
Yes	338	62.9%
No	199	37.1%
Total	537	100.0%
What do you think about the pay for these doctors when compared to MBBS doctors?		
Same	217	40.4%
More	153	28.5%
Less	167	31.1%
Total	537	100.0%
Should this program be centralized only to government universities or should be extended to private institutions and deemed universities?		
Government colleges	301	56.1%
Include deemed universities	236	43.9%
Total	537	100.0%
Can postgraduate dentists also be eligible for this bridge course?		
Yes	326	60.6%
No	212	39.4%
Total	538	100.0%
Do you think that entrance examination is needed?		
Yes	313	58.3%
No	224	41.7%
Total	537	100.0%
What is your opinion on the current program (should be approved/rejected)?		
None	511	94.5%
Yes	30	5.5%
Total	541	100.0%

Table 3: Opinion on additional branches that need to be added as a part of bridge course

Branches of medicine should be included in the curriculum		*Responses*		*Percentage supporting the addition to curriculum*
		N	*Percent*	
Branches of medicine should be added to the curriculum	Trauma	99	12.3%	27.7%
	OG	101	12.5%	28.2%
	Emergency	135	16.7%	37.7%
	Surgery	63	7.8%	17.6%
	Med	105	13.0%	29.3%
	ENT	42	5.2%	11.7%
	Cardiology	30	3.7%	8.4%
	Pediatrics	68	8.4%	19.0%
	Diabetology	10	1.2%	2.8%
	Radiology	7	0.9%	2.0%
	Neurology	21	2.6%	5.9%
	Psychiatry	23	2.8%	6.4%
	Pathology	2	0.2%	0.6%
	Anatomy	20	2.5%	5.6%
	Casualty	7	0.9%	2.0%
	Social and preventive medicine (SPM)	15	1.9%	4.2%
	Physiology	11	1.4%	3.1%
	Biochemistry	7	0.9%	2.0%
	Pharmacology	11	1.4%	3.1%
	Forensics	4	0.5%	1.1%
	Genetics	4	0.5%	1.1%
	Dermatology	9	1.1%	2.5%
	Immunology	3	0.4%	0.8%
	Embryology	2	0.2%	0.6%
	Urology	4	0.5%	1.1%
	Orthopedics	4	0.5%	1.1%
	Ophthalmology	1	0.1%	0.3%

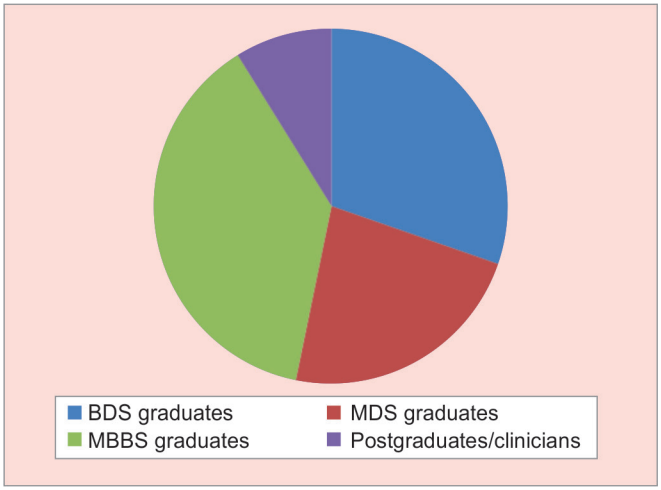

Fig. 1: Survey participants

Equitable distribution of healthcare workers is the first measure that needs to be addressed at the earliest to improve the rural healthcare needs. This can be augmented in case of need, to fulfill the existing deficiencies by bridge course for BDS graduates. This deficit in the healthcare system has been obvious during the current pandemic with dearth of doctors for fulfilling the duty, with dental graduates stepping up for the same. Bridge course may be an encouraging step that will provide a solution for the increasing demand of rural healthcare workers and also provide placement for an increasing number of unemployed dental graduates.

The proposal by the National Institution for Transforming India (NITI AYOG) was based on the fact that two major problems faced by the country will be solved. The first is acute shortage of MBBS doctors in the country, especially in rural areas. This may have an additional benefit in times of an epidemic or pandemic breakout as the bridge course doctors can be actively engaged in delivering medical services. Apart from this, dental students facing issues of recruitment after they complete their course can be addressed simultaneously.

Enhancing the current healthcare setup in PHCs by employing additional medical personnel through bridge course appears to be a lucrative option to reduce the rural healthcare burden. Employing a stringent curriculum including basic medical sciences with extensive training in the fields of family medicine, gynecology, obstetrics, and emergency medicine may aid in accomplishing the same. The training should be restricted to the government

