Original Article

Change in the examination pattern in 1st year MDS- boon or bane: A Survey

ABSTRACT

Introduction: Pursuant to the notification published by Dental Council of India, dated May 17, 2018, no. DE-14-MDS-2018/2131, the committee amended the regulation on postgraduated MDS student and made provision of giving MDS – paper I (basic science paper) at the end of 1st year. Assessment of this survey will provide clear information regarding the response of postgraduate students and teachers. The aim of this article is to report and discuss the characteristics of new-learning processes.

Materials and Methods: A total of 400 sample sizes were included, i.e., 300 postgraduate students and 100 postgraduate teachers. Questions were generated using Google form to gain access an establish rapport with participants and to obtain open, honest understanding of the participants "learning experience." The link was sent to the participants using E-mails or Whatsapp number.

Results: Analysis of survey data was done using the Likert scale. Comparison of responses was done using the Chi-square test. Graphs 1-10 provide responses of participants.

Conclusion: Postgraduate students and PG teachers are neutral toward the initial protocol of examination. Participants have positive attitude toward new framework. However, curriculum activity such as library dissertation, dissertation selection, and patient work get disturbed somewhere. It might take time for both students and guide to get familiar with new.

Keywords: Evaluation of examination pattern, impact study, learning experience, postgraduate studies

INTRODUCTION

Pursuant to the notification published by Dental Council of India (DCI), dated May 17, 2018, no. DE-14-MDS-2018/2131, the committee amended the regulation on postgraduate MDS students. It became mandatory for postgraduate students to appear first paper (Basic Sciences) at the end of the 1st year MDS programme.

The importance of providing quality education has been recognized for a long time, but perhaps, never more than present. This article is regarding assessing the need for conducting paper I at the end of MDS 1st year. According to the initial protocol, examination was conducted at the end of MDS 3rd year. There are many views of interest among the students as well as teachers about the current protocol. This created a wave of confusion among all the PG students and their respective guides in the entire PG institute under DCI. This system of framework needs to be more open and transparent so that, the standard and procedures of framework assessment become clearer among all. Research suggest that students' perceptions should be considered in any discussion of their education.[1,2]

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The consensus opinion in the dental education literature is that teacher's and student's feedback on their learning experiences should inform all discussion and decisions relating to the education.[3-6] Researchers interested in eliciting students' feedback emphasize that attention to "student's voice" is important because they have distinctive perspectives of teaching and learning which can offer in depth information.[7-10] Attention of this survey was to assess the perception of students and their respective guides regarding the conduction of examination (paper I) at the end of the 1st year MDS programme.

It is important to assess and analyze teachers and students' suggestions about whether the new system will add more merits than the initial protocol of conducting examination. There is limited literature on postgraduate student learning, and the existing quality dental education. Although there are limitations with both the systems, hence there is a need to assess the merits and demerits to understand what benefits the proposed system will bring and whether it will work well with the students and postgraduate guide.

The purpose of our evaluation was not only to identify the strengths and weaknesses in current assessment but to offer the recommendations for modification regarding the same. The focus of this article is to report and discuss about different perspective of both teachers and students about various foci of interest of the newly formed rules.

MATERIALS AND METHODS

The present study was approved by the Institutional Review Committee. A cross-sectional questionnaire-based study was conducted among the various postgraduate students and teachers of dental colleges through an e-survey using Google forms.

Study population and sampling technique

A list of postgraduate dental colleges was obtained from the DCI website. A list of E-mail address of all the postgraduate students and teachers was collected through the convenience sampling. Sample size was calculated using EpiInfo software (Atlanta, Georgia, US) based on finite population where 239 postgraduate dental institutions with approximately 25 postgraduate students in each institution was considered. The final sample size estimated was 400 where 300 postgraduate students and 100 teachers were included.

To estimate sample size, a power analysis was performed taking finite population into consideration.

Sample size was calculated using the formula for the prevalence in finite population.[11]

Finite population was calculated considering 239 postgraduate dental institutions with approximately 25 postgraduate students in each institution.

