



Management of Geriatric Patients in Clinical Settings Comorbid with Psychiatric Disorders: A KAP Study

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Background and Objectives: Comorbidity with psychiatric disorders raises health risks and has an impact on the condition, treatment and prognosis of elderly patients, necessitating holistic dental care for this age group. Thus, present study was conducted to assess knowledge, attitude, practice and awareness of psychiatric disorders and their relation to oral health amongst dental undergraduates, interns, postgraduate students and faculties treating geriatric patients.

Materials and Methods: A cross-sectional questionnaire-based study was conducted among 300 dental students and faculties from various departments. The questionnaire was developed and subsequent face validation was obtained from dental students followed by content validation from a medical expert and four dental experts which was then utilized to assess knowledge, attitude and practice amongst dental health practitioners and students for managing geriatric patients comorbid with psychiatric disorders.

Results: Of the total study participants, majority of faculties with clinical practice (86.0%) had more knowledge regarding systemic disorders which can lead to psychiatric diseases in geriatric patients. 66% of BDS interns and 40% of faculties evaluate the mental status of the geriatrics before commencing dental treatment. 64.9% of faculties and 56.4% interns believed in shared decision

making for dentist patient relationship whereas remaining participants believed in dentist-based decision making which was found to be statistically significant (<0.001).

Conclusion: More evidence and research in this field is increasingly important and required to improve evidence-based clinical practice and therapy for geriatric patients.

Keywords: Geriatric; psychiatric disorders; dental students.

1. INTRODUCTION

A robust growth in the number of elderly people in the general population in the recent years is termed as “greying of the world” [1]. Globally, the number of people aged 60 years and older in the population are increasing. In 2019, the number of people aged 60 years and older were 1 billion [2]. It has been expected that the elderly population of India by 2050 to be 22.0% of world’s total population [3]. This transformation may be due to changing trends in lifestyle and social life but on the other hand has led to rise in systemic diseases as well as psychiatric disorders.

Psychiatric disorders are a leading cause of deteriorating oral health problems worldwide which in turn is more worsened with systemic diseases and acts as major contributor to the overall burden of disease [4]. The incidence of mental health problems is expected to increase among adults in general as well as in older population in particular [5]. Even though psychiatric disorders are common in the elderly population, they remain undiagnosed in about 50% cases [6]. WHO estimated the incidence of global depressive disorder among older adults to be 10 -20% [7]. Among all mentally ill individuals, 40% were diagnosed to have a depressive disorder [8].

Not only overall general health is the matter of concern but condition and quality of health and health related issues which makes an individual to speak, eat and socialise without any discomfort, embarrassment and active disease contributing to general well- being is the major reflection of oral health with interplay of health dimensions involving mental health as one of the essential one [9]. In health care delivery care systems, oral health education and promotion along with conceptual health is drastically turning the table on upper and positive side of health spectrum but holistic approach is still lacking behind [10,11]. So, managing geriatric patients with comorbid psychiatric disorders may be a challenge for dental professionals to provide treatment as well as provide guidance for the same.

To encourage and raise holistic approach and also to improve doctor-patient relationship as a part of health care approach, it is a need to first assess the knowledge, attitude and practice about the same. However, till date there is paucity of literature regarding assessment of knowledge, attitude and practice among dental students and professionals for managing geriatric patients comorbid with psychiatric disorders and it will be one of the first of its kind to be conducted in Uttar Pradesh with the aim to assess knowledge, attitude, practice and awareness of psychiatric disorders and their relation to oral health among dental undergraduates, interns, postgraduate students and faculties treating geriatric patients.

2. MATERIALS AND METHODS

2.1 Study Settings

A cross-sectional study was conducted to assess the knowledge, attitude and practice amongst students and fraternities for treating geriatric patients with psychiatric disorders.

The study was conducted in the months of January to March 2022.

2.2 Source of Data

A total sample of 300 dental students and academicians with clinical practice were included in the study from the Ghaziabad institute. A total of 57 academicians and 243 students viz, BDS 3rd year, BDS 4th year, Interns and postgraduates from various specialities.

2.3 Sample Size Determination

All the dental students and faculties present on the day of the study were included as the part of the study.

2.3.1 Inclusion criteria

1. Subjects who were present on the day of questionnaire distribution.
2. Subjects who gave informed consent.

2.3.2 Exclusion criteria

Subjects who have not been exposed to the clinical examination and treatment of patients.

2.4 Data Collection

The data was collected over a period of 3 months from January 2022 to March 2022.

