Original Article

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Dentistry Section

Oral Health Maintenance and Barriers among Patients Attending Psychiatry Ward of Tertiary Hospital of Bhubaneswar: A Qualitative Research

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ABSTRACT

Introduction: Individuals with psychiatric disorders often encounter unique challenges that extend beyond mental health concerns, impacting various aspects of their wellbeing, including oral health. Psychiatric patients frequently experience a complex interplay of factors contributing to compromised oral health. To address these barriers, integrated healthcare approaches that incorporate oral health into psychiatric care are proposed. As there is a lack of baseline data on oral health barriers highlighting the intersection of mental health and oral health to inform future interventions and policies, it is necessary to assess the oral health barriers and maintenance in psychiatric patients.

Aim: To assess the oral health barriers and oral health maintenance of psychiatric patients of a tertiary hospital in Bhubaneswar, India.

Materials and Methods: A qualitative research was conducted in the Psychiatry Ward, Kalinga Institute of Medical Sciences, Bhubaneswar, Odisha, India, from January 2022 to May 2022. Patients between age group of 16 years and 60 years with psychiatric illness and those who gave informed consent were included in the study. Principle of maximum diversity was maintained to select participants. Hence, the sample size was 13. Data were collected through a semistructured questionnaire that consisted of socio-demographic details (age, gender, education, marital status, diagnosis and duration of illness), health perception (general, oral and mental health), and barriers and facilitators (risk factors and protective factors). The data analysis was done using MAXimum Qualitative Data Analysis (MAXQDA) 2020 software, and various themes were identified and classed at two levels: before illness and during symptomatic illness.

Results: The mean±Standard Deviation (SD) age of the study population was 24.77±9.02 years. Among the subjects, the distribution of gender consisted of 4 (30.8%) males and 9 (69.2%) females. Based on education, 3 (23.1%) participants had primary level of education, followed by 6 (46.2%) of secondary education and 4 (30.8%) with graduation degree. Themes were derived from the participant interview following the inductive coding method, concerning both before illness and symptomatic illness. The various sub-themes included previous treatment for psychiatry, barriers to care, delayed care, oral health maintenance, reduced self-care and medicine side-effect.

Conclusion: Enhancing oral health and daily self-care among individuals with severe mental illness necessitates further research involving larger and more diverse samples to thoroughly explore perspectives on specific intervention elements. Understanding and addressing the barriers to dental treatment consistent with prior studies is critical. Policymakers and healthcare planners should incorporate these findings into strategies aimed at reducing disparities in oral healthcare access and improving outcomes for this vulnerable population. Tailored, evidence-based approaches are essential to bridge existing gaps and ensure holistic care delivery.

Keywords: Mental disorders, Psychiatric illness, Qualitative analysis, Schizophrenia

INTRODUCTION

An essential measure of general health, wellbeing and quality of life is oral health. It addresses a wide range of conditions and ailments, including tooth decay, periodontal disease, tooth loss, oral cancer, oral trauma, noma, and congenital abnormalities such as cleft lips and cleft palates. Oral diseases are the most widespread non communicable diseases, affecting almost half of the world's population (45% or 3.5 billion people worldwide) over the life course from early life to old age [1]. Globally, mental health is acknowledged as a top priority in health research and policy, and the Sustainable Development Goals include mental health. Over 197 million individuals suffer from mental illnesses ranging in severity, the most of them are brought on by worry or despair. Over the past three decades, the share of these illnesses in India's overall disease burden has nearly doubled, with an even greater increase in adult populations. Psychiatric research has to be given more priority in light of this growing trend [2-4].

Long-term hospital stays combined with a hysteric mindset exacerbate the situation and put their oral health in the worst possible situation. Furthermore, certain antidepressants and antipsychotic medications can induce xerostomia, which can lead to dental conditions such as gingivitis, stomatitis, caries and oral ulcers. Furthermore, due to a lack of motivation, ignorance and low prioritisation, patients often either do not seek dental care or choose an option like tooth extraction, resulting in lower functioning at a younger age, because of a lack of motivation, ignorance and low priority shortly after the rehabilitation becomes a financial burden [5].

