

Oral Health, Caries, and Bruxism in Institutionalized Psychiatric Patients: The Impact of Long-term Psychotropic Medication Use

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ABSTRACT

The present study evaluates the prevalence of bruxism and its association with dental caries and oral hygiene in patients with severe mental disorders. 200 patients (51.5% female and 48.5% male) aged 30 to 70 years, who were hospitalized at the Ali Mihali Psychiatric Hospital in Vlore, Albania, for five to thirty years, participated in the observational study. The study was granted formal ethical approval by the Institutional Review Board of the University of Vlora, Albania, and complied with the Declaration of Helsinki. Participants were divided into four age groups: 30–40, 41–50, 51–60, and 61–70 years. The data showed that 68% of patients had poor oral hygiene, with 66% suffering from dental caries, primarily because they brushed their teeth only once a day. Around 50% of patients treated with psychotropic drugs like haloperidol, risperidone, and olanzapine reported involuntary jaw movements and teeth grinding. Based on the ANOVA test, a notable statistically significant association was detected between the administration of these medications and the incidence of bruxism ($p = 0.001$). It was also noted that there was a significant relationship between bruxism and caries, as indicated by high statistical significance ($p < 0.05$). Our study indicates that extended use of psychotropic medications linked to dry mouth considerably raises the risk of chronic bruxism and adverse oral health in individuals with mental health issues.

Keywords: Bruxism, Dental Caries, Oral Hygiene, Severe Mental Illness, Psychotropic Medications.

INTRODUCTION

Bruxism is a complex phenomenon that combines biological and psychological factors (Lee et al., 2025). In individuals with mental health conditions, the severity of this disorder is notably amplified (Kuhn & Türp, 2018).

Studies show that this condition is often triggered by high levels of stress and anxiety and is further complicated by poor oral hygiene and regular use of antipsychotic medications (Kang, 2024). According to Fratto and Manzon (2014), extrapyramidal side effects caused by antipsychotic medications can promote jaw muscle activity during both sleep and wakefulness. A clinical study by Raymond and Maloney (2015) found that patients with mental health problems have difficulty maintaining good dental and oral hygiene. As reported by Skrypnik (2025), patients who experience chronic teeth grinding alongside potential salivary changes face an elevated risk of enamel erosion and tooth decay. Urien (2023) established that mental and oral health have a bidirectional relationship; therefore, managing this connection requires comprehensive assessment and a multidisciplinary approach by healthcare professionals. Our article presents a study involving psychiatric patients, aiming to better understand the relationships among bruxism, overall mental health, oral hygiene, and dental caries. In Albania, data on the prevalence of bruxism among adults aged 30–70 with mental health disorders remains limited; meanwhile, according to the Institute of Public Health, anxiety and mood disorders are on the rise, and mental health issues affect a significant portion of the general population.

Purpose of the study: The aim of this study is to evaluate the prevalence of bruxism and its association with dental caries and oral hygiene status in adults aged 30–70 diagnosed with severe mental illnesses.

MATERIAL and METHODS

This observational study was conducted at the "Ali Mihali" psychiatric hospital in Vlora, Albania. A sample of 200 patients was selected from a population of 250 hospitalized patients at the psychiatric hospital. The participants were 51.5% female and 48.5% male. The patients' length of hospital stay ranged from 5 to 30 years. We collected data on patient toothbrushing frequency. Based on morning jaw stiffness, masseter muscle hypertrophy, and headaches reported during the day, patients were diagnosed with bruxism. No occlusal splints were utilized to assess nighttime grinding. Patients without teeth or those unable to provide their consent were not included in our study. Patients were randomly selected to form a representative sample of the hospital population. For the implementation of this study, we have obtained formal ethical approval from the Institutional Review Board of the University of Vlora, thus guaranteeing full compliance with international standards of scientific research. The study was conducted in full accordance with the principles of the Declaration of Helsinki. The psychiatric hospital director granted permission for the observations. Informed consent was obtained from all participants, who had the right to withdraw from the study at any time. All data was fully anonymized to ensure the protection of patient privacy.

RESULTS

We examined the prevalence of bruxism, dental caries, and oral hygiene status in 200 patients (aged 30–70) with severe mental disorders.