2.5 Questionnaire

The questionnaire was divided into four sections. The content validation for questions was obtained from a medical expert and four dental experts. The questionnaire was provided to them through electronic mail and the corrections were made according to the responses obtained via electronic mails individually. Face validation was obtained from 5 dental students by providing them the questions and later the corrections in the questions were made accordingly.

In the questionnaire SECTION A- Assessed the demographic details of the participants (age, designation, gender, college). SECTION B- Comprised of 6 questions to assess the knowledge out of which 4 questions were close ended and 2 were based on Likert scale. SECTION C- Comprised of 5 questions to assess the attitude all of which were based on Likert scale. SECTION D- Comprised of 5 questions to assess the practice of which all were close ended. The internal reliability of the questionnaire was determined with Cronbach's alpha coefficient (.003).

2.6 Statistical Analysis

Data was analysed using SSPS 20.0 software package. Descriptive statistics such as mean, standard deviation and percentage were used. Association was evaluated using Chi-square cross tab. Any p value less than 0.05 was considered significant.

3. RESULTS

3.1 Demographic Profile

A survey related to knowledge, attitude and practice amongst dental students and practitioner for managing patients with perceived mental health care needs was conducted with the study participants bearing maximum age of 60 and minimum age of 20 (mean age 27.06 years). The gender distribution of the study population was 148 participants male and 152 females. Majority of the study population were dental students (BDS Interns) (Table 1).

3.2 General Findings

Prevalence of knowledge for systemic disorders like diabetes mellitus comorbid with psychiatric disorders amongst geriatric patients was significantly higher amongst the study participants (75.3%). Similarly, 57.7% responded that gender predilection plays an important role in psychiatric disorders and 77.0% of the participants agreed to the fact that history taking of psychiatric illness should be a part of medical history taking. 34.3% agreed that disorders like

Table 1. Distribution of study population according to various parameters of dental students and fraternities

Age	Number	Percentage (%)
20-29	244	81.3
30-39	26	8.7
40-49	23	7.7
Above 50	7	2.3
Total	300	100
Gender	Number	Percentage
Male	148	49.3
Female	152	56.4
Total	300	100
Designation	Number	Percentage
Bds 3 rd year	65	21.7
Bds 4 th year	47	15.7
Interns	91	30.3
Postgraduates	40	13.3
Mds faculties with clinical practice	57	19.0
Total	300	100

dementia, depression affect the compliance of the patients with the treatment provided to them (Table 2).

3.3 Oral Findings

For the oral findings it was observed that 50.3% were aware of the dental disorders like

TMJ dysfunction and bruxism associated with axis I psychiatric disorders. It was also seen that majority of study population (64.3%) acknowledged that edentulism in geriatric patients can contribute to sleep disorders. Also, majority of dental professionals (53.3%) agreed that mouth burning syndrome is associated with psychiatric disorders (Table 2).

Table 2. Analysis of the responses of the options chosen by the dental students and fraternities

Questions		Number	Percentage
Q1. Many of the systemic disorders like diabetes mellitus etc are comorbid with psychiatric disorders in geriatric patients	Yes	226	75.3
	No	74	24.7
Q2. Some of the dental disorders like TMJ dysfunction and Bruxism are associated with axis 1 and 2 psychiatric disorders like depression or can be a side effect of psychotropic medications	Yes	151	50.3
	No	149	49.7
Q3. Edentulism in Geriatric patients can contribute to sleep disorders like sleep apnoea	Yes	193	64.3
	No	107	35.7
Q4. Disorder like Burning mouth syndrome is associated with psychiatric disorders	Yes	160	53.3
	No	140	46.7
Q5. There is Gender predilection in psychiatric disorders	Yes	173	57.7
	No	127	42.3
Q6. History of Psychiatric illness should be included during medical history taking in Geriatric Patients	Yes	231	77.0
	No	69	23.0
Q7. Do you evaluate the mental status of patient before commencing dental treatment	Yes	183	61.0
	No	117	39.0
Q8. Do you behaviourally manage and orient these patients in your set-up	Yes	174	58.0
	No	126	42.0
Q9. When you find the patient suffering from probable psychiatric disorder, do you refer him/her for psychiatric evaluation	Yes	207	69.0
	No	93	31.0
Q10. Do the Geriatric patients suffering from psychiatric disorders accompanied by family members	Yes	187	62.3
	No	113	37.7
Q11. Stigma in your own perception holds you from seeking medical attention for treating Geriatric patients	Yes	142	47.3
	No	140	46.7
	Others	18	6.0
Q12. Psychosis according to you is not found in geriatric patients these are all as a result of age-related process	Strongly agree	35	11.7
	Agree	36	12.0
	Neither agree nor disagree	125	41.7
	Disagree	104	34.7
Q13. The psychiatric disorders in geriatric patients like dementia, depression etc. affect their compliance with the treatment provided to them	Strongly agree	103	34.3
	Agree	97	32.3
	Neither agree nor disagree	46	15.3
	Disagree	54	18.0
	Strongly disagree		
Q14. The psychotropic medications have an adverse effect on oral health of geriatric patients	Strongly agree	83	27.7
	Agree	111	37.0
	Neither agree nor	94	31.3