India, with its large population and diverse demographics, faces a significant mental health challenge that demands immediate attention. Mental health disorders affect people across all age groups, socio-economic strata and geographical areas, impacting individuals from all sections of society [6]. These conditions lead to personal distress, hindered daily functioning, and incur substantial societal costs. In recent years, the prevalence of mental health issues in India has been steadily increasing, contributing to a growing public health crisis. It is estimated that approximately 15% of the Indian population is affected by mental health disorders, which encompass a wide range of conditions such as anxiety, depression,

bipolar disorder, schizophrenia, substance use disorders and neurodevelopmental disorders [7,8].

In India, the prevalence and presentation of psychiatric disorders vary significantly across regions, genders, occupations, age groups and ethnicities. Likewise, people's lay beliefs and perceptions of mental health conditions differ, influencing their care-seeking behaviour and utilisation of health services. Insights from qualitative research can be instrumental in designing interventions, shaping policies, and implementing innovations in mental healthcare. Despite the critical role Qualitative Research Methods (QRM) play in psychiatric research within India, there is limited information on their current application in the field of Indian psychiatry [9,10].

There is a lack of baseline data in Bhubaneswar city, India that has been conducted on the oral health barriers of patients admitted in tertiary care hospital. Given the above, the current study was aimed to assess the oral health barriers and oral health maintenance of psychiatric patients of a tertiary hospital in Bhubaneswar city, India.

MATERIALS AND METHODS

The present qualitative research was conducted in the Psychiatry Ward, Kalinga Institute of Medical Sciences, Bhubaneswar, Odisha, India, from January 2022 to May 2022. The patients who were admitted in the Psychiatry Ward during the study period comprised the study population. Ethical clearance was obtained from the Institutional Ethics Committee of KIMS, KIIT Deemed to be University (KIIT/KIMS/IEC/792/2021). Informed written consent was obtained from the participants at the beginning of the survey form. The identity of the subjects was concealed, and they were free to withdraw from the study at any point.

Inclusion criteria: Patients between 16 years and 60 years of age, diagnosed with all types of psychiatric illnesses and who were present at the time of study, and who gave their informed consent were included in the study.

Exclusion criteria: Subjects who did not give consent were excluded from the study.

Sample size calculation: Principle of maximum diversity will be maintained to select participants, and the number of interviews was stopped once data saturation was reached. Hence, the sample size was 13. A purposive sampling method was followed.

Study Procedure

A self-made interview guide was prepared for the qualitative assessment. Data were collected by trained postgraduate student using a semistructured questionnaire consisting of eight questions based on following topics [Annexure-1].

Interview guide:

1. How were you maintaining your oral health before the onset of your mental illness?
2. Have you experienced pain or discomfort in your oral health during the mental illness?
3. Do you experience difficulty in chewing or speaking, or do you have dry mouth?
4. Have you visited the dentist during your mental illness? If yes, what kind of service did you avail?
5. How are you maintaining your oral health now?
6. What is important to you when dealing with a dentist?
7. What kind of dental health service should be available to you in the best possible way?
8. If dental treatment is difficult for you, what do you experience as barriers to meeting your dental health service?

A. Socio-demographic details

B. Health perception-General, oral and mental health

C. Barriers and facilitators-Risk factors and protective factors

The Cronbach's alpha for the quantitative part of the questionnaire was calculated to be 0.98, which denoted excellent reliability. All interviews were conducted in Odia language, since it is the common local language in Odisha. If the patient was unable to answer, the patient's attendant was interviewed instead.

STATISTICAL ANALYSIS

Qualitative data analysis was analysed using MAXQDA 2020 software. Themes were derived from the participant interview following the inductive coding method. The different themes and subthemes derived were as follows:

I. Before illness [Table/Fig-1]:

a) Oral health maintenance
b) Previous dental treatment
c) Previous psychiatric treatment
d) Barriers to care
e) Delayed care

II. Symptomatic illness [Table/Fig-2]:

a) Oral health maintenance
b) Reduced self-care
c) During illness
d) Barriers to care
e) Medicine side-effects