Finite population size = 5975 (239 × 20)

$$n' = \frac{NZ^2\,P\,(1-P)}{d^2\,(N-1) + Z^2\,P\,(1-P)}$$

Where,
n' = Sample size with finite population correction
N = Population size
Z = Z statistic for a level of confidence (1.96)
P = Expected proportion (in proportion of one)
d = Allowable error (0.05)

$$n = \frac{5975 \times (1.92)^2 \times 0.05\,(1-0.50)}{(0.05)^2\,(5975-1) + (1.96)^2\;0.50\,(1-0.50)} = 362$$

Rounded off to 400.

A total of 400 sample size was calculated for the survey.

Study tools and data collection

Questionnaire was framed to establish rapport with participants and to obtain open, honest opinion of the participants regarding "learning experience." Lawshe's method[12] was used for content validity using judgments from a panel of 10 subject matter experts. The reliability was also established by test – retest among 20 volunteers of similar population. The kappa value was 0.9 which indicated high reliability. This was followed by pilot testing among 10 volunteers who were asked to answer the questionnaire and provide feedback on content, clarity, and brevity of the questionnaire.

Check boxes were provided, and participants had to click on any one option for each question. Care was taken that one person could answer the questionnaire only once, and all questions were mandatory. Efforts were made to get completed forms by sending three reminders through E-mails. The responses were directly recorded through Google forms. Since this was an e-survey, the informed consent was included in the Google form. The study duration was of 3 months.

Statistical analysis

The online recorded information was converted into codes and analyzed using the Statistical Package for the Social Sciences (SPSS) version 26 software package (IBM Corp., Armonk, NY, USA). Confidence intervals were set at 95%, and

values of $P < 0.05$ were interpreted as statistically significant. The Chi-squared test was applied to compare responses of postgraduate students and teachers.

Following questions were included:

1. Finishing basic paper in 1st year helps to concentrate more on individual specialized subjects
2. Does this pattern help in complete understanding of basic subject?
3. Is there adequate time for the preparation of examination?
4. Is there any pressure performance in passing examination with high score?
5. Is Allowed to keep terms (ATKT) necessary?
6. Will preparation leave hamper the PG activity?
7. Does it affect your curriculum activity such as library dissertation (LD) and main dissertation selection?
8. Does it affect quality of patient's work?
9. Is there need for taking examination in 1st year MDS?
10. Initial protocol of conducting examination was better.

All the participants used 5-point scale that is Likert scale for the response which includes:

1. Strongly agree
2. Agree
3. Neutral
4. Disagree
5. Strongly disagree.

RESULTS

After collection, the data were processed and analyzed in accordance with the outline laid down for the purpose at the time of developing the framework. Analysis of survey data using the Likert scale showed that respondents were active to participate and all of them answered all the questions. Details of survey are given are in Table 1 by using the mode of percentage and mean score values by Chi-square test. Graphs 1-10 provide responses of both student and postgraduate guide in detail for individual question.

Outcome 1: Finishing basic paper will help in concentrating on individual specialized subject: Seventy-seven percent of postgraduate teachers agreed and 55.3% students were neutral on this. Comparison showed significant results ($P = 0.001$*) [Table 1 and Graph 1].

Outcome 2: Help to increase understanding for basic subject. Sixty-seven percent of postgraduate teachers and 63.3% students both were neutral regarding increasing the understanding of basic subject. Comparison showed significant results ($P = 0.029$*) [Table 1 and Graph 2].

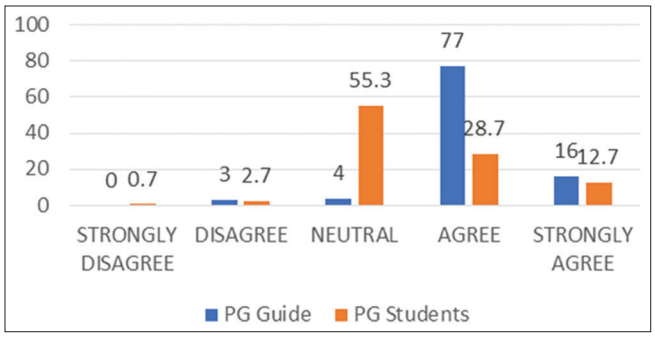
Outcome 3: Time for the preparation of examination: Fifty-three percent of postgraduate teachers and 67.7% of students agreed on this. There were significant results ($P = 0.008$*) [Table 1 and Graph 3].

