Raising awareness of oral health care in patients with schizophrenia

The physical health of people with severe mental illness (SMI) has received much attention over recent years, and not only are they significantly more likely to experience long-term physical health conditions (including coronary heart disease, diabetes and many cancers) compared with the general population, they are also less likely to receive the level of physical-based care they need (Public Health England, 2018). This is particularly important given that life expectancy in this group is 13-20 years shorter than that of the general population and the associated risk factors are largely modifiable (De Hert et al, 2011).

One important area of physical health in people who have SMI is oral health and hygiene. Although this has received increased attention in the literature in recent years, and it is recognised that people with SMI have worse oral and dental conditions compared with the wider community (Happell et al, 2015), the dental health of psychiatric patients can be overlooked in routine care (Teng et al, 2011).

Having healthy teeth and gums is not only important functionally for digesting food, but also plays a role in the prevention of systemic diseases. Oral health also affects people psychologically and in their social interactions: it can affect factors such as speech, emotional expression and social inclusion, with an unattractive smile or halitosis diminishing their feelings of self-worth and wellbeing.

There are many modifiable lifestyle factors that contribute to bad oral, and often physical, health including:
- Poor oral hygiene;
- Cigarette smoking;
- A diet that is rich in sugar or carbohydrates;
- Overuse of convenience foods;
- Acidic drinks;
- Use of recreational drugs and alcohol.

Service-related factors include:
- Lack of awareness, lifestyle choices and reduced access to dental care contribute to patients’ oral health problems.
- Oral health should be part of physical health monitoring and care planning for people with schizophrenia.

Abstract

Oral health is an integral part of physical health and poor oral health, can have wider implications for disease and wellbeing. People with severe mental illness have poorer oral and physical health than the general population, but oral health is still overlooked in routine care. This article describes a service evaluation to raise the profile of oral health with patients being treated for schizophrenia, their family members and carers, and clinicians involved in their care. Interviews with 106 patients with schizophrenia revealed that 95% had not been asked about their oral health by clinicians and that those who smoked were the least likely to have visited a dentist. An oral health promotion leaflet was developed to help raise awareness among patients and clinicians.

Citation


Keywords

Schizophrenia/Severe mental illness/Oral health
Clinical Practice

Innovation

- Lack of, or poor access to, dental provision;
- Oral health being overlooked by clinicians in both physical and mental health.

The huge improvement in oral hygiene and dental care in the general population over the past 50 years (Piccoli et al, 2014) has not been seen in users of mental health services: a large body of evidence worldwide has shown that people with SMI living in hospital (Bertaud-Gounot et al, 2013; Tani et al, 2012; Chu et al, 2011; Teng et al, 2011) or the community (Velasco-Ortega et al, 2017; Patel and Gamboa, 2012) have worse oral health compared with the general population.

The National Centre for Mental Health at Cardiff University embarked on a service evaluation to:
- Raise the profile of oral health with people diagnosed with schizophrenia, family members, carers and clinicians;
- Show how integral it is to an individual’s physical health and wellbeing.

This involved surveying a group of patients within Cardiff and Vale University Health Board to see whether oral health was included in physical health monitoring, and how often patients were recommended to visit their dentist. It also included the design and distribution of a dental health promotion information leaflet.

Literature review

Poor oral health is often recognised using the Diseased, Missing or Filled Teeth (DMFT) scoring system, which scores one point for each decayed, missing or filled tooth. In total, 32 natural adult teeth is the minimum (McCreadie et al, 2004).

A systematic review of 25 studies - involving 5,076 patients undergoing psychiatric care and 39,545 (Kisely et al, 2015) - showed the odds of people losing all their teeth were 2.8 times higher in those with an SMI compared with the general community (McCreadie et al, 2004). DMFT scores on SMI populations ranged from 0-92 (India) to 30 (UK); scores of >20 were generally found in Western countries such as the US, Australia, Israel and those in Europe.

Other studies of oral health in people with SMI found that significant associations or predictors for elevated DMFT or Plaque (a score based on plaque accumulation) scores were:
- Older age;
- Underweight;
- Male gender;
- Increased length of hospital stay;
- Unmarried;
- Lower educational attainment;
- Unemployment;

Antipsychotics

A study by Grinshpoon et al (2015) found that people taking second-generation antipsychotics had a lower DMFT score, suggesting better dental health, compared with people taking first-generation antipsychotics or combinations of the two. (Members of the group taking second-generation antipsychotics were slightly older, but this was not found to be statistically significant). Second-generation antipsychotics may also be associated with fewer motor concerns (such as teeth grinding or chewing movements) or dry mouth they can cause other problems including metabolic syndrome (Gautam and Meena, 2011). There is some evidence that metabolic syndrome could play a role in the development or worsening of periodontitis and be a predictor of tooth loss (Kaye et al, 2016).