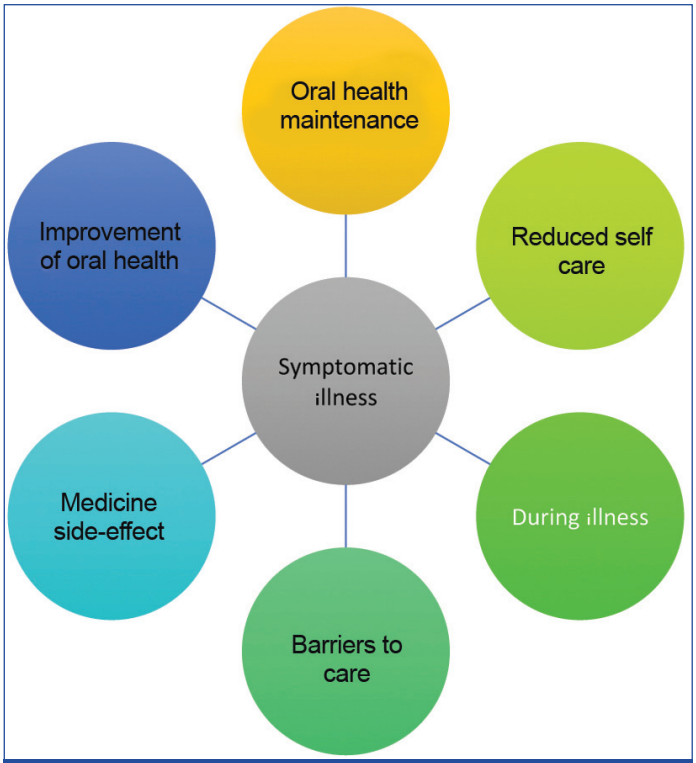
[Table/Fig-1]: Thematic diagram before illness.

RESULTS

The distribution of the study population according to their different socio-demographic variables has been illustrated in [Table/Fig-3]. The study population consisted of about 13 subjects of age group ranging from 16-40 years. The mean±SD age of the study population is 24.77±9.02 years. Among the subjects, the gender distribution consisted of 4 (30.8%) males and 9 (69.2%) females. The mean±SD age of the study population is 24.77±9.020 years. Based on education, 3 (23.1%) had primary level of education, followed by 6 (46.2%) with secondary education and 4 (30.8%) with graduation.

I. Before illness:

a) Oral health maintenance: The participants reported various oral hygiene methods and materials, as well as, their frequency of brushing before being diagnosed with symptomatic illness. Most of them brushed once a day, while a few brushed twice a day along with mouthwash.



[Table/Fig-2]: Thematic diagram during symptomatic illness.

Variables	Frequency (n)/Mean	Percentage (%)/SD
Age	24.77	9.020
Gender		
Male	4	30.8
Female	9	69.2
Education		
Primary	3	23.1
Secondary	6	46.2
Graduation	4	30.8
Marital status		
Single	10	76.9
Married	3	23.1
Diagnosis		
Shizophrenia	5	38.5
Depression	3	23.1
Psychosis	4	30.8
Dissociative motor disorder	1	7.7
Duration of illness (years)		
<1	1	7.7
1	6	46.2
2	5	38.5
>2	1	7.7
Total (N)	13	100

[Table/Fig-3]: Socio-demographic details of study participants.

"Earlier, I used to brush my teeth once a day." (Participant 1, female, 19)

"Earlier, I used to brush twice a day and use to rinse my mouth regularly." (Participant 2, female, 19)

"I advised her to use Ramdev Baba's toothpaste. Since she was born, we have been using Ramdev Baba products." (Participant 5, female, 17)

"She brushes once a day with Colgate toothpaste." (Participant 6, female, 23)

"I used to brush my teeth properly for 4-5 minutes earlier." (Participant 7, female, 24)

"I used to brush my teeth once and twice whenever I ate non-veg." (Participant 8, female, 47)

"I brush my teeth once a day with a hard bristle brush." (Participant 10, male, 21; Participant 11, male, 19; Participant 12, male, 18)

"I used to brush once a day for 8-10 minutes. I also used tongue cleaner." (Participant 13, male, 24)

b) Previous treatment: Some of the patients had visited a dental clinic or hospital for services such as root canal treatment, extraction, restoration and prosthesis.