Outcome 4: Pressure for passing examination with high score: Sixty-six percent of postgraduate teachers and 73% students agreed that examination should be passed with high scores. Comparison showed nonsignificant result ($P = 0.146$*) [Table 1 and Graph 4].

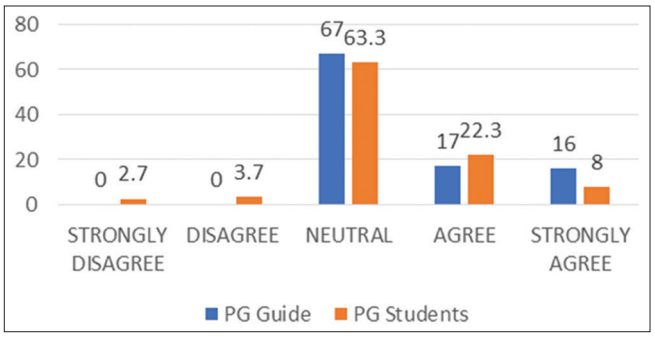
Outcome 5: Need for ATKT: Seventy-seven percent of postgraduate teachers and 89% of students agreed on the need for ATKT. Comparison showed significant result ($P = 0.008$*) [Table 1 and Graph 5].

Outcome 6: Preparation Leave hamper PG activity: Preparation leave would affect PG activity as 80% of postgraduate teachers and 79.7% of students agreed on this. There were nonsignificant results. ($P = 0.008$*) [Table 1 and Graph 6].

Outcome 7: Effect on curriculum activity such as LD and dissertation selection: Eighty-two percent of postgraduate teachers and 76.7% of students agreed that curriculum activity gets disturbed. Significant result has proven this fact. ($P = 0.004$*) [Table 1 and Graph 7].



Graph 1: Finishing basic paper in 1st year will help in concentrating on individual specialized subject later

