

Proceeding Paper

# Assessment of Xerostomia in Outpatients of the Lisbon Psychiatric Hospital Centre (CHPL) <sup>†</sup>

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**Abstract:** This study aimed to assess the prevalence of xerostomia in psychotropics-medicated outpatients of the Lisbon Psychiatric Hospital Centre (CHPL). For this cross-sectional study, 60 outpatients who underwent a general psychiatry consultation signed a consent form and answered a questionnaire assessing Summated Xerostomia Inventory (SXI-PL), and sialometry was performed. Amongst the 60 subjects, 61.70% were male, and the mean age was  $51.53 \pm 11.15$  years. Among the population, the prevalence of hyposialia was 16.7%, and that of xerostomia was 23.3%. Higher SXI-PL scores ( $7.60 \pm 2.26$ ) were reported in patients with normal saliva flow. The symptom that showed a higher severity of xerostomia was “My mouth feels dry” ( $1.78 \pm 0.81$ ).

**Keywords:** psychotic disorders; hyposalivation; xerostomia

## 1. Introduction

Saliva is a biochemically complex fluid consisting of a mixture of water, proteins, glycoproteins and ions that collaborate to carry out several functions for the homeostasis of oral health, including lubrication of oral tissues. It also plays a major role in the process of remineralization and antimicrobial activity and acts as a physical barrier due its numerous immune and nonimmune defence components. Salivary secretion dysfunction is mainly attributed to adverse drug effects, leading the symptom of mouth dryness (xerostomia) because of hyposialia [1]. Hyposialia has been documented upon exposure to antipsychotics and other medications (first-generation antipsychotics, second-generation antipsychotics and anticholinergics) which often disturb saliva secretion [2]. The aim of this study was to assess the prevalence of hyposialia and xerostomia in psychotropics-medicated outpatients of the Lisbon Psychiatric Hospital Centre (CHPL).

## 2. Materials and Methods

A cross-sectional study was conducted from March to June 2022 for a period of 4 months at the outpatient department of the General Psychiatry and Non-Medical Nursing Consultation Department at the CHPL. The inclusion criteria for the patients were as follows: (1) has a psychiatric diagnosis according to the International Classification of Diseases-10 [3]; (2) has had a psychiatric condition for at least 1 year; (3) has taken antipsychotic medication for at least 1 year; (4) is being treated as an outpatient; and (5) is over 18 years old. A sample of 60 outpatients were selected randomly from the psychiatry department of the CHPL, consisting of individuals of both genders aged between 27 and 72 years who consented to participate in this study. This study was approved by the Ethics Committee of the Lisbon Psychiatric Hospital Centre and the Egas Moniz Ethics Committee with the approval number 1126. Subsequently, a questionnaire was applied regarding sociodemographic variables and SXI-PL. Sialometry was performed for unstimulated (USFR) and stimulated (SSFR) salivary flow rates. Hyposialia was considered when



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USFR < 0.1 mL/min and/or SSFR < 0.7 mL/min [4]. Data were submitted to descriptive analysis using IBM SPSS Statistics® v.28 software.

### 3. Results

Amongst the 60 outpatients, the majority were male, at 61.70% (37), and the mean age of the study population was  $51.53 \pm 11.15$ . The majority of the population, 53.34% (32), had completed primary school or had a lower education level; 46.7% (28) had fewer than 1 monthly family income at minimum wage and 46.7% (28) were retired (Table 1). The frequency distribution of psychiatric patients was as follows: schizophrenia, schizotypal and delusional disorders, 66.70% (40); epilepsy, 31.70% (19); and neurotic, stress-related and somatoform disorder, 1 (1.7%) (Table 2).