"I have gone to a dentist earlier for a root canal." (Participant 2, female, 19)

"She visited the dentist only when she had to extract teeth at railway clinic free of cost." (Participant 5, female, 17)

"When I was small, I fell down and broke my front teeth. At that time, I did not visit a dentist. Two years ago, I went to a dentist, who advised me to get a fixed prosthesis." (Participant 7, female, 24)

"I once had a dental cavity and had to go to Cuttack hospital in Cuttack for treatment." (Participant 9, female, 28)

"Earlier I visited a dentist for extraction and faced no problem." (Participant 13, male, 24)

c) Previous treatment for psychiatry: Only one patient was admitted earlier during the Coronavirus Disease 2019 (COVID-19) pandemic for the mental illness.

"Two years before I had admitted my daughter during COVID-19 time. She recovered, but now, again due to domestic violence, she has come to hospital." (Participant 3, female, 40)

d) Barriers to care: Often, financial constraints were put forward by patients as an explanation for inadequate oral healthcare. Domestic violence emerged as a new finding. Being a homemaker, the patient was dependent on her in-laws, who did not provide her with adequate healthcare. Some participants expressed apprehension about dentists and their treatment procedures. Availability of time was also a hurdle, as dental appointments are long taking which in order would mean to take a day off from their work. Some did not have proper access to dental care, while for some dental treatment was not a priority.

"…Root canal treatment was costly." (Participant 2, female, 19)

"She did not go to dentist because there was domestic violence at her in-laws' home. My grandson hit my daughter, due to which she fell down and hurt her mouth." (Participant 3, female, 40)

"We are farmers; we do not have any job. Therefore, we cannot afford a dentist." (Participant 3, female, 40)

"I am afraid of dentists. I fear injections." (Participant 4, female, 24)

"We do not have time. I work as a nursing superintendent at railways. Being a woman, I am constantly scolded that I do not give my daughter enough time. Life is not same always. Therefore, we can not go to dentist regularly." (Participant 5, female, 17)

"But my father did not have that much money, so I want to go for temporary prosthesis." (Participant 7, female, 24)

"I have not visited a dentist due to transportation issues. There is no dental clinic near my village." (Participant 9, female, 28)

"The long queues and moving from here to there tiring when I visited Cuttack hospital. But now, I can not visit the dentist as I am admitted here." (Participant 9, female, 28)

"Teeth are not that important to me. I have not visited a dentist. I will visit if I have any pain." (Participant 10, male, 21)

"I fear dentists, so I have not visited a dentist. Once my younger brother went to a dentist, and he came home crying. So, I will not go to dentist." (Participant 11, male, 19)

"I have never gone to a dentist. I do not have a dentist in my village." (Participant 12, male, 18)

"I want to use mouthwash properly, but as I have ulcers, I can not." (Participant 13, male, 24)

1.5 Delayed Care

"My father is ill; therefore, I could not go to dentist." (Participant 1, female, 19)

"But now I do not have any pain, so I will not go." (Participant 10, male, 21)

2. Symptomatic illness:

a) Oral health maintenance: "I wish dentist could advised her to use mouthwash twice so that the smell does not come." (Participant 5, female, 17)

"I want to fix my front tooth as I will get married soon, but I do not have money. Therefore, I want to use temporary teeth free of cost." (Participant 7, female, 24)

"Now, I have been given mouthwash to maintain my oral health." (Participant 11, male, 19)

"I visited a dentist now. They gave me medicine and a jelly to put in my mouth." (Participant 13, male, 24)

b) Reduced self-care: "After psychiatry problem, I brush only once a day. I am unable to keep my mouth clean." (Participant 2, female, 19)

"Now she is brushing with Colgate toothpaste once a day. I ask her to brush twice, but she is not listening. She is shouting at me." (Participant 3, female, 40)

"Psychiatry problem should be solved first. Now, I am still brushing once." (Participant 10, male, 21)

c) During illness: During periods of illness, many patients struggle to maintain proper oral hygiene due to a variety of factors, including physical discomfort, mental health challenges, and a lack of access to necessary resources. This neglect often leads to the development of common oral health issues, such as halitosis (bad breath), which can result from the accumulation of bacteria, food debris and plaque in the mouth. In some cases, poor oral hygiene exacerbates existing dental problems, causing symptoms such as tooth sensitivity, gum inflammation, or persistent pain. These issues not only affect physical wellbeing but also contribute to psychological distress, social discomfort and a reduced quality of life. This further highlighting the importance of integrating oral healthcare into overall health management, particularly during periods of illness.