Questions		Number	Percentage
	disagree		
	Disagree	12	4.0
	Strongly disagree		
Q15. Psychiatric evaluation should be an integral part in managing geriatric patients	Strongly agree	146	48.7
	Agree	125	41.7
	Neither agree nor disagree	27	9.0
	Disagree	2	0.7
	Strongly disagree		
Q16. The presence of cognitive dysfunction hampers the decision-making process in geriatric patients	Strongly agree	112	37.3
	Agree	178	59.3
	Neither agree nor disagree	8	2.7
	Disagree	2	0.7
	Strongly disagree		
Q17.What kind of doctor -patient relationship you think is best for treating geriatric patients	Dentist-based	149	49.7
	Shared decision-making	135	45.0
	Patient- based	4	1.3
	Informed consent	12	4.0

4. COMPARISON OF RESPONSES WITH UNDERGRADUATES, POSTGRADUATES AND FACULTY MEMBERS

86.0% MDS faculties, 83.0% BDS 4th year, 80.2% interns, 62.5% postgraduates and 61.53% BDS 3rd year students were aware about the fact that many systemic disorders like diabetes mellitus are comorbid with psychiatric disorders ($p=0.003$). A statistically significant result was also found for the fact that disorders like burning mouth syndrome is associated with psychiatric disorders ($p=0.00$) with MDS faculties 77.2%, 65.9% interns, 51.1% BDS 4th Year, 30.8% BDS 3rd Year and 30.0% postgraduates responding in affirmation. 72.5% interns, 70.2% postgraduates, 59.6% BDS 4th Year and 45.0% postgraduates responded that they evaluate the mental status of the patient before commencing dental treatment ($p=0.003$). 68.4% practitioners, 63.8% BDS 4th Year, 62.6% interns, 47.5% postgraduates and 44.6% BDS 3rd Year behaviourally manage patients in the clinical set-up ($p=0.032$). 77.2% practitioners, 70.3% interns, 52.5% postgraduates, 52.3% BDS 3rd Year and 51.1% BDS 4th Year revealed that geriatric patients are accompanied by their family members ($p=0.005$). Similar statistically significant response ($p=0.026$) was obtained from 49.5% interns, 48.9% BDS 4th Year, 47.5% postgraduates, 46.2% BDS 3rd Year and 43.9% practitioners for their own stigma holds

them from providing treatment to such patients. 53.8% BDS 3rd Year, 55.0% postgraduates and 31.6% practitioners neither agreed nor disagreed that psychiatric disorders are age-related process whereas 42.6% BDS 4th Year and 40.7% Interns disagreed ($p=0.000$). 40.4% practitioners, 37.5% postgraduates strongly agreed that psychiatric disorders in geriatric patients affect their compliance with the treatment provided with agreed response of 42.9% interns and 40.4% BDS 4th Year ($p=0.002$). 77.5% postgraduates, 70.8% BDS 3rd Year, 57.4% BDS 4th Year believed in dentist-based relationship followed by 64.9% practitioners and 56.0% Interns believed in shared decision-making ($p<0.001$).

5. DISCUSSION

Researchers have determined that technical errors, systemic illness, improper maintenance of oral hygiene or financial instability contributes to dissatisfactory dentures. However, it is unfortunate that the focus is mainly on the treatment procedures from the first step till the last step rather than on managing them [1]. Moreover, geriatric population have a higher incidence of psychiatric disorders as compared to other age group population due to drastic changes in lifestyle dynamics and societal relations in addition to health [2].