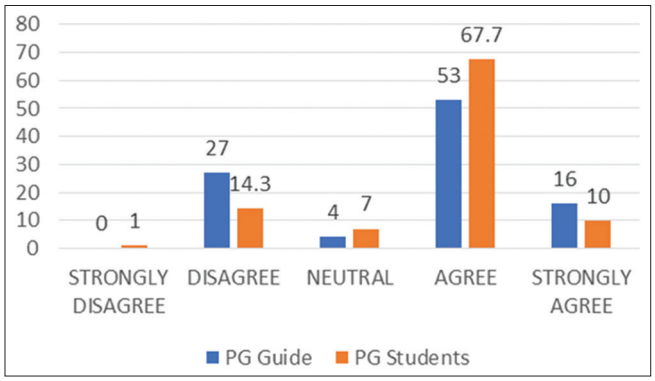


Graph 2: Does this pattern will help to increase understanding for basic subject

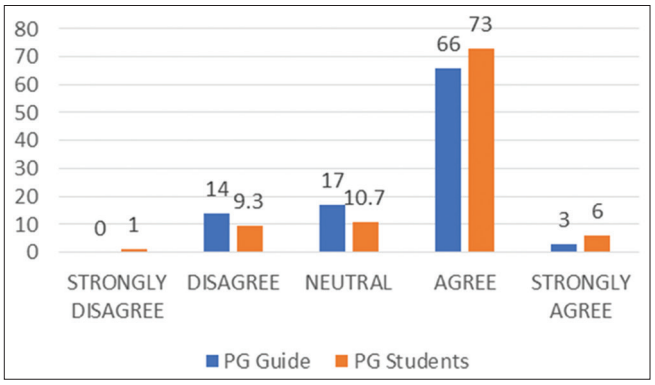
Table 1: Comparison of responses

Question	Group	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean score	*P*
Finishing basic paper in 1st year will help in concentrating on individual specialized subject later?	PG Teacher	0	3	4	77	16	4.06 (0.565)	0.001*
	PG Student	0.7	2.7	55.3	28.7	12.7	3.50 (0.774)	
Does this pattern will help to increase understanding for basic subject?	PG Teacher	0	0	67	17	16	3.49 (0.759)	0.029*
	PG Student	2.7	3.7	63.3	22.3	8	3.29 (0.776)	
Is there adequate time for the preparation of examination?	PG Teacher	0	27	4	53	16	3.58 (1.06)	0.008*
	PG Student	1	14.3	7	67.7	10	3.71 (0.868)	
Is there any pressure performance for passing examination with high score?	PG Teacher	0	14	17	66	3	3.58 (0.768)	0.146*(NS)
	PG Student	1	9.3	10.7	73	6	3.74 (0.750)	
Is ATKT necessary?	PG Teacher	0	2	21	77	0	3.75 (0.479)	0.008*
	PG Student	0	1.7	9.3	89	0	3.87 (0.380)	
Will preparation leave hampers PG activity?	PG Teacher	0	18	0	80	2	3.66 (0.794)	0.008*
	PG Student	0.3	8.7	3.7	79.7	7.7	3.86 (0.686)	
Does it affect other curriculum activities such as LD and dissertation selection?	PG Teacher	2	2	13	82	1	3.78 (0.596)	0.004*
	PG Student	6.7	4.3	5.3	76.7	7	3.73 (0.909)	
Does it affect quality of patient's work?	PG Teacher	2	3	25	64	6	3.69 (0.720)	0.001*
	PG Student	0	3	6	76.7	14.3	4.02 (0.569)	
Is there need for taking examination in 1st year of MDS?	PG Teacher	0	5	18	62	15	3.87 (0.720)	0.001*
	PG Student	7.7	17	14.7	60.7	0	3.28 (1.003)	
Initial protocol of conducting examination was better?	PG Teacher	5	14	72	9	0	2.85 (0.642)	0.054 (NS)
	PG Student	4.3	12	64	12	7.7	3.07 (0.847)	

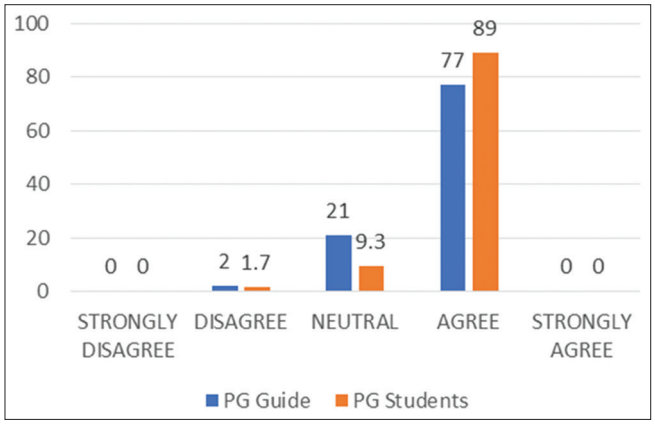
Chi-square test; *Indicates significant at $P \leq 0.05$. NS: Nonsignificant, SD: Standard deviation, SA: Statistical analysis



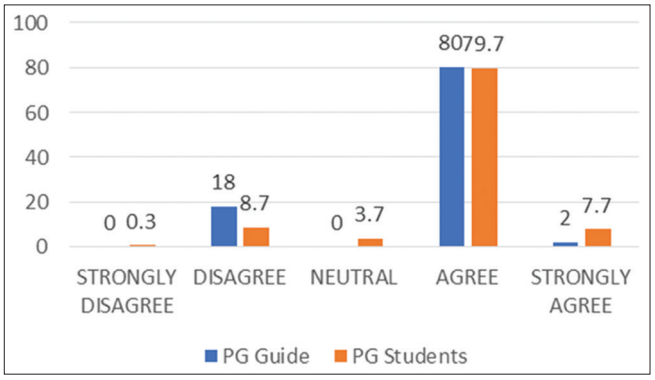
Graph 3: Is there adequate time for preparation of examination



