



PERCEPTION FOR INTER PROFESSIONAL EDUCATION AMONG DENTAL STUDENTS OF NORTHERN INDIA -A DESCRIPTIVE CROSS-SECTIONAL QUESTIONNAIRE BASED STUDY

Dental Science

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ABSTRACT

Background- Healthcare providers, including dentists are increasingly required to work in multidisciplinary teams. Efforts to increase collaboration among health care workers have included the introduction of collaborative practice at an early stage of health care education through Inter professional education. **Objective-** The aim of this study was to assess the perception for Inter professional Education among dental students of Northern India. **Methodology-** Descriptive cross sectional e-questionnaire study was done among 309 dental students. Questionnaire consisted of questions related to knowledge, attitude and acceptability towards Inter professional Education. **Results-** Majority of the students (96.22%) felt Inter professional education should be taught in preclinical/clinical classes and 98.38% felt it is effective in learning process. **Conclusion-** Curriculum planning across disciplines should consider integrated exposure to inter professional activities throughout the curriculum to maximise student receptiveness to inter professional learning.

KEYWORDS

healthcare, inter professional education, collaborative perception, dental students.

INTRODUCTION

According to WHO 2010, Inter professional education is when students from two or more profession come together to learn about, from and with each other to enable effective collaboration and to improve health outcomes¹. So, it's a peer aided learning in which they share their mutual knowledge. Inter professional education shows synergistic effect to each other's profession.

Oral health is mirror to general health. When body is invaded by antigens, body activates the immune system and it starts its inflammatory mechanism and this mechanism is same throughout the body^{2,3}. So most of the oral diseases are in relation to systemic diseases such as Infective endocarditis, pneumonia, diabetes mellitus etc.^{4,5}

India stands high among other countries in case of suffering from diseases. Every year people die of one or more preventable disease mainly to inaccessible health care system, lack of resources, out of pocket health expenditure, poverty and unawareness among people⁶.

Dentist population ratio of urban area in India is 1:9000 and in rural area is 1:2.00000⁷. Therefore, if inter professional education comes into practice then people will be provided general health care along with oral health care. Keeping in view the current situation, Inter professional education will definitely cater the unmet needs of lower income group or the communities at a disadvantage by providing them basic treatment. This will help us to enhance the health care system and will provide pronounced quality of care to patients and help them to attain favourable health. Hence the present study was conducted with the aim to assess the perception for inter professional education among dental students of Northern India.

MATERIALS AND METHODS

Study Design

A descriptive cross-sectional e-questionnaire based study design.

Study Sample

Dental students currently studying in a Dental college in Northern India. Students who gave consent and had android phones were included whereas those who refrain themselves from the use of internet to fill the google forms were excluded.

Sample Size

Total students in Dental college were approached and 309 were included after obtaining informed consent.

Data Collection

Data was collected with the help of pre-designed close ended and pre validated e-questionnaire in the form of google forms consisting of 15 questions.

The questionnaire consisted of two parts:-

- The first part consists of socio demographic questions like name, age, gender and year of education.
- The second part consist of questions related to knowledge, attitude, acceptability and role toward inter professional education.
- The questionnaire was pilot tested on ten students which were not included in final results. Necessary changes were made and final e-questionnaire was finalised.
- The main investigator visited classrooms of all BDS batches and informed them about the purpose of the study. The Google form (e-questionnaire) was forwarded to the respective whats app groups of all BDS batches with the help of class representative and a time frame of 7 days was given. A reminder message was put after 7 days for filling the form.
- Data was then collected, compiled and arranged in systematic manner and analysed in terms of frequencies using SPSS software version 24. Inferential statistics was done using chi-square test. The level of significance was set at $p < 0.05$

RESULTS

Present study had a total sample of 309. According to the present study 77% (238) were females whereas only 23% (71) were males.

Majority of the study participants belonged to 21-33 years of age group (57.6%) followed by 18- 20 years (35%) Distribution of study participants according to the year of study showed that majority were final year students (29%) followed by second years (27.5%) whereas merely 8.1% were interns.

Majority of the study participants (98.38%) agreed that inter professional education should be formulated in intracurricular activities. Majority of the students also felt it will be effective to

learning process (98.38%), improve patient care (98.38%), improve clinical knowledge studying with medical students (97.09%), will improve respect for other fields (97.73%) improve working skills (98.73%), lead to expanded opportunities for dental students (98.71%) and benefit in situations like systemic health problems (98.38%). Almost 33.33% felt that difference in attitude and education will hinder the learning and around 26.53% felt that Inter professional education in curricular courses will lead to increase in fees and student expenses.