Table 3. Comparison of responses with undergraduates, postgraduates and faculty members

Question	Options	Designation					P-value	Chi-square
		Bds 3 rd year (no./%)	Bds 4 th year (no./%)	Interns (no./%)	Postgraduates (no./%)	Mds faculties with clinical practice (no./%).		
Q1.	Yes	40 61.5%	39 83.0%	73 80.2%	25 62.5%	49 86.0%	.003	16.317
	No	25 38.5%	8 17.0%	18 19.8%	15 37.5%	8 14.0%		
Q2	Yes	38 58.5%	30 63.8%	43 47.3%	22 55.0%	18 31.6%	.008	13.856
	No	27 41.5%	17 36.2%	48 52.7%	18 45.0%	39 68.4%		
Q3	Yes	47 72.3%	27 57.4%	55 60.4%	28 70.0%	36 63.2%	.410	3.698
	No	18 27.7%	20 42.6%	36 39.6%	12 30.0%	21 36.8%		
Q4.	Yes	20 30.8%	24 51.1%	60 65.9%	12 30.0%	44 77.2%	.000	40.987
	No	45 69.2%	23 48.9%	31 34.1%	28 70.0%	13 22.8%		
Q5.	Yes	41 63.1%	25 53.2%	52 57.1%	25 62.5%	30 52.6%	.708	2.150
	No	24 36.9%	22 46.8%	39 42.9%	15 37.5%	27 47.4%		
Q6.	Yes	53 81.5%	30 63.8%	69 75.8%	34 85.0%	45 78.9%	.136	6.998
	No	12 18.5%	17 36.2%	22 24.2%	6 15.0%	12 21.1%		
Q7.	Yes	31 47.7%	28 59.6%	66 72.5%	18 45.0%	40 70.2%	.003	16.283
	No	34 52.3%	19 40.4%	25 27.5%	22 55.0%	17 29.8%		
Q8.	Yes	29	30	57	19	39	.032	10.591

Question	Options	Designation					P-value	Chi-square
Q9.	No	44.6%	63.8%	62.6%	47.5%	68.4%	.856	1.332
	Yes	36	17	34	21	18		
Q10.	No	55.4%	36.2%	37.4%	52.5%	31.6%	.005	14.811
	Yes	43	30	65	28	41		
Q11.	No	66.2%	63.8%	71.0%	70.0%	71.9%	.026	17.425
	Yes	22	17	26	12	16		
Q12.	No	33.8%	36.2%	28.6%	30.0%	28.1%	.000	47.509
	Yes	34	24	64	21	44		
Q13.	No	52.3%	51.1%	70.3%	52.5%	77.2%	.002	31.740
	Yes	31	23	27	19	13		
Q12.	Others	47.7%	48.9%	29.7%	47.5%	22.8%	.000	47.509
	Strongly agree	30	23	45	19	25		
Q13.	No	46.2%	48.9%	49.5%	47.5%	43.9%	.002	31.740
	Agree	35	21	40	21	23		
Q12.	Neither agree nor disagree	53.8%	44.7%	44.0%	52.5%	40.4%	.000	47.509
	Disagree	0	3	6	0	9		
Q13.	Strongly agree	.0%	6.4%	6.6%	.0%	15.8%	.002	31.740
	Agree	13	4	6	9	3		
Q12.	Neither agree nor disagree	20.0%	8.5%	6.6%	22.5%	5.3%	.000	47.509
	Disagree	0	6	15	0	15		
Q13.	Strongly agree	.0%	12.8%	16.5%	.0%	26.3%	.002	31.740
	Agree	35	17	33	22	18		
Q12.	Neither agree nor disagree	53.8%	36.2%	36.3%	55.0%	31.6%	.002	31.740
	Disagree	17	20	37	9	21		
Q13.	Strongly agree	26.2%	42.6%	40.7%	22.5%	36.8%	.002	31.740
	Agree	23	12	13	15	23		
Q12.	Neither agree nor disagree	35.4%	25.5%	33.0%	37.5%	40.4%	.002	31.740
	Disagree	12	19	56	6	21		
Q13.	Strongly agree	18.5%	40.4%	42.9%	15.0%	36.8%	.002	31.740
	Agree	10	10	12	6	8		
Q12.	Neither agree nor disagree	15.4%	21.3%	13.2%	15.0%	14.0%	.002	31.740
	Disagree	20	6	10	13	5		
Q13.	Strongly agree	30.8%	12.8%	11.0%	32.5%	8.8%	.002	31.740
	Agree							

