

The Gap Between the Oral Health of those with Serious Mental Health Disorders and the General Population: A Major Public Health Problem

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Abstract

The mapping of databases for Caisse nationale d'assurance maladie des travailleurs (CNAM-TS) in France is imprecise, since many people with psychiatric disorders have difficulty accessing the health system and are not visible on the databases. However, it is estimated that people suffering from serious psychiatric illnesses, such as schizophrenia, have a premature mortality rate on average, one that is four times higher than for others, and who die between 13 years (for women) and 16 years (for men) on average earlier than the rest of the population. In the field of oral health, we observed inequality in the treatment between these individuals and France's general population, as well as worldwide. In the interests of efficiency and equity, dental care systems should focus on the promotion and maintenance of oral health, as a strong case can be made for the risk factors between oral, physical, and mental health.

Keywords: Oral health • Schizophrenia • Mental disorders • Public health

Description

A public health problem with blurred contours

It is reasonable to estimate that each year, one French person in five is affected by a mental disorder, and that around 3 million people around the world suffer from a serious mental illness [1]. Thus, in 2016, the spending on mental illness amounted to nearly 24 billion euros (14% of health insurance spending), which places mental health care in first place for health spending after cancer (17 billion euros), and cardiovascular disease with 16 billion euros [1]. However, there are few advocates in France who focus on psychiatric diseases. Indeed, while the databases of the National Health Insurance Fund for Workers (CNAM-TS) provide valuable information regarding the evaluation of health costs through the reimbursement of medical procedures and the consumption of drugs, mental health care is very broad. It can range from temporary sleep disorders to psychotic disorders and/or the inappropriate use of toxic substances, which can induce mental disorders. As such, it can be assumed that mapping for the CNAM-TS is vague, as many people with psychiatric disorders have difficulty accessing the health system and are not visible on the databases; moreover, the diagnosis of mental disorder is not always made to formally identify them, as psychiatric illnesses are often perceived as shameful by patients and their loved ones, and can be stigmatized by some health professionals. In addition, dental care can be expensive and poorly reimbursed, which explains the reluctance of some patients to seek treatment [2,3].

Mental suffering is often associated with behavior with a negative impact on physical health, which includes poor diet (low in fiber, high in sugar), lack of physical activity, lack of sleep, smoking, alcohol, or the consumption of toxic substances, etc. This presents higher risk factors for many chronic diseases, such as cardiovascular disease, metabolic syndrome, autoimmune and neurological diseases, certain types of cancer,

and oral disorders [4,5]. Those with serious psychiatric illnesses, such as schizophrenia, have a premature mortality rate four times higher than average, and who die between 13 years (for women) and 16 years (for men) on average earlier than the general population [4,5].

Mental health and oral health

Over the past 15 years, population studies have shown a strong link between oral health status and major chronic diseases. These factors are common to a number of other chronic diseases, such as heart disease, cancer, and stroke [6]. Therefore, oral health and general health have similar causes and risk behaviors in common. Poor oral health and poor general health often occur together, impacting each other. For example, nutritional deficiency and a weakened immune system are associated with oral disease, as well as general illness [7]. It is also well-documented in the literature that systemic diseases such as stress [8], diabetes, Human Immunodeficiency Virus (HIV) infections and leukemia increase risk for severe periodontal disease [9]. It is also known that smoking and alcohol consumption are associated with periodontal disease and complete tooth loss [10], and oral cancer. A large case-control study showed [11] that the risk of oral and pharyngeal cancer was more than 35 times higher among those who consumed two or more packs of cigarettes per day and who had more than four alcoholic beverages per day. In general, negative symptoms of mental illness, age, duration of mental illness, and low socioeconomic and cultural status are typical risk factors for dental and periodontal disorders [12]. Cavities with periodontal or infectious diseases of oral origin, and metabolic disorders (diabetes, obesity, xerostomia) induced by antipsychotic treatment, poor diet, and lifestyle (high sugar, use of psychoactive substances, and smoking) contribute to poor physical health [13,14] (Figure 1). Poor oral health can also affect quality of life (QoL) due to the social impact of aesthetically deteriorating smiles and their connection to self-confidence [14].

