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Srabani Bhattacharya

Professor and Head, Physiology
Department, Rajiv Gandhi
Medical College, Kalwa, Thane,
Maharashtra, India

Sundaram Kartikeyan

Professor and Head, Community
Medicine Department, Rajiv
Gandhi Medical College, Kalwa,
Thane, Maharashtra, India

Yogesh R Yadav

Junior Resident-1, Community
Medicine Department, Rajiv
Gandhi Medical College, Kalwa,
Thane, Maharashtra, India

Corresponding Author:

Srabani Bhattacharya

Professor and Head, Physiology
Department, Rajiv Gandhi
Medical College, Kalwa, Thane,
Maharashtra, India

Perceptions of MBBS students regarding the national exit test

Srabani Bhattacharya, Sundaram Kartikeyan and Yogesh R Yadav

Abstract

This cross-sectional interview-based descriptive study was conducted using the convenience sampling technique on 374 respondents (females: 205; 54.81% and males: 169; 45.19%) to determine the perceptions of MBBS students regarding the proposed National Exit Test (or "NEXT"). A pre-tested and pre-validated questionnaire was administered online via Google forms to students aged 18+ years, of either gender, who were pursuing MBBS course (from First-year MBBS to Internship). Significant gender differences were observed in only in the responses of first-year MBBS students. Cost-benefit assessment of NLEs is considerably difficult. Quantifying the excess mortality and morbidity of patients that may be averted by NLEs is a challenging task. Deficient performance on an NLE does suggest sub-standard performance in practice. The assessment of professionalism should be taken up on par with evaluation of knowledge and skills. Workplace-based assessments are frequently employed to confirm the professional behaviour of trainees in real-life environments.

Keywords: MBBS students, national exit test, NEXT, perceptions

1. Introduction

As per Chapter 4, Section 15 of The National Medical Commission Act, 2019, a common final year undergraduate medical examination, to be known as the National Exit Test (or "NEXT"), shall be conducted for granting licence to practice medicine as medical practitioners and for enrolment in the State or the National Register. Any person with a foreign medical qualification shall have to qualify NEXT for obtaining licence to practice medicine as medical practitioner and the same test shall be the basis for admission to the postgraduate broad-speciality medical education in Indian medical institutions. The NEXT is expected to become operational within three years from the date of commencement of this Act, which was 08 August 2019^[1].

There is a striking divergence in the basic purpose of appraisal in MBBS, licensing and PG entrance examinations^[2]. While the intention of the MBBS and licensing examinations is to evaluate the minimum level of knowledge and competency, the PG entrance examination is competitive in nature and even the least difference in the ranks of any two candidates may lead to alteration in the course and/or the institute available at their rank^[2]. Thus, diverse types of valid, reliable and feasible tools ought to be employed to test these three modalities independently^[3].

There has been an increase in medical regulation mainly in the developed countries partly in response to the increasing demands for accountability and national licensing examinations (NLEs) were seen as a method for ensuring minimum standards^[4]. The efficacy of NLEs and suitability of current examination systems have been debated^[5-7]. In the developed countries, the widespread shortage of qualified doctors^[8] coupled with internationalization of medical training has resulted in a discernible increase in the mobility of the medical personnel from the developing countries^[9-12]. Worldwide, NLEs will inexorably proliferate^[13], driven by the rise in the numbers and assortment of medical schools and the increasing mobility of the medical workforce^[14]. There is difference of opinion on the structure, curriculum of NLEs and the type of candidates to be evaluated^[15-18].

Various studies^[19-21] have provided statistically valid confirmation that IMGs obtain lower NLE scores when compared with local medical graduates.

But, IMGs can circumvent regulations of the United Kingdom by obtaining citizenship in a European Union country and then enter the United Kingdom [13, 22] because as per current European Law, graduates from the European Union will be exempt under freedom of movement legislation. [23] A review concluded that there is little evidence available about the impact of NLEs on the quality of care across the international healthcare system. [24] This has caused apprehensions among experts because of noticeable differences in the standards of medical education internationally [25] and also because some students who get gain entry into foreign medical colleges would not have got admissions to medical institutions in their home country. [14] Migration of qualified medical personnel to developed countries (termed “brain drain”) has important implications for developing countries, [26, 27] and has been portrayed as an “obstacle to global health” [26].