"After my psychiatry problem, I could not brush my teeth. I use my hand to clean my teeth." (Participant 1, female, 19)

"My daughter's mouth is stinking. I ask her to open her mouth properly and to speak properly. She says she cannot because her tooth is paining as she fell down. She is not opening her mouth. She has been given mouthwash, but she does not using regularly." (Participant 3, female, 40)

"There is no change before and after admission." (Participant 5, female, 17)

"Today she was saying she experienced pain. I checked her mouth and saw a big cavity." (Participant 6, female, 23)

"But now I cannot do it." (Participant 7, female, 24)

"But now I cannot brush. I am having bad smell." (Participant 8, female, 47)

"Now I have a hole in my tooth. The food gets lodged there. I want to treat it." (Participant 9, female, 28)

"Now I have been given mouthwash to use as my mouth smells. I can not swallow food properly." (Participant 11, male, 19)

"There is no problem with my teeth. Therefore, I have never gone to a dentist." (Participant 12, male, 18)

"Now I have ulcers in my mouth since six days. Therefore, I cannot brush my teeth properly. I can not eat properly. I can not drink. I eat slowly. I continue taking the medicine and think it will reduce. But it's not reducing." (Participant 13, male, 24)

d) Barriers to care: The major barrier to accessing oral health post-illness was being admitted to the ward and lack of time.

"Now I am having pain but can not visit a dentist due to psychiatry problem." (Participant 2, female, 19)

"But now I am admitted here; I can not go to the dentist." (Participant 7, female, 24)

"I want to have a machine wash for my teeth, but I can not go to dentist because I am admitted here. There is also no time to go." (Participant 8, female, 47)

e) Medicine side-effect: "I have dry mouth. I swallow with difficulty. I cannot make my mouth wide open." (Participant 1, female, 19)

"I can not eat properly. I can not drink. I eat slowly." (Participant 13, male, 24)

f) Improvement of oral health: "Oral health can be improved by maintaining oral hygiene. We are vegetarians, so we should take calcium-enriched food. We can also do gum massages, but I do not know much about it." (Participant 5, female, 17)

Validity

The study explored oral health maintenance, barriers to care and changes during illness through participant interviews. Before illness, most participants brushed their teeth once daily, with minimal use of advanced hygiene tools. Major barriers to care included financial constraints, geographic inaccessibility, fear of dentists and time limitations. Illness further reduced self-care due to physical discomfort, psychiatric challenges and hospital admissions, leading to issues like bad breath, cavities and ulcers. Cultural practices influenced product choices, while domestic violence emerged as a unique barrier. The findings highlight the need for integrated dental care in psychiatric settings, improved accessibility in rural areas, and enhanced oral health education.

DISCUSSION

The present study aimed to investigate the barriers and facilitators affecting oral health maintenance among patients admitted to the Psychiatry Ward of a tertiary hospital. Themes emerging from the study were categorised into two distinct phases: preillness and during symptomatic illness. This categorisation provided valuable insights into how patients managed their oral health before being diagnosed with their condition and the challenges they now face in maintaining oral hygiene during their illness. The majority of participants in the study had a diagnosis of schizophrenia. In 2006, an oral health survey was conducted among institutionalised residents with schizophrenia at Taiwan's largest public psychiatric hospital. The survey revealed that low income and low educational attainment were significantly associated with markers of dental caries in this population. These findings emphasise the importance of considering factors such as prolonged institutional stays when designing preventive dental health programs for individuals with schizophrenia in institutional settings. Decision-makers must address these unique treatment-related challenges to improve oral health outcomes for this vulnerable group [11].