Graph 4: Is there any pressure performance for passing exam with high score

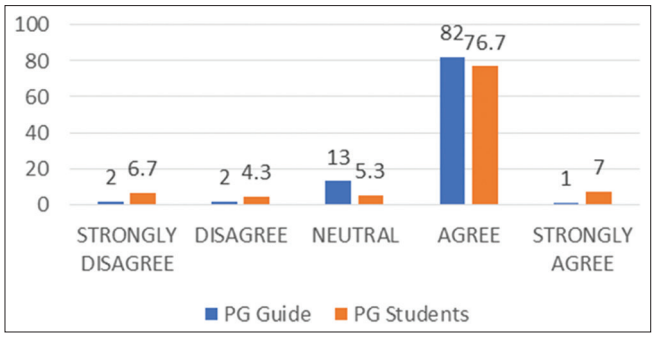


Graph 5: Is allowed to keep terms necessary?

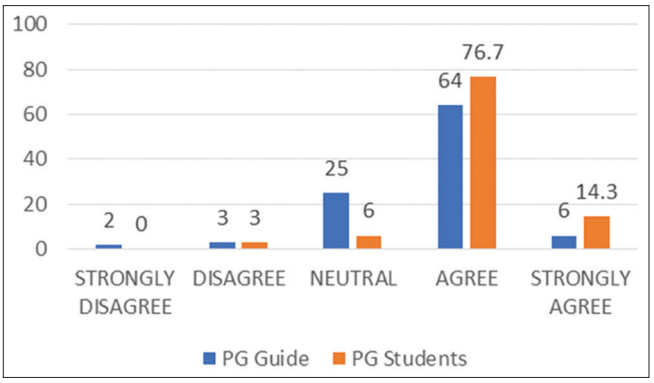


Graph 6: Will preparation leave hamper PG activity?

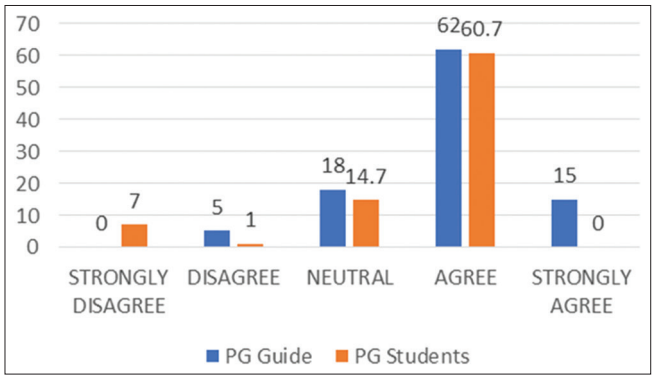
Outcome 8: Quality of patient work: Sixty-four percent of postgraduate teachers and 76.7% of students agreed that quality of patient's related work gets affected. Comparison showed significant results ($P = 0.001^*$) [Table 1 and Graph 8].



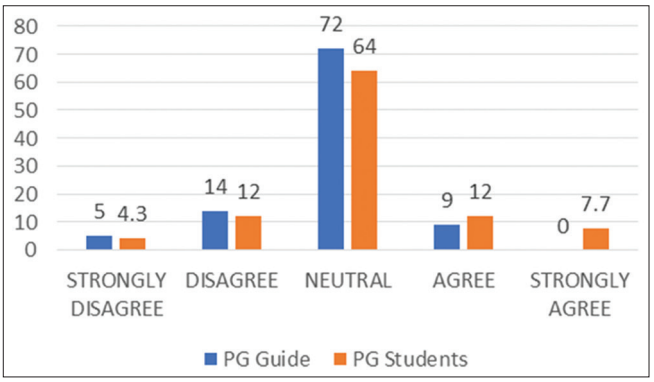
Graph 7: Does it affect other curriculum activity like library dissertation and dissertation selection?



Graph 8: Does it affect other curriculum activity such as library dissertation and dissertation selection?



Graph 9: Is there need for taking examination in 1st year of MDS?



Graph 10: Initial protocol of conducting examination was better?

Outcome 9: Taking examination in 1st year MDS: Sixty-two percent of postgraduate teachers and 60.7% of students agreed on this aspect. Comparison showed significant results ($P = 0.001^{*}$) [Table 1 and Graph 9].

