Patients affected by mental health at higher risk of poor dental outcomes

By DTI

PERTH, Australia: A study published by researchers at the University of Western Australia has found that many dental professionals in Perth do not feel adequately trained and equipped to best support patients with mental health conditions. The study was published to coincide with the recent Mental Health Week and involved interviewing 16 dental professionals across Perth.

Senior researcher Prof. Linda Slack-Smith, from the University of Western Australia Dental School, said that while evidence indicated people affected by mental health had poor oral health outcomes, the research team wanted to find out more about what the key challenges were and how dental professionals could better support patients.

“People living with mental health conditions face many challenges and we know that access to good quality dental health care is one of them,” said Slack-Smith. “However, through this study we wanted to delve more into the key issues and insights on what could be done to address this, by speaking directly to people at the core of dental health care that see and deal with these issues on a regular basis.”

Slack-Smith said that the interviewed dental professionals found there to be many barriers to treating people with mental health conditions, including an overburdened public health system. “The public health system is hugely stretched resource-wise,” she said. “And the private health system, which employs over 85 per cent of dentists, is not always an option for people with limited resources.”

“The costs of accessing dental care can be prohibitive for socially disadvantaged adults reliant on public dental care, and often incurs a fee, which is usually uncertain until treatment needs are ascertained. There are also long waiting lists,” she continued.

“If more people with mental health conditions are to access dental services, our evidence suggests that more flexibility is needed in how services are provided and more collaboration between mental health and dental professionals so that oral health becomes integral to primary health care,” Slack-Smith explained.

The study, titled “Providing oral care for adults with mental health disorders: Dental professionals’ perceptions and experiences in Perth, Western Australia”, was published in Community Dentistry and Oral Epidemiology on 8 October 2018 ahead of inclusion in an issue.

Bogus dentist convicted after performing root canal therapy without licence

By DTI

SYDNEY, Australia: A man was recently convicted of falsely representing himself as a dentist and performing invasive procedures, including root canal therapy, as well as consulting with dental patients, at his premises in the Sydney suburb of Guildford West.

In May 2018, Majid Rahebi was charged by the Australian Health Practitioner Regulation Agency (AHPRA) with 64 counts of falsely representing himself as a registered dentist and 35 counts of performing a restricted dental act. The allegations related to treatments performed between November 2017 and February 2018.

AHPRA confirmed that Rahebi, although registered as a dental technician in Iran, holds no formal dental practice qualifications and had never been licensed as a dentist or any other health practitioner in Australia. Besides performing dental treatments, he administered anaesthetics, despite not having the authority to do so, according to AHPRA.

In late October, Rahebi pleaded guilty to all charges. While the offences do not carry any jail time, he is required to pay over A$60,000 (€38,500) in fines.

In an interview with the Sydney Morning Herald, AHPRA CEO Martin Fletcher said that the matter was an “extreme example” of unregistered practice. “To represent that you are a registered dental practitioner, operate a business that supports that lie and carry out restricted dental acts that may endanger the public, is not behaviour that goes unchecked,” commented Fletcher on the agency’s response.

Majid Rahebi, who performed significant dental work on dozens of patients in Sydney until late last year under the guise of being a dentist, has been convicted. (Photograph: Anna Jurkovska/Shutterstock)
Recent study suggests sugar tax is needed in New Zealand

By DTI

DUNEDIN, New Zealand: The debate around sugar and its ill effects on society and how to address this has taken many forms; one of the main measures being sugar tax, which has already been implemented in countries such as Belgium, Fiji, France, Mexico, Spain and the UK. A new study from the University of Otago has found that New Zealand (NZ) citizens too could benefit from such a tax, as people who consume high-sugar drinks are also more likely to make general unhealthy dietary decisions.

According to lead author Dr Kirsten Robertson, a senior lecturer at the university’s Department of Marketing, NZ has a significant problem regarding the consumption of sugar-sweetened beverages (SSBs). “While a number of other countries have successfully implemented national taxes on SSBs, New Zealand relies on industry self-regulation and has called for better labelling so individuals can take responsibility for their own sugar intake,” she said.