The study identified several barriers to oral healthcare before the onset of illness, including long wait times, inconvenient appointment schedules, transportation challenges, fear of dentists, financial constraints and experiences of domestic abuse. During hospitalisation, a lack of time emerged as a significant obstacle to maintaining oral hygiene. Additionally, some individuals prioritised addressing their mental health concerns over dental issues, even when experiencing pain. The present study highlighted a gap between the services available and the specific needs of patients, which must be addressed to improve access to oral healthcare.

Participants also described challenges related to their mental illness that hindered their ability to attend and adhere to treatment, such as difficulties in scheduling appointments, physically visiting the clinic

and missing appointments due to illness. Access to dental health services often relies on an individual's ability to initiate contact and maintain consistent follow-up, which can be particularly challenging for those with mental health conditions.

Similar findings were seen in a study by Aljabri MK et al., [12]. It is reasonable to conclude that patients face financial barriers to dental care, largely due to unemployment, which limits their ability to afford such treatments. Furthermore, previous studies have highlighted that the cost of dental services and dental anxiety are significant obstacles to accessing oral healthcare-findings that were also corroborated in the present study [13-17].

Another study identified potential barriers to oral healthcare, with 41.7% of participants reporting that they never felt the need for it, 27.1% citing a lack of awareness, and 14.6% pointing to costly treatments and time constraints as significant factors [18].

In a study by Kuipers S et al., the issues that patients faced included general dental care (such as ignorance), risk factors (such as substance abuse, unhealthy eating habits and financial difficulties), general experiences with dentists and dental hygienists, and the discrepancy between needs and interventions [19].

The current study observed a notable change in oral care habits before and after hospital admission. Prior to receiving a mental health diagnosis, most patients used mouthwash and brushed their teeth atleast once a day. However, after admission, many participants admitted to brushing less frequently, with some even neglecting to brush daily. While several patients requested a dentist to visit and offer guidance on maintaining good oral hygiene for their relatives, caregivers reported that the mouthwash prescribed by doctors was often not being used.

Survey participants emphasised the importance of access to nutritious food and transportation for oral healthcare. To address oral hygiene needs, mental health and dental services must collaborate closely, incorporating oral hygiene as a fundamental aspect of overall health. The present study found that extended wait times were a major barrier to dental service use, with participants and caregivers suggesting a continuous program where patients can regularly interact with specialised dentists. Involving service users in the process is crucial for enhancing care. This user participation aligns with recovery-oriented mental health practices, underscoring the importance of incorporating their knowledge and needs in dental care initiatives.

The current study's strength lies in the diversity of participants, who had a broad range of mental health conditions and varied experiences with oral health services, providing a wide spectrum of perspectives. Conducting the research with patients from both a general public dental hospital and a tertiary hospital added depth to the findings. Despite time and budget constraints, the present small but focused study highlighted important issues, such as domestic abuse, that warrant attention in future research on mental health and oral healthcare.

Limitation(s)

The present study has certain limitations. A primary drawback was the small sample size, which may have affected the robustness of the findings. Additionally, the absence of consent from one participant for audio recording could have introduced bias. Another limitation was the insufficient recruitment of individuals from diverse ethnic backgrounds, which might have restricted the inclusion of varied cultural perspectives and opinions, thereby limiting the richness of the data. Furthermore, the study did not collect information on the socio-economic status of the participants. Future studies should consider extending the recruitment period and gathering detailed socio-demographic data to enhance the depth and applicability of the findings. Lastly, the study's generalisability is limited, as the participants were exclusively drawn from a mental health clinic, excluding individuals not receiving mental healthcare.

CONCLUSION(S)

In order to investigate the opinions on particular elements of interventions to enhance oral health in the present study population, more study with a more extensive and varied sample is required. This is crucial for effectively improving oral health and daily self-care for individuals with severe mental illness, more research involving a more diverse sample size is required to examine perspectives on particular aspects of interventions aimed at improving oral health in the present study population. Additionally, the barriers to dental treatment that have been reported largely align with the findings of prior studies, and policymakers and planners for healthcare should consider them.

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[ANNEXURE-1]: DATA COLLECTION SHEET

A. Sociodemographic details

Name-

Age-

Gender-

Education-

Occupation-

Marital Status-

Income-

Type of Mental Illness-

Duration of Illness-