Question	Options	Designation					P-value	Chi-square
Q14.	Strongly agree	13	22	27	6	15	.000	37.720
		20.0%	46.8%	29.7%	15.0%	26.3%		
	Agree	21	14	37	13	26		
		32.3%	29.8%	40.7%	32.5%	45.6%		
	Neither agree nor disagree	31	9	21	21	12		
Q15.	Disagree	0	2	6	0	4	.341	13.389
		.0%	4.3%	6.6%	.0%	7.0%		
	Strongly agree	32	21	43	22	28		
		49.2%	44.7%	47.3%	55.0%	49.1%		
	Agree	23	22	42	12	26		
Q16.		35.4%	46.8%	46.2%	30.0%	45.6%	.011	26.044
	Neither agree nor disagree	10	4	5	6	2		
		15.4%	8.5%	5.5%	15.0%	3.5%		
	Disagree	0	0	1	0	1		
		.0%	.0%	1.1%	.0%	1.8%		
Q17.	Strongly agree	16	24	38	10	24	.000	58.940
		24.6%	51.1%	41.8%	25.0%	42.1%		
	Agree	49	23	48	30	28		
		75.4%	48.9%	52.7%	75.0%	49.1%		
	Neither agree nor disagree	0	0	4	0	4		
Q17.	Disagree	0	0	1	0	1	.000	58.940
		.0%	.0%	1.1%	.0%	1.8%		
	Dentist-based	46	27	33	31	12		
		70.8%	57.4%	36.3%	77.5%	21.1%		
	Shared-decision making	19	19	51	9	37		
Q17.		29.2%	40.4%	56.0%	22.5%	64.9%	.000	58.940
	Patient-based	0	1	1	0	2		
		.0%	2.1%	1.1%	.0%	3.5%		
	Informed consent	0	0	6	0	6		
		.0%	.0%	6.6%	.0%	10.5%		

This study has been conducted for the first time and the results have contributed new findings to the research field. In terms of Knowledge, it was revealed that dental faculties running their clinic had the most knowledge about the systemic disorders comorbid with psychiatric disorders amongst geriatric patients (86.0%), followed by BDS 4th Year students (83.0%), Interns (80.2%), Postgraduates (62.5%]. and least the BDS 3rd Year (61.5%). Similarly, knowledge about the association of burning mouth syndrome with psychiatric disorders was highest amongst dental faculties with running clinics (77.2%), followed by Interns, BDS 4th Year and least amongst postgraduates (30.0%). Variations in knowledge assessment may be attributed to clinics and varied patient exposure, as well as experience. When asked if edentulism in geriatric patients could contribute to sleep disorders like sleep apnoea, dental faculties had very low knowledge as compared to BDS 3rd and 4th Year students, postgraduates and interns. Moreover, 72.5% of Interns agreed that they assess a patient's mental health before beginning dental therapy. Differences in answers could be related to the fact that BDS students are more dedicated to taking case histories of every patient who comes to them as opposed to dental faculties who are juggling academics and patients. There is a co-curriculum in the academics for BDS students to take extended case histories of patients [12-14].

On evaluating the attitude of study subjects, it was revealed that irrespective of the academic year or designation, 53.8% BDS 3rd Year students, 36.2% BDS 4th Year students, 36.3% Interns, 55.0% postgraduates and 31.6% MDS faculties neither agreed nor disagreed to the question that psychosis is not found in geriatric patients these are all as a result of age-related process. The probable reason might be due to unawareness of the psychological related health of all age groups amongst which affects the daily life activities of such patients. Lastly, it was revealed that 70.8% BDS 3rd Year students and 77.5% postgraduates believed that dentist-based relationship is best for treating geriatric patients followed by 64.9% MDS Faculties and 56.0% interns believe shared -decision making to be the best. This finding attributes to the reason that BDS students and postgraduates are supervised by mentors and they work with certain principles whereas practitioners can work according to their own beliefs and treatment preferences.

6. CONCLUSION

The dearth of literature on the subject as well as general dentist's and student's ignorance on the subject of impact of psychiatric disorders on oral health is perplexing and to be thus implicated on a large scale. As a result, more evidence and research in this field is increasingly important and required to improve evidence- based clinical practise and therapy for geriatric patients.

7. RECOMMENDATIONS

1. There should be regular webinars on behavioural lifestyle and quality of life affecting oral health.
2. Dental professionals should share a healthy and shared decision-making relationship with patients.
3. Dental professionals should be trained in the recognition and management of both physical and mental disorders needed to cater health needs of this ever- increasing part of the population.

CONSENT AND ETHICAL APPROVAL

The nature and the purpose of the study was elucidated to the institutional review board and the ethical clearance was acquired. Informed consent was obtained from all the study participants.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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