Outcome 10: Initial protocol of conducting examination: Seventy-two percent of postgraduate teachers and 64% of students had neutral response. Comparison showed nonsignificant results. ($P = 0.054$) [Table 1 and Graph 10].

DISCUSSION

Till date, there has been a lack of qualitative research on postgraduate students and their respective teacher's learning experiences, particularly in India. This study was unique in its attention that evaluates the perception of both current postgraduate students and postgraduate teachers in dental education. Different opinions had emerged from participants' perspective regarding the compulsion of examination at the end of MDS 1st year.

This framework of survey provided clear connection between the responses of postgraduate students and their respective teachers through online Google form. The focus of this article was to highlight the difficulties that students encountered during patients work and other academic activities in correspondence with stress of examination during 1st year of PG programme. This framework could therefore also provide a way forward for the development.

Perception of effective and ineffective learning experiences was largely similar across both the groups (students and teachers). This could likely reflect their preexisting assumptions, needs, preferences, beliefs, and values about their education. The framework of 10 questionnaires and outcomes results is given in Table 1 and Graphs 1-10.

Level of knowledge and attitude toward new framework

Postgraduate teachers and students revealed positive response toward finishing basic paper in 1st year that would then help in concentrating on individual specialized subject later and would help in increasing the understanding for basic subject.

Quality of education

Most of the participants agreed on the time span provided for the preparation of examination and passing examination with high score. This indicated that quality of postgraduate education would be maintained. Both postgraduate teachers (77%) and postgraduate students (89%) showed similar opinion of getting second chance and need for ATKT to pass the examination.

Mission of curriculum activity

Although leave helps in better preparation of examination, but the workload and patient's related work would increase during that period, and hence, preparation leave would be a break in the curricular activity thus both postteachers and students agreed on it. New framework is affecting curriculum activity such as LD, dissertation selection, and quality of patient work somewhere.

Educational structure

Both postgraduate teachers (62%) and students (60.7%) had positive attitude toward taking examination in 1st year MDS as it helps to concentrate on the individual subjects later. Postgraduate students (64%) and postgraduate teachers (72%) were neutral toward the initial protocol of examination.

Orthodontic education is pretty varied across the country, although the DCI recommended that the curriculum provides a common platform nationwide. The standards and quality of training might range from bare minimum to pretty advanced, and perhaps, we are dealing with an audience with different expectations and different levels of training.[13] Perceptions of effective and ineffective learning experiences were similar across both groups of participants, but there was the difference in opinion in some aspects. Close attention to student's perspectives on their learning environment may be useful for informing professional development programs. The aim of this framework was not to evaluate importance of understanding of basic science paper but also to highlight the need to increase supervision's on other curriculum activities, practice skill, promote interactive learning, and critical thinking.

Limitations

The key limitation of the study was the small number of participants involved. However, the main aim of the study was to gain the in depth understanding of postgraduate students and teachers as well. Although, the study findings cannot be generalized to every postgraduate students and teachers, but may be useful for promoting future studies and the students outlook toward the new framework.

CONCLUSION

This survey identified specific proposals which might be considered by education providers and organizers. Data revealed that the framework and outcomes would benefit from wider audience at this stage. In this spirit, this framework helped to identify gap and outcome guide their curriculum activity planning. Postgraduate students and PG teachers are neutral toward the initial protocol of examination. Participants have positive attitude toward new framework of taking examination in 1st year MDS and rising importance of basic science at the same time concentrating more on specialized subject later. However, curriculum activities such as LD, dissertation selection, and patient work gets affected somewhere; hence, it will take a little time to get adapt to the new framework.

Recommendations

The findings of this study suggest a need to consider the impact on students about the change in the examination pattern in 1st year MDS. Constructive feedback and positive encouragement emerged as further factors facilitating effective learning. We recognize that, the system of assessment needs to be more open and transparent so that the standards and procedures for assessment become clearer to the student and teachers as well. There were different opinions regarding the new framework; hence, we recommend giving some time to adapt to the new pattern.

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Conflicts of interest

There are no conflicts of interest.

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