However, considering recent data showing that NZ is the third most overweight nation in the Organisation for Economic Co-operation and Development area and 17 per cent of adults’ total sugar intake comes from SSBs, self-regulation may not be working. In the study, the researchers surveyed more than 2,000 people, measuring their food and beverage intake over a 24-hour period and their self-reported intentions to eat healthily. Of those surveyed, 30.5 per cent had consumed SSBs in the past 24 hours. They also displayed a general pattern of unhealthy eating, as they also consumed desserts, confectionary, fast food and pre-prepared food, as well as were less likely to eat breakfast or a meal made from scratch.

“The findings raise significant concerns regarding the effectiveness of the current soft intervention measures. The fact that SSB consumers are less likely than non-SSB consumers to try to eat healthily, or to read food labels, raises serious questions about the likelihood of them changing their behaviour in response to better labelling,” commented Robertson.

Roberson believes that, since SSB consumers are less likely than non-SSB consumers to read food labels, a national tax will give some power back to individuals to be able to make healthier choices without having to refer to food labels. She noted that such measures have been shown to have little effect on industry sales and cited the example of the UK soft-drink industry, which simply reformulated its products to reduce the sugar content.

“Findings in other countries suggest national taxes will encourage the industry to reformulate their products by reducing the sugar content and will encourage consumers to select other alternatives. Therefore, we support the sugar tax recommendation by the New Zealand Medical Association and the New Zealand beverage guidance panel,” said Robertson.

The study titled “Supporting a sugar tax in New Zealand: Sugar sweetened beverage (fizzy drink) consumption as a normal behaviour within the obesogenic environment,” was published in Peers on 19 October 2018.

Silver nanoparticle-coated membrane may enhance dental implant treatment

By DTI

CRAWLEY, Australia: Alveolar bone loss is a commonly observed problem in patients seeking dental implant placement. A barrier between the bone substitute and gingiva that can prevent fibrous tissue ingrowth and bacterial infection, as well as induce bone formation, is a key factor in improving the success of alveolar ridge reconstruction. Researchers at the University of Western Australia have improved a bioactive collagen barrier material for guided bone regeneration, giving it antibacterial and anti-inflammatory properties.

In their study, the researchers used a CelCpro collagen membrane (Orthocell), which is approved for guided bone regeneration in dentistry, and coated it with silver nanoparticles (AgNPs) using two low-temperature fabrication methods: sonication and sputtering.

Scanning electron microscopy revealed that sonication could accurately deposit AgNPs on the membrane, with higher AgNP concentrations depositing more nanoparticles on the collagen fibres. Sputtering, however, was difficult to control and led to large uneven deposition of AgNPs.

To test the membrane’s antibacterial properties, the researchers prepared AgNP-coated collagen membranes with different nanoparticle concentrations and placed them on bacterial inoculation plates. After four days, samples fabricated via either sonication or sputtering exhibited an excellent antibacterial effect against Staphylococcus aureus and Pseudomonas aeruginosa.

Next, the team seeded mesenchymal stem cells, which can differentiate into a variety of cell types including bone cells, on AgNP-coated collagen membranes. After 24 hours in culture, they observed an AgNP dose-dependent decline in cell numbers on sonication-coated samples; however, proliferation rates after day one were similar. According to the researchers, sputter-coated collagen severely inhibited cell growth—suggesting that this technique is not suitable for coating collagen membranes for cell proliferation.

To assess the anti-inflammatory effects of the AgNP coating, the researchers examined the expression of two inflammatory cytokines, interleukin-6 (IL-6) and tumour necrosis factor alpha (TNF-α), in macrophages seeded on collagen membranes. Their findings demonstrated the anti-inflammatory properties of the coated membranes.