It has been argued that all new doctors should pass a licensing examination to prove that they have achieved a minimum standard [28]. The divided viewpoints [29, 30] of academics are sustained by insufficient evidence [16-18]. Some studies have revealed correlations between NLE scores, patient outcomes [31] and superior performance in later career [13]. But these correlations do not prop up the contention that NLEs will improve standards [13] and create better doctors [13, 32]. One confounding variable is that those who obtain the highest scores are likely to get into the best institutions where the working environment itself may result in better patient outcomes and fewer complaints [33-35].

The debate on NLEs is marked by compelling opinions but is fragile in terms of proof for the claim that NLEs improve either the competence of practitioners or the safety of patients. [13] The proponents claim that NLEs would ensure that only those who achieve the required standards are allowed to practice and thereby, a nation’s population is reassured that only capable doctors who can practice safely are qualified. [13] It has been argued that NLEs “reassure patients, the public, and employing organizations that, regardless of where their doctor trained, they can be sure of a minimum level of competence”. [14] However, there exists a misplaced conviction that NLEs enhance patient safety, when they merely reassure the public. [13] In the assertions that NLEs lead to improved patient safety [17, 31, 36] and enhanced quality of care, [37] there seems to be a tendency to rely more on correlations and less on causal evidence.

The objective of the present study was to determine the perceptions of MBBS students regarding the proposed National Exit Test (or “NEXT”).

2. Materials and Methods

This cross-sectional interview-based descriptive study was conducted using the convenience sampling technique. A pre-tested and pre-validated questionnaire was administered online via Google forms to students aged 18+ years, of either gender, who were pursuing MBBS course (from First-year MBBS to Internship). Informed consent was taken on the Google forms. The data were adapted to Microsoft Excel spreadsheet (Microsoft Corporation, Redmond, WA, USA) and analyzed using SPSS statistical software Windows Version 25.0 (IBM Corporation, Armonk, NY, USA). The percentage of responses and the standard error of difference between two sample proportions were calculated. For continuous data, the standard error of difference between two means was calculated. 95% Confidence interval (CI) was stated as: [Mean-(1.96)*Standard Error] - [Mean+(1.96)*Standard Error]. The statistical significance was determined at $p < 0.05$.

3. Results and Discussion

There were a total of 374 respondents (females: 205; 54.81% and males: 169; 45.19%) from all years of the MBBS course.

3.1 Age distribution of respondents: Significant gender differences in the age distribution were observed amongst First-year and Second-year MBBS students ($Z=2.996$; $p=0.002$) and ($Z=2.334$; $p=0.019$), respectively, but the gender differences were not statistically significant for students of Third-year MBBS, Final-year MBBS and Interns (Table 1). The first quartile, median and maximum age of male students was more than that for their female counterparts in each year of the MBBS course (Fig. 1). The third quartile in age distribution of male students was more than that for their female counterparts, except for interns (Fig. 1).

3.2 Perceptions regarding impact of NEXT: More than three-fourths of respondents opined that a single NEXT would obviate the need to appear for multiple entrance examinations; that there would be a proliferation of expensive coaching centers for NEXT; that Online MCQ-based exams at MBBS level will help the students to qualify in NEXT; that the proposed questions on case scenarios in the NEXT will help in evaluating practical knowledge and that the pattern of the NEXT will assess the conceptual understanding, analytical and problem-solving skills. (Table 2). Significant gender differences were observed in only in the responses of first-year MBBS students. (Table 3).