Around 34.63 believed that clinical skills can only be learned through one's own department Majority of the study subjects (96.12%) felt Inter professional education should be taught in preclinical /clinical classes.

Table 1 Shows gender wise differentiation was significant among females and males regarding considering Inter professional education as overload to current work schedule ($p=0.049$).

Table 2 Shows 39.8% students of 18-20 years (1st-2nd year) agreed that it is waste of time along with 37% of above 20 years (3rd year- intern) felling the same .On the contrary 60.2% of 18-20 years students disagreed that Inter professional education is waste of time along with 63% of above 20 years feeling the same .But the difference between the two groups was found to be non-significant ($p=0.28$)

Around 63% of 18-20 years and 61.7% of above 20 years believed that inter-professional education is overload on current schedule whereas 37% of 18-20 years and 38.3% of above 20 years did not agree to it and the difference was found to be non-significant ($p=0.08$)

DISCUSSION

Globally many health systems are fragmented and struggling to manage unmet health needs mainly due to shortage of human resources. WHO recognises Inter profession collaboration as an innovative strategy to strengthen the health care work force and to deliver the highest quality of care¹. Therefore the present study was done to assess the perception of Inter professional education among Dental students of Northern India.

Present study had 77% females and 23% were males. Women are entering dentistry in large numbers because it is believed that they are soft at heart and would naturally be more inclined to patients need so that they can have a painless dental journey. Therefore they are natural care takers.

These shifting paradigms of dentistry having more female dentists is also because dentistry does not involve much of emergency late

working evenings hours. So it becomes easy to take care of profession and home⁸. Majority of the students around 60% of both age groups 18-20 years and above 20 years believe that Inter professional education is waste of time. This is in accordance to Suleiman N. *et al*⁹. Which state that multiple things at once wastes a lot of time while framing a holistic view?

According to the present study around 63% of 18-20 years believed that inter professional education leads to overload. Studies have shown that organisational factors such as curriculum overload propagated negative attitudes towards dental students from other professions and professional stereotyping could have an effect on the dental student's attitude towards inter professional education¹⁰ Present study showed majority of students (98.3%) agreed that inter professional education should be formulated in curriculum. Similar findings were seen in research done by Dental Education Association that Inter professional education was implemented differently at each institution in terms of programs, materials, time of delivery, number of health workers involved areas of focus and other aspects and showed positive attitude among students.¹¹ Current study showed that Inter professional education will improve patient care whereas study by Bartow *et al*¹² have argued that a standardised approach by a specialised and multidisciplinary team can reduce incidence of complications and ends up with better patient outcome.

According to Present study 33.3% felt that difference in attitude will hinder the learning similar trend was seen in study done by Oandason *et al*¹³ in which medical students were unwilling to communicate, behaved arrogantly and held stereotyped views, attributes which inhibit the implementation of Inter professional education.

Inter professional education will avail the students with better viewpoint and esteem for other's profession, helps in attaining collaboration¹⁴, cooperation and coordination, social, psychological and academic refinement and dealing with emergencies but in the country like India following barriers were perceived on implementing inter professional education¹⁵:

1. Lack of interest of faculty members.
2. Lack of resources and technology.
3. Competitive environment.
4. Prejudice and stereotypes.

Limitations

Generalising the present study globally may be limited as the study was taken in a single dental college with a limited sample size. Therefore multi-centric study with larger sample size involving students from different streams must be conducted to increase the significance level of results and this can be done through longitudinal study which will show better results.