Our observational study found that 68% of participants had poor oral hygiene and 66% reported dental caries. This was mainly attributed to the average frequency of tooth brushing, which was only once a day, lack of daily flossing, and skipping regular professional dental cleanings.

According to the study's findings, half of the patients taking antipsychotic drugs like olanzapine, haloperidol, or risperidone complained of headaches, morning jaw stiffness, and masseter muscle hypertrophy.

To assess the impact of medication, use on the occurrence of bruxism, data were processed using the ANOVA test in IBM SPSS Statistics 23.0. The significance level was set at $\alpha = 0.05$.

Our findings suggest a strong statistical association between antipsychotic treatment and the prevalence of bruxism ($p = 0.001$).

According to statistical analysis, there is a significant correlation ($p < 0.05$) between the prevalence of dental caries and bruxism.

DISCUSSION

Bruxism is a growing phenomenon that is heavily influenced by emotional tension and mental disorders (Teoh & McCullough, 2019). In patients with psychiatric conditions, this specific condition is worsened by high anxiety, poor dental hygiene, and long-term psychotropic drug use (Tagger-Green et al., 2020).

Disorders such as schizophrenia, depression, and anxiety negatively impact oral health, as prescribed medications commonly cause dry mouth, which directly leads to caries and tooth loss (Khairunnisa et al., 2024).

The present study highlights that among patients aged 30–70 with mental health issues, 68% suffer from poor oral hygiene and 66% present with dental caries. Our findings suggest a strong statistical association between antipsychotic treatment and bruxism.

In Albania, the Institute of Public Health has reported a concerning increase up to 50% in requests for treatment and psychiatric ward admissions. This increase is driven primarily by acute episodes, depression, and anxiety,

alongside substance abuse that exacerbates psychosis. This trend indicates an urgent need for integrated psychiatric and dental care to mitigate the oral health side effects of necessary psychopharmacological treatments.

As noted by Glazer (2000), conditions such as enamel loss and tooth decay are often exacerbated by bruxism caused by stress and poor oral hygiene. Our observational study supports the findings of Namlı and Oflezer (2024), who observed that 41.2% of participants demonstrated potential for bruxism, a figure that highlights a concerning prevalence within both their study of patients with schizophrenia in Istanbul, Türkiye and our own evaluated population.

To maintain oral health, study patients were advised to stay hydrated and chew sugar-free gum for 20 minutes after meals to stimulate saliva flow. Additionally, they were instructed to attend regular check-ups and consult their dentist about protective night guards or bite splints.

With rising cases of medication-induced bruxism emerging as a growing public health concern in Albania, multidisciplinary collaboration between specialized teams at the Mother Teresa University Hospital Center in Tirana and regional community health projects in Vlora is an essential step to provide integrated dental, psychiatric, and neurological interventions for vulnerable patients.

LIMITATIONS

It is difficult to determine the exact chronological onset of bruxism relative to the start of psychopharmacological treatment. The assessments rely on patient reports and questionnaires. Because psychiatric patients may suffer from altered cognitive states or memory deterioration, this can impact the accuracy of self-reported daily oral hygiene and bruxism frequency.

FUTURE RESEARCH RECOMMENDATION

Multidisciplinary reforms at facilities like the Vlorë “Ali Mihali” Psychiatric Hospital and the University Hospital Centre “Mother Teresa” (QSUT) in Tirana are expanding mental healthcare delivery in Albania, paving the way for on-site dental screenings. For medication-induced dry mouth, which directly exacerbates caries, dentists often recommend alcohol-free mouthwashes, salivary substitutes, and increased hydration. In cases of severe antidepressant- or antipsychotic-associated bruxism, psychiatrists may occasionally adjust dosages or evaluate alternative psychopharmacological therapies where appropriate.

CONCLUSION

Long-term use of psychotropic medications, coupled with underlying stress and anxiety, severely elevates the risk of chronic bruxism and drug-induced xerostomia. This combination rapidly degrades oral health in patients aged 30-70, creating a critical need for integrated psychiatric and dental care to break the cycle of enamel wear and jaw dysfunction.

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