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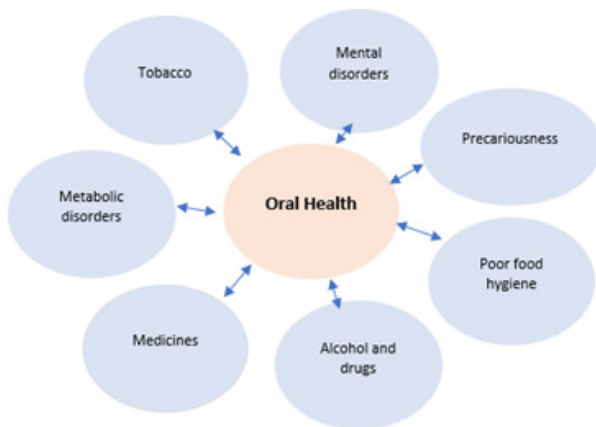


Figure 1. Factors which contribute to oral health.

The oral health of individuals with severe mental illness: Various perspectives

Available data in France on the oral health status of the general population is poor and even worse for people with schizophrenia. The data for the general population is not current, as it existed from 1997-1999 [15], and although the oral health of the French population may have improved over time, that is also the case in many industrialized countries – so it is difficult to compare recent studies of those with schizophrenia. In the only study carried out in France, for a high proportion of individuals with schizophrenia on an outpatient or inpatient basis in one department, with 500,000 inhabitants observed that the number of decayed teeth (2.5 compared to 1.2) and missing teeth (4 compared to 3) was higher than for the general population [16]. In France, only a few psychiatric hospitals have a somatic care service that includes dental consultations. The care of patients in psychiatric treatment remains heterogeneous, with different modes of care management from one service to another [2].

A study on the oral health treatment of schizophrenic patients, based on the database of the "National Health Data System" (SNDS), which collects individual data on hospital and non-hospital health care, revealed that, compared to other types of medical care, dental visits were largely underused by schizophrenic patients throughout the country [2]. We also found that they were more likely to undergo tooth extraction over a three-year period [2]. Studies on psychiatric patients show that those with schizophrenia do not receive sufficient preventive oral care [13,14,17-19]. Dentists are more likely to consider these patients as difficult to manage, which may lead them to opt for simple tooth extractions, precluding longer but more conservative treatment. Such practices can lead to early missing teeth, which can be detrimental to the QoL as related to oral health. Dental health is often considered a lower priority in People With Schizophrenia (PWS) including a holistic approach to health [20,21], as physics is considered [3].

Conclusion

Inequality in oral health treatment for those with severe mental disorders is a major public health problem of a global basis; although the oral health status of the population has improved in much of the world, psychiatric patients remain disadvantaged in all countries. Dentistry in France has not been able to address this problem: in many high-income countries where interventionists use specialized approaches, they are increasingly dominated by high-technology treatments, and do not address the underlying causes of disease or the oral health inequalities of those with mental disorders. Moreover, in low- and middle-income countries, dentistry is often unavailable, unaffordable, and inappropriate for the majority of the population. This may be the case in France in certain regions, where the number of dentists is insufficient in terms of the number of inhabitants. In this way, for efficiency and equity, dental care systems must focus on

promoting and maintaining oral health, as this makes a strong case for common risk factors regarding oral, physical, and mental health.

Disclosure

The authors report no conflicts of interest.