Physical health conditions

Inattention to oral hygiene or poor oral health not only affects the oral cavity, but may also lead to systemic disease. Poor oral health can be associated with other physical health conditions, such as coronary heart disease, atherosclerosis, stroke, gromerulonephritis, inflammatory bowel disease, diabetes and obesity (Lafon et al, 2014; Jung et al, 2014; de Oliveira et al, 2010). It is also a possible risk factor for orodigestive, pancreatic and other cancers (Linden et al, 2013), which may be compounded by poor attendance at dental services where cancerous growths (for example, oral carcinomas) may be identified earlier.

Reasons for poor oral health

The reasons why people with SMI have worse oral health than the general population appear to be many and complex. Arnaiz et al (2013) found negative symptoms associated with SMI that had positive correlations with poor dental health. These may include:
- Amotivational states;
- Lack of interest in self-care;
- Lack of daily structure;
- Poor lifestyle choices;
- Long periods of sedation from medication;
- Limited social interaction;
- Lack of support from family or friends.

Positive psychotic symptoms (such as florid delusional thought disorder regarding the teeth), dental fears or specific phobias may also contribute to poor oral health (Aljabri et al, 2018). People with a psychotic illness are known to have impaired pain recognition (Stubb et al, 2015). This means they might not recognise oral-related pain until it is relatively extreme, causing them to delay visiting the dentist until dental problems become much more severe or challenging to treat.

In a sample of 4,769 veterans diagnosed with SMI, 61% reported poor-to-fair dental health and 34.1% had dental or oral problems that made it difficult for them to eat; factors independently associated with poor dental health included race and ethnicity, poor academic attainment, unemployment, financial strain and smoking (Kilbourne et al, 2007).

Oral hygiene

Brushing teeth regularly is a mainstay of good oral hygiene, and a lower frequency of brushing or poor brushing technique are associated with worsened oral health (Kebede et al, 2012; Tani et al, 2012). In a study of the general public in England, Wales and Northern Ireland 23% of adults said they cleaned their teeth once a day and 75% at least twice a day (Information Centre for Health and Social Care, 2011). Tooth brushing in people with SMI showed great variance between studies:
- 7-65% said they brushed once a day (Aljabri et al, 2018; Bertaud-Gounot et al, 2013; Laloo et al, 2013; Kebede et al, 2012).
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2012; Tani et al, 2012);
- 19.5-49% reported brushing twice a day (Ngo et al, 2018; Laloo et al, 2013; Tani et al, 2012);
- 25.3-34.4% brushed twice a day or more (Aljabri et al, 2018; Tani et al, 2012);
- 25% said they brushed their teeth three times or more a day (Tani et al, 2012);
- 18.2-26% said they brushed less than once a day;
- 2%-26% reported never cleaning their teeth at all (Aljabri et al, 2018; Bertaud-Gounot et al, 2013; Kebede et al, 2012; Tani et al, 2012).

Dental visits

Visiting the dentist regularly promotes oral health (such as plaque removal) and early correction of problems, such as caries or periodontitis, before further deterioration; it is also important for monitoring pathophysiology. Nielson et al (2011) found that only 43% of people with schizophrenia were likely to visit the dentist compared with 68% of the general population. In Patel and Gamboa’s (2012) study of a community sample of 89 psychiatric patients attending eight outpatient clinics, 41.6% had no dental practice they regularly or repeatedly attended.

Teng et al (2011) found a 70% probability of dental care utilisation by people with SMI when compared with the general public. McCreadie et al’s (2004) study found that 61% of people with schizophrenia visited their dentist because of problems with their teeth, versus 32% of the general population, and only 33% attended for routine check-ups versus 49%.

Service evaluation

Agreement for the service evaluation was secured from the Cardiff and Vale University Health Board and a short pilot questionnaire was distributed to 15 patients with schizophrenia. It posed key questions about oral health and hygiene, use of dental services and whether respondents had been asked to visit their dentist by psychiatric services (Box 1). No changes were needed and the questionnaire was used in interviews with patients between June and August 2018.

Study participants were recruited from patients in clinic with a diagnosis of schizophrenia (based on the ICD-10 diagnostic manual), who attended a community mental health team clinic at least once a month for clozapine monitoring or psychotropic long-acting injection. Out of 140 patients invited to participate, 106 agreed, representing a 76% uptake. All gave full and valid consent after the aims of the study had been explained to them. Ethical approval was not needed as it was a service evaluation.

Data was analysed using SPSS 23 statistical software and chi-squared tests for independence to assess whether relationships between factors were statistically significant, with statistical significance set at p<0.05 (p<0.05-c0.10 indicates a tendency).

Results

The results are shown in Fig 1. The average age of participants was 46.5 years, with an age range of 20-82 years; 64.2% (n=68) were males and 35.8% (n=38) were females. As many as 95.3% (n=101) patients said the mental health clinicians involved in their care had never asked about their dental or oral health or suggested that they go and see a dentist.

In terms of oral hygiene, 31.1% (n=33) of participants brushed their teeth once a day, 50.0% (n=53) twice a day, and 0.9% (n=1) three times a day. A further 9.4% (n=10) brushed their teeth every other day and 3.8% (n=4) reported never brushing their teeth, with another 4.7% (n=5) only using mouthwash.