Finally, the researchers examined the osteogenic differentiation of mesenchymal stem cells seeded on AgNP-coated collagen membranes. Expression of early osteogenic markers was far higher in cells cultured on AgNP-coated membranes than on uncoated membranes initially; however, there was no significant difference later in culturing.

The optimised AgNP-coated collagen membrane showed the ability to guide bone regeneration, as well as exhibit antibacterial and anti-inflammatory capacity, with limited cellular toxicity. The researchers emphasised the potential application of such membranes in dental surgery, particularly for alveolar bone augmentation and bone graft integration.

The study, titled “Fabrication of a silver nanoparticle-coated collagen membrane with anti-bacterial and anti-inflammatory activities for guided bone regeneration”, was published in the November 2018 issue of Biomedical Materials.
Heavy smoking during Irish famine led to dental caries, study finds

By DTI

DUNEDIN, New Zealand: Despite the vast amount of research on smoking, the relationship between smoking and oral health in an archaeological sample of a historical population has never been done. In a new study, scientists from the University of Otago in New Zealand and Queen’s University Belfast in Northern Ireland have examined the teeth of 363 adult victims of the Great Irish Famine, who died in the Kilkenny Union Workhouse between 1847 and 1851.

Co-researcher Prof Eileen Murphy, from the School of Natural and Built Environment at Queen’s, believes the research is important as it adds to the current clinical knowledge of how smoking affects oral health, since this is not yet fully understood. “The study also gives us a unique insight into the living conditions of the working classes in Victorian Irish society at the time of the Great Famine,” she said.

According to the study findings, 80 per cent of the adult remains showed evidence of dental caries and over half had missing teeth, indicating that most of the famine victims had poor oral health. There were also signs of pipe smoking marks on their teeth.

Co-researcher Dr Jonny Geber, from the Department of Anatomy at Otago, said: “We believe the bad condition of the teeth studied was because of widespread pipe smoking in both men and women, rather than their diet of potatoes and milk, as a comparative study of the 20th century population on the same diet didn’t have the same evidence of poor oral health.” Geber went on to say that the Kilkenny study shows that it is not only diet that affects oral health.

“The high frequency of clay-pipe facets or marks from clenching a pipe between the teeth in many of the skeletons was evidence of smoking in both males and females. The current study adds to the growing body of evidence that demonstrates that smoking is not only bad for your health, it is also bad for your teeth,” said Geber.


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The dentition of a 26- to 35-year-old male from the Irish famine era showing dental caries, tooth loss, abscesses, calculus, periodontal disease and a clay-pipe facet. (Photograph: University of Otago/Queen’s University Belfast)
BRISBANE, Australia: Pregnancy is a unique experience in a woman’s life; however, it may significantly affect her own and her child’s oral health. Studies have shown that links exist between poor oral health and low birth weight or premature birth. According to a Brisbane dentist, as pregnancy is associated with compromised oral health due to hormonal effects, expectant mothers should be warned that poor oral health during pregnancy can adversely affect their infants’ health.

Dr Ellie Nadian, who is a general dental practitioner and runs Pure Dentistry, a practice in Brisbane, believes that pregnant woman should receive specific information for the management of changes in their oral health conditions during pregnancy. During the phases of pregnancy, a woman undergoes many hormonal changes in the body and because of these, dental and gingival deterioration may be rapid. For this reason, Nadian also highlights the particular importance of having good oral health prior to conception.

With various pregnancy-induced growth factors, such as a change in the physiological condition and female hormones, there can be an increase in the activity of bacteria in the oral cavity and increased risks to a pregnant woman’s oral health. In a study of pregnant Japanese women, researchers reported that oral bacteria significantly increase in the early pregnancy period. Therefore, pregnancy, especially in the early stages, can promote the proliferation of bacteria in the oral cavity and facilitate colonisation by periodontal pathogens. However, according to the results of a separate study, proper oral hygiene during pregnancy can partially neutralise hormonal effects on oral tissue.