Table 1: Age distribution of respondents

Year	Parameter	Females	Males	Z value	'p' value
1 st MBBS	Total	47	60	2.996	0.002 *
	Mean age (years)	19.13	19.92		
	SD (years)	0.82	1.82		
	95% CI (years)	18.89–19.36	19.46–20.38		
2 nd MBBS	Total	38	26	2.334	0.019 *
	Mean age (years)	21.11	21.92		
	SD (years)	0.86	1.62		
	95% CI (years)	24.46–25.12	21.30–22.55		
3 rd MBBS	Total	27	27	1.685	0.091
	Mean age (years)	22.19	22.85		
	SD (years)	1.33	1.54		
	95% CI (years)	21.68–22.69	22.27–23.43		
Final MBBS	Total	34	19	0.465	0.641
	Mean age (years)	22.71	22.89		
	SD (years)	0.97	1.52		
	95% CI (years)	22.38–23.03	22.21–23.58		

Intern	Total	59	37	1.172	0.241
	Mean age (years)	24.53	24.16		
	SD (years)	1.32	1.61		
	95% CI (years)	24.19–24.86	23.64–24.68		

SD = Standard deviation; CI = Confidence interval; Z = Relative deviate; *Significant

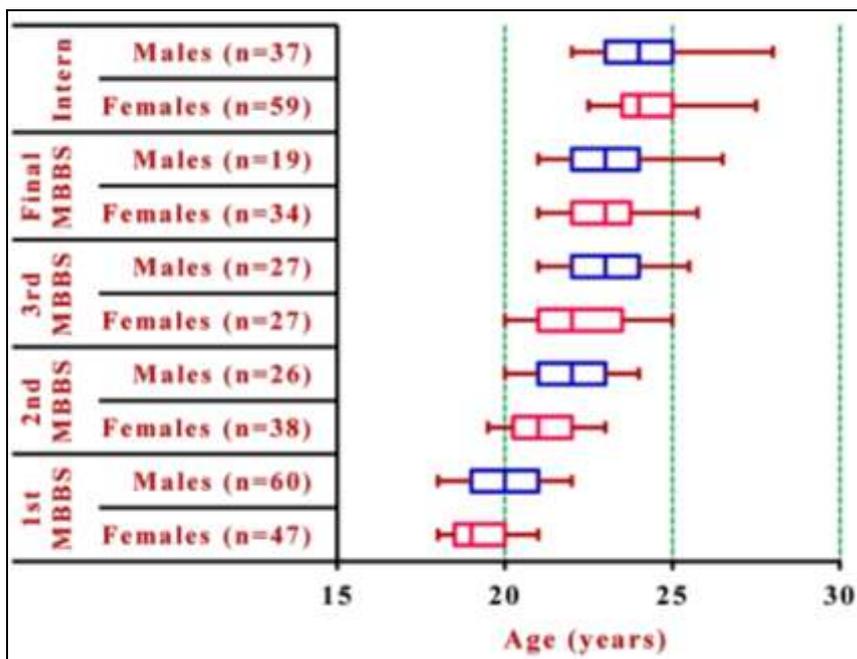


Fig 1: Box plot of age distribution of respondents

There are apprehensions that standardizing medical education through NLEs will diminish innovation and advancements in curricula [16, 38, 39] that NLEs tend to focus on easily testable learning outcomes that may not correlate with actual practice; [16, 29, 35] and that NLEs would have grim consequences, including stress and burnout, as candidates would struggle for

the highest scores [36]. A possible disadvantage is that some institutions may opt for solely coaching students for the NLEs, which would adversely affect the recently introduced competency-based medical education (CBME) curriculum and also restrict their capability and motivation to delve into more innovative teaching [40].

Table 2: Overall perception of impact of “NEXT” examination (n=374)

Sr. No.	Perception of impact	Responses
1	The NEXT would help in standardizing the quality of training of doctors	272 (72.73%)
2	A single NEXT would obviate the need to appear for multiple entrance examinations	282 (75.40%)
3	The NEXT will allow focus on practical training during internship	254 (67.91%)
4	The NEXT scores will indicate the quality of training-teaching in respective medical colleges	247 (66.04%)
5	The NEXT will define a uniform minimum level of competency in all medical graduates	264 (70.59%)
6	The NEXT will be an improvement over the current NEET-PG Exam	185 (49.47%)
7	The NEXT will produce doctors who are more qualified and skilled	231 (61.76%)
8	The NEXT will ease the certification process for Foreign Medical Graduates	217 (58.02%)
9	Help enhance the overall Health Care Delivery System in India in the long term	229 (61.23%)
10	Disadvantage: Increase in number of costly coaching centers for the NEXT	328 (87.70%)
11	Online MCQ-based exams at MBBS level will help the students to qualify in the NEXT	284 (75.94%)
12	Proposed questions on case scenarios in the NEXT will help in evaluating practical knowledge	324 (86.63%)
13	Pattern of the NEXT will assess the conceptual understanding, analytical and problem-solving skills	305 (81.55%)