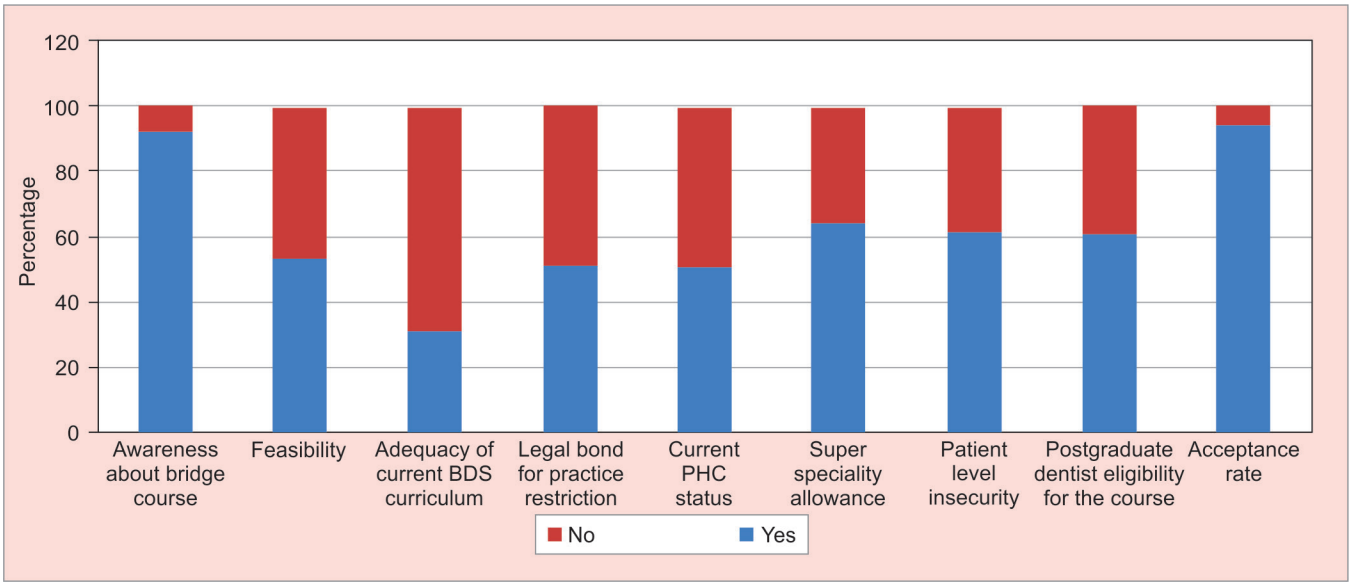

Fig. 2: Survey response

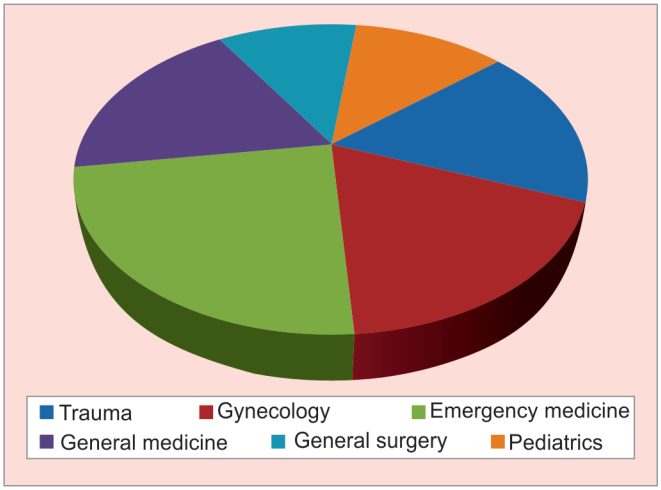

Fig. 3: Opinions on subjects that need to be included in the curriculum

universities and colleges and entrance into the curriculum should be merit-based. These graduates may be facilitated to pursue specialty medicine; however, their practice should be restricted to rural health centers. This procedure can be enhanced by short- and long-term bonds similar to those followed in defense services. However, it is essential to ensure the retention of these personnel in the rural health sector to avoid mushrooming of these doctors in the urban/private hospitals. Apart from this, stringent care in maintaining a constant ratio between the demand and supply of these medical personnel should be regulated by the government to avoid career conflicts among the medical and dental graduates and the graduates of bridge course.

Conclusion

To conclude, addition of bridge course for dental graduates may be a lucrative option to enhance the current rural health setup, provided a stringent structured program can be orchestrated by the governing bodies with measures to retain these doctors in the rural healthcare system. However, due consideration of demand and supply of doctors should be in check to avoid exhaustion of human resources.

References

1. Thayyil J, Cherumanalil JM. Issues of creating new cadre of doctors in rural India. Int J Med Public Health 2013;3(1). DOI: 10.4103/2230-8598.109305.
2. Singh S, Badaya S. Health care in rural India: a lack between need and feed. South Asian J Cancer 2014;3(2):143–144. DOI: 10.4103/2278-330X.130483.
3. Ma S, Sood N. Comparison of health care system in China and India. Rand Corporation: CA, USA; 2008 [Bhore Committee].
4. Chokshi M, Patil B, Khanna R, et al. A review of health care system in India. J Preinatol 2016;36(supp 3):S9–S12. DOI: 10.1038/jp.2016.184.
5. Peters DH, Rao KS. Lumping and splitting: the health policy agenda in India. Health Policy Plan 2003;18(3):249–260 [Privitisation of HCare]. DOI: 10.1093/heapol/czg031.
6. MOHFW National Health Policy. New Delhi: Ministry of Health and Family Welfare Govt of India; 2002.
7. Kasthuri A. Challenges to Healthcare in India–the five A's. Indian J Community Med 2018;43(3):141–143. DOI: 10.4103/ijcm.IJCM_194_18.
8. Rao KD. Situation analysis of the health workforce in India. Human Resources Technical Paper Public Health Foundation of India; 2011. Available from: http://www.uhc-india.org/uploads/RaoKD_SituationAnalysisoftheHealthWorkforceinIndia.pdf.
9. Mohan P, Kumar R. Strengthening primary care in rural India: lessons from Indian and global evidence and experience. J Family Med Prim Care 2019;8(7):2169–2172. DOI: 10.4103/jfmpc.jfmpc_426_19.