**Table 1.** Distribution of participants according to sociodemographic characteristics.

Variables		Absolute Frequency	Relative Frequency
Gender	Male	37	61.70%
	Female	23	38.30%
Educational Level	Primary or less	32	53.34%
	Secondary or higher	15	25.00%
	Graduate student or higher	13	21.70%
Employment status	Employed	15	25.00%
	Unemployed	17	28.40%
	Retired	28	46.70%
Income	Not known/no response	4	6.70%
	Fewer than 1 monthly family income at minimum wage	28	46.70%
	1–2 monthly incomes	23	38.30%
	2–4 monthly incomes	5	8.30%

**Table 2.** Distribution of participants according to their psychiatric diagnosis.

Psychiatric Diagnosis	Absolute Frequency	Relative Frequency
Schizophrenia, schizotypal and delusional disorders	40	66.70%
Epilepsy	19	31.70%
Neurotic, stress-related, and somatoform disorder	1	1.7%

The prevalence of hyposialia was 16.7% and xerostomia was 23.3% among our population (Table 3). Overall SXI-PL scores ranged from 5 to 15 with a mean of  $(7.41 \pm 2.28)$  and the severe symptom that showed higher perception of xerostomia was “My mouth feels dry” ( $1.78 \pm 0.81$ ) (Table 4). The mean SXI-PL scores were higher in patients with normal saliva flow ( $7.60 \pm 2.26$ ). The results demonstrate no statistically significant correlation between SXI-PL scores and hyposalivation ( $p > 0.05$ ) (Table 5).

**Table 3.** Distribution of the frequency of salivary flow conditions.

	Absolute Frequency (n)	Absolute Frequency (%)
Normal	50	83.30%
Hyposialia	10	16.7%

**Table 4.** Distribution of the mean scores of Summated Xerostomia Inventory (SXI-PL).

SXI-PL	Mean	SD
My mouth feels dry when eating a meal	1.38	0.66
My mouth feels dry	1.76	0.81
I have difficulty in eating dry foods	1.26	0.54
I have difficulty swallowing certain foods	1.33	0.57
My lips feel dry	1.68	0.81
Total	7.41	2.28

**Table 5.** Distribution of SXI-PL mean scores among salivary flow conditions.

	Hyposialia	Normal	Total	<i>p</i> -Value <sup>1</sup>
SXI-PL	6.5 ± 2.27	7.60 ± 2.26	7.85 ± 2.37	>0.05

<sup>1</sup> A significance level of 0.05 was considered statistically significant.

#### 4. Discussion

The SXI-PL score was higher in patients with normal saliva flow conditions among our population. Patients with mental disorders often have behavioural pattern impairment and an inability to distinguish symptoms of a concurrent physical illness and do not often consider their oral status [5,6]. Thomson et al.'s (2000) and Hopcraft et al.'s (2010) presented evidence for oral reactions being drug-induced is variable; both studies demonstrated that hospitalized patients who endured dry mouth symptoms more likely had been exposed to more than two kinds of drugs (cardiovascular, psychiatric and allergy drugs) than those who did not complain of dry mouth. [7,8]. Putten et al. (2011) concluded that “My mouth feels dry” (1.8 points) was the most severe symptom of xerostomia reported among a Dutch population [9]. The phenomenon of poor oral health among people with psychological disorders remains a largely neglected problem, and concerns have arisen regarding the iatrogenic effects of antipsychotics and xerostomia-inducing drugs on oral health. Greater awareness of these repercussions could help to protect against the poor outcomes seen in chronic psychosis and relieve the burden of the implications for public health [10].

#### 5. Conclusions

The major limitations of this study were the small size of our sample population and the fact that it was conducted for a single institution, which did not ensure causal relationships and did not give a general perspective of the whole population suffering from mental disorders. Future studies should consider a broader sample size among different institutions. Closer collaboration between mental health clinicians and dentists should also be considered to remove the barriers to care and improve the oral health measures for this neglected population.

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**Institutional Review Board Statement:** The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of Egas Moniz School of Health and Science (protocol code 1013, approved on 27 January 2022).

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data presented in this study are available on request from the corresponding author. The data are not publicly available as they are part of an ongoing study.

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**Conflicts of Interest:** The authors declare no conflict of interest.

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