Table 3: Gender differences in perception of impact of “NEXT” examination

Response	Year	Females	Males	Z value	‘p’ value
A single NEXT would be beneficial	1 st MBBS	46/47 (97.87%)	50/60 (83.33%)	2.457	0.013 *
	2 nd MBBS	35/38 (92.10%)	24/26 (92.31%)	0.029	0.976
	3 rd MBBS	16/27 (59.26%)	17/27 (62.96%)	0.279	0.779
	Final MBBS	30/34 (88.23%)	17/19 (89.47%)	0.136	0.888
	Intern	30/59 (50.85%)	17/37 (45.95%)	0.467	0.638
Increase in costly coaching centres for the NEXT	1 st MBBS	37/47 (78.72%)	56/60 (93.33%)	2.224	0.026 *
	2 nd MBBS	36/38 (94.74%)	25/26 (96.15%)	0.263	0.794
	3 rd MBBS	25/27 (92.59%)	26/27 (96.30%)	0.594	0.555
	Final MBBS	31/34 (91.17%)	18/19 (94.73%)	0.470	0.638
	Intern	44/59 (74.58%)	30/37 (81.08%)	0.738	0.459
Case scenarios will evaluate practical knowledge of students	1 st MBBS	46/47 (97.87%)	52/60 (86.67%)	2.072	0.038 *
	2 nd MBBS	37/38 (97.37%)	25/26 (96.15%)	0.274	0.787

	3 rd MBBS	23/27 (85.19%)	22/27 (81.48%)	0.365	0.711
	Final MBBS	29/34 (85.29%)	16/19 (84.21%)	0.105	0.912
	Intern	46/59 (77.97%)	28/37 (75.67%)	0.259	0.794
Exam pattern will improve problem-solving skills of students	1 st MBBS	37/47 (78.72%)	56/60 (93.33%)	2.224	0.026 *
	2 nd MBBS	37/38 (97.36%)	25/26 (96.15%)	0.274	0.787
	3 rd MBBS	23/27 (85.19%)	22/27 (81.48%)	0.365	0.711
	Final MBBS	30/34 (88.24%)	17/19 (89.47%)	0.136	0.888
	Intern	38/59 (64.41%)	20/37 (54.05%)	1.009	0.312
NEXT will standardize quality of MBBS training	1 st MBBS	43/47 (91.49%)	46/60 (76.67%)	2.034	0.042 *
	2 nd MBBS	31/38 (81.58%)	21/26 (80.77%)	0.081	0.936
	3 rd MBBS	22/27 (81.48%)	23/27 (85.19%)	0.365	0.711
	Final MBBS	26/34 (76.47%)	15/19 (78.94%)	0.206	0.833
	Intern	28/59 (47.49%)	17/37 (45.95%)	0.144	0.888

Z = Relative deviate; *Significant

4. Conclusion

Cost-benefit assessment of NLEs is considerably difficult. Though, a single unqualified trainee can certainly cause substantial avoidable mortality and morbidity among patients during postgraduate training, it is tricky to judge the impact of NLEs in preventing this from occurring, because failure in NLE prevents entry into postgraduate training. There are also challenges in quantifying the excess mortality and morbidity of patients that may be prevented by NLEs. Even though other factors may compensate for an individual doctor's inadequacies, poor performance on an NLE does suggest that performance in practice may fall below acceptable levels. The assessment of professionalism should be taken up on par with evaluation of knowledge and skills. Workplace-based assessments are frequently employed to confirm the professional behaviour of trainees in real-life environments.

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