References

1. Organisation for Economic Co-operation and Development (OCDE). "Promoting Mental Health in Europe: Why and How?" Health at a Glance: State of Health in the EU Cycle. Éditions OCDE, Paris, Europe 2018.
2. Denis, Frédéric, Karine Goueslard, Francesca Siu-Paredes, and Gilles Amador, et al. Oral Health Treatment Habits of People with Schizophrenia in France: A Retrospective Cohort Study." PLOSone 15(2020): e0229946.
3. Gandré, Coralie, and Magali Coldefy. "Disparities in the Use of General Somatic Care among Individuals Treated for Severe Mental Disorders and the General Population in France." Int J Environ Res Public Health 17(2020): 3367.
4. Wildgust, Hiram Joseph, Richard Hodgson, and Mike Beary. "The Paradox of Premature Mortality in Schizophrenia: New Research Questions." J Psychopharmacol (2010): 9-15.
5. Tiihonen, Jari, Jouko Lönnqvist, Kristian Wahlbeck, and Timo Klaukka, et al. "11-year follow-up of Mortality in Patients with Schizophrenia: A Population-Based Cohort Study (FIN11 study)." The Lancet 374, no. 9690 (2009): 620-627.
6. Sheiham, Aubrey, Netuveli GS. "Periodontal diseases in Europe." Periodontol 2000; 29:104-121.
7. Nazir, Muhammad Ashraf. "Prevalence of Periodontal Disease, its Association with Systemic Diseases and Prevention." Int J Health Sci 11(2017): 72.
8. Sheetal, Aparna, Vinay Kumar Hiremath, Anand G Patil, and Sangmeshwar Sajjansetty, et al. "Malnutrition and its Oral Outcome : A Review." J Clin Diagn Res 7 (2013): 178.
9. Genco, RJ, AW Ho, SG Grossi, and RG Dunford, et al. "Relationship of Stress, Distress, and Inadequate Coping Behaviors to Periodontal Disease." J Periodontol 70(1999): 711-723.
10. Genco, RJ, I Glurich, V Haraszthy, and J Zambon, et al. "Overview of Risk Factors for Periodontal Disease and Implications for Diabetes and Cardiovascular Disease." Compend Cont Ed Dentistry 22 (2001): 21-23.
11. Zhang, Yixin, Jinxiu He, Bing He, and Ruijie Huang, et al. "Effect of Tobacco on Periodontal Disease and Oral Cancer." Tob Induc Dis 17 (2019).
12. Blot, William J, Joseph K McLaughlin, Deborah M Winn, and Donald F Austin, et al. "Smoking and Drinking in Relation to Oral and Pharyngeal Cancer." Cancer Res 48 (1988): 3282-3287.
13. Paredes, Francesca Siu, Nathalie Rude, Sahar Moussa-Badran, and Jean-François Pelletier, et al. "Coping Strategies for Oral Health Problems by People with Schizophrenia." Transl Neurosci 10 (2019): 187-194.
14. Denis, Frederic, Jean Francois Pelletier, Jean Christophe Chauvet Gelinier, and Nathalie Rude, et al. "Oral Health is a Challenging Problem for Patients with Schizophrenia: A Narrative Review." Iran J Psychiatry Behav Sci 12 (2018): e8062.
15. Wey, Mang Chek, SiewYim Loh, Jennifer Geraldine Doss, and Abdul Kadir Abu Bakar, et al. "The Oral Health of People with Chronic Schizophrenia: A Neglected Public Health Burden." Aust N Z J Psychiatry 50(2016): 685-694.
16. Hescot, P, D Bourgeois, and J Doury. "Oral Health in 35–44 Year Old Adults in France." Int Dent J 47(1997): 94-99.
17. Denis, Frederic, Gérard Milleret, Thomas Wallenhorst, and Maud Carpentier, et al. "Oral Health in Schizophrenia Patients: A French Multicenter Cross-Sectional Study." Presse Med 48(2019): e89-e99.
18. Kisely, Steve, LakeHui Quek, Joanne Pais, and Ratilal Laloo, et al. "Advanced Dental Disease in People with Severe Mental Illness: Systematic Review and Meta-Analysis." Br J Psychiatry 199 (2011): 187-193.

19. Kisely, Steve, Hooman Baghaie, Ratilal Laloo, and Dan Siskind. "A Systematic Review and Meta-Analysis of the Association between Poor Oral Health and Severe Mental Illness." *Psychosom Med* 77 (2015): 83-92.
20. Heald, A, AL Montejó, H Millar, Marc De Hert, and J McCrae, et al. "Management of Physical Health in Patients with Schizophrenia: Practical Recommendations." *Eur Psychiatry J* 25 (2010): S41-S45.
21. Velasco Ortega, Eugenio, L Monsalve-Guil, I Ortiz-Garcia, and A Jimenez-Guerra, et al. "Dental Caries Status of Patients with Schizophrenia in Seville, Spain: A Case Control Study." *BMC Res Notes* 10(2017): 50.

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