The survey showed that 9.4% (n=10) of participants had full dentures, 27.4% (n=29) had partial dentures and 0.9% (n=1) had neither dentures nor natural teeth.

In terms of visiting the dentist, 18.9% (n=20) said they never attended (of whom four had full dentures), 23.6% (n=25) only attended when a problem arose, 50.0% (n=53) visited at least every six months, 3.8% (n=4) went annually and a further 3.8% (n=4) attended every two years; 24 (22.6%) had a fear or anxiety about visiting the dentist.

As many as 55.7% (n=59) of participants described themselves as current smokers; they were statistically significantly more likely than non-smokers not to attend the dentist (p=0.001).

Discussion

The study revealed that 95.3% of participants did not recall being asked about their oral health, a figure very similar to the findings of Mirza et al (2001), who reported that 96% had never been asked. It seems that while patients are monitored for other aspects of their physical health (such as blood pressure), oral health is not generally considered when they attend psychiatric clinic appointments. This is despite guidance and recommendations from professional bodies on the importance of good oral hygiene – such as that from the Nursing, Midwifery and Allied Health Professions Policy Unit (2016) and the British Society for Disability and Oral Health (2000) – and holistic care being embedded in the Nursing and Midwifery Council’s (2018) code through the promotion of well-being and the prevention of ill health.

Given the findings of our study, clinicians should ensure that oral care is an integral part of patients’ care and treatment plan. Study participants who smoked cigarettes were statistically more likely not to attend the dentist, and so could be seen as requiring more-intensive oral-health promotion.

Poor oral health has a wider impact than ‘just bad teeth.’ Good teeth are seen as a social asset, improving social confidence, self-esteem and the ability to smile without concern; on the other hand, poor oral health may cause shame, stigma, guilt, discrimination, pain, communication difficulties, limited participation in social activities and hallucosis, and is a risk factor for wider physical health problems (Ablonczy and Smith, 2017).

Closure of the larger mental health hospitals, which often had dedicated in-reach dental services, may have worsened the oral care of those patients now discharged into the community, who depend on community dental services and their own motivation to ensure they attend to their oral hygiene needs and present for dental treatment.

This study is not without its limitations. It is possible that some participants were advised to attend the dentist by clinical staff but disregarded the suggestion,
Conclusion

Oral ill-health can have a negative impact on physical health, social interaction and emotional wellbeing, and there are similarities in the risk factors for physical and oral ill health. Despite 40 years of data, the poorer oral health of people with serious or enduring mental illness compared with the general population has still not been addressed (Kisely, 2016).

Our study shows that patients with schizophrenia are likely to be at high risk of oral disease, and that oral health practices are worst in patients who smoke. Oral diseases are, on the whole avoidable, but a combination of poor lifestyle choices, lack of awareness among patients and psychiatric patients, carers and relatives, and professionals involved in their clinical care. With the help of dental care colleagues, the team drew up an A5 fact sheet, published by the Cardiff and Vale University Health Board and the National Centre for Mental Health (Fig 2). This has been distributed to service users, carers and family members – for example, at clinic appointments and by being stapled to tertiary service prescriptions. The aim is to repeat the study in one year to ascertain the extent of the leaflet’s success at both drawing the attention of staff and service users to the importance of oral health, and achieving improvements. The leaflet can be downloaded free of charge at Bit.ly/MHDental.

Information leaflet

The researchers noted the lack of easily available information on oral health for people with mental illness, and the need for a leaflet that was easy to understand and could be used by carers, family members and staff. They identified that dental attendance was lower among psychiatric patients compared with the general population, and that those who smoked were more likely to have poor oral health. The leaflet was designed to raise awareness among patients, carers and professionals of the importance of oral health and to encourage better dental practices. It included information on the benefits of good oral health, the importance of regular dental check-ups, and advice on how to improve oral health, such as brushing twice a day and using mouthwash.

The researchers also noted that some patients were struggling with their poor mental health or simply forgot to arrange an appointment. Participants’ embarrassment at poor dental attendance or oral hygiene may also have led to positive bias, although the large number saying they never visited the dentist or only attended if there was something wrong is not suggestive of this. In addition, all participants were prescribed clozapine and long-acting injections – a study of patients with less-severe and enduring mental health difficulties may have given different results.

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suboptimal mental health and dental services for this group means that oral ill health in people with schizophrenia is often undiagnosed and undertreated.

Oral health should be a routine part of physical health monitoring and support, and should be included in each patient’s care plan; patients and their carers should be regularly reminded of the importance of good oral care, just as they are about other aspects of their physical health. It is hoped this study and the accompanying information leaflet will be a positive step towards improving awareness of oral health and care for people experiencing severe or enduring mental illness to give better outcomes.

For more information about dental health care, visit Oral Health Foundation’s website: www.dentalhealth.org

References