Table 1: Response to questions w.r.t. gender

Questions	Strongly Agree				Agree				Disagree				Strongly Disagree				Chi Square	P value
	Female		Male		Female		Male		Female		Male		Female		Male			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Formulated in Intracurricular Activities.	97	40.8	31	43.7	138	58	38	53.5	3	1.3	2	2.8	0	0	0	0	1.21	0.57
Effectiveness In learning.	96	40.3	31	43.7	140	58.8	37	52.1	2	0.8	3	4.2	0	0	0	0	4.45	0.11
Improved patient Care	91	38.2	34	47.9	144	60.5	35	49.3	3	1.3	2	2.8	0	0	0	0	3.26	0.19
Taught in clinical/pre Clinical classes	75	31.5	29	40.8	153	64.3	40	56.3	10	4.2	2	2.8	0	0	0	0	2.24	0.33
Increase clinical knowledge with medical students	113	47.5	35	49.3	120	50.4	32	45.1	5	2.1	3	4.2	0	0	1	1.4	4.66	0.19
Increase in respect for Other fields	105	44.1	33	46.5	129	54.2	35	49.3	4	1.7	3	4.2	0	0	0	0	1.88	0.39
Improved working skills	95	39.9	32	45.1	140	58.8	38	53.5	2	0.8	1	1.4	1	0.4	0	0	1.10	0.78
Skills can only be learn through own department	48	20.2	22	31	104	43.7	28	39.4	82	34.5	19	26.8	4	1.7	2	2.8	4.41	0.22
Expanded Opportunities	96	40.3	32	45.1	136	57.1	35	49.2	5	2.1	4	5.6	1	0.4	0	0	3.55	0.32
Benefit in systemic health issues	92	38.7	27	38	144	60.5	41	57.7	2	0.8	3	4.2	0	0	0	0	3.95	0.14
Difference in attitude hinder Learning	48	20.2	14	19.7	110	46.2	34	47.9	74	31.1	17	23.9	6	2.5	6	8.5	5.94	0.12
Increase in fee and expenses	46	19.3	15	21.1	134	56.3	32	45.1	54	22.7	19	26.8	4	1.7	5	7	7.16	0.07
Increase overload	38	16	13	18.3	110	46.2	31	43.7	82	34.5	19	26.8	8	3.4	8	11.3	7.85	0.049*
Waste of time	25	10.5	9	12.7	68	28.7	15	21.1	115	48.5	37	52.1	29	12.2	10	14.1	1.67	0.64

*: statistically significant

Table 2: Response to questions w.r.t. age

Questions	Strongly Agree				Agree				Disagree				Strongly Disagree				Chi Squar e	P value
	18-20		>20		18-20		>20		18-20		>20		18-20		>20			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Formulated in intracurricular activities	50	46.3	78	38.8	58	53.7	118	58.7	0	0	5	2.5	0	0	0	0	3.95	0.14
Effectiveness in learning	49	45.4	78	38.8	58	53.7	119	59.2	1	0.9	4	2	0	0	0	0	1.59	0.45
Improved patient care	50	46.3	75	37.3	57	52.8	122	60.7	1	0.9	4	2	0	0	0	0	2.65	0.27
Taught in clinical /preclinical classes	40	37	64	31.8	65	60.2	128	63.7	3	2.8	9	4.5	0	0	0	0	1.22	0.54
Increase clinical knowledge with medical students	61	56.5	87	43.3	45	41.7	107	53.2	2	1.9	6	3	0	0	1	0.5	5.35	0.15
Increase in respect for other fields	54	50	84	41.8	54	50	110	54.7	0	0	7	3.6	0	0	0	0	5.12	0.08
Improved working skills	51	47.2	76	37.8	56	51.9	122	60.7	1	0.9	2	1	0	0	1	0.5	3.01	0.39
Skills can only be learn through own department	27	25	43	21.4	43	39.8	89	44.3	35	32.4	66	32.8	3	2.8	3	1.5	1.33	0.72
Expanded opportunities	48	44.4	80	39.8	58	53.7	113	56.2	1	0.9	8	0.4	1	0.9	0	0	4.56	0.21
Benefit in systemic health issues	45	41.7	74	36.8	63	58.3	122	60.7	0	0	5	2.5	0	0	0	0	3.18	0.20
Difference in attitude hinder learning	25	23.1	37	18.4	50	46.3	94	46.8	26	24.1	65	32.3	7	6.5	5	2.5	5.31	0.15
Increase in fees and expenses	22	20.4	39	19.4	63	58.3	103	51.2	21	19.4	52	25.9	2	1.9	7	3.5	2.56	0.47
Increase overload	19	17.6	32	15.9	49	45.4	92	45.8	30	27.8	71	35.3	10	9.3	6	3	6.69	0.08
Waste of time	11	10.2	23	11.5	32	29.6	51	25.5	47	43.5	105	52.5	18	16.7	21	10.5	3.81	0.28

CONCLUSION

Educators and policy makers should develop various strategies to observe behaviour and perceptions qualitatively. In addition longitudinal studies to assess the outcomes of inter professional education in the curricula will be useful in order to strengthen the health care force and to deliver the highest quality of care for the patients.

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