According to American guidelines on oral health during pregnancy and early childhood, preventative dental care should be provided as early in pregnancy as possible. In a study by scientists at the Harvard School of Dental Medicine in Boston in the US, that may help highlight the importance of good oral health during pregnancy. These researchers studied 1,635 pregnant women regarding periodontitis and its relation to preterm birth. According to the results, periodontitis is an independent risk factor for poor pregnancy outcomes among some women.

Editorial note: The references can be obtained from Dr Ellie Nadian.
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Despite often being overlooked by some dental professionals, dental loupes can provide clinicians with better visibility of the patient’s mouth and reduce the stress placed on their eyes, neck and back. Dental Tribune International spoke with Priyam Patel, co-owner of dental loupes manufacturer Bryant Dental, about where the company began and what kind of feedback they have received from their customers thus far.

Could you tell us a bit about the company’s history and how it all started?
Connor Bryant established Bryant Dental in 2016 with the vision to connect dentists with loupes technology that would make smart dentistry simpler. I joined him shortly after that as co-owner and together we turned Bryant Dental into one of the most popular loupes brands in the UK. Since then, we’ve innovated a range of different products in-house and now distribute the LumaDent Headlight System across the UK and European markets. Our goal at Bryant Dental is to combine brilliantly engineered products with a next-generation customer experience.

Is there any particular type of dental professional that Bryant Dental’s loupes are designed for, or can they be adapted to the various needs of different clinicians?
Bryant Dental products are suitable for a wide range of clinicians, from students who are at the start of their careers to dentists with many years of experience. The common factor, really, is that the dentist must be looking to achieve the highest standard of dentistry—clinically or otherwise.

What has the response been like from your customers so far?
Overwhelmingly positive. The feedback that we’ve received has been truly eye-opening as to just how antiquated many of the current products and distribution channels in dentistry actually are. We love our customers and they are at the core of everything we do. It’s an industry that is ripe for disruption and we believe that we’re the ones who will achieve mass disruption over the next three to five years.

The Bryant Dental stand was noticeably busy during the recent BDIA Dental Showcase 2018. What was the general feedback that you received there like?
The general feedback we received at the showcase was great. Our customers really enjoyed being able to compare our range of products to others at the show. It also helped to highlight just how incredibly well-designed and engineered Bryant Dental products are.
Managing a dental practice: Jimmy’s story

By Dr Alan Rees

Jimmy* stood shyly on my doorstep and asked, “Can we go for a pint Alun?” This wasn’t the normal way for a patient to start our work together, but I had known Jimmy for the better part of 40 years and understood that he was a proud man who found it difficult to ask for help.

People seek my help for a number of reasons. Often, it is because they have reached a crisis in their business lives or have arrived at a crossroads and cannot decide which path to take. At other times, they realise they are stuck in the middle lane, being overtaken by other businesses. Some want an outside set of eyes to guide them through the jungle where they could perform better.

In Jimmy’s case, this was a crisis, and over a couple of pints, he started to share his problems. “I paid the Inland Revenue £40,000 a couple of weeks ago and now they’re back and want the same again.” He told me. “I was able to cash in a policy last time, but I don’t understand why I’m so broke. I thought I was making good money—the practice is full and I’ve never been busier.”

My approach

I was a dentist before changing career, and I work in a way that is unique but familiar to my clients. First, I take a thorough history of the client and his or her business. Next, I’m so broke. I thought I was making good money—money that I had known Jimmy for the better part of 40 years and understood that he was a proud man who found it difficult to ask for help.

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Starting Well drive encourages young children to visit dentist

By DT UK

LONDON, UK: It can sometimes feel like dentists are fighting a losing battle when it comes to children’s oral health, especially given that recent figures from NHS Digital show that the number of children admitted to hospital for tooth decay has risen for the second consecutive year. It comes as some welcome news, then, that around 30,000 children in the London Borough of Ealing have registered for a dental practice this year, thanks in part to Starting Well. A Smile4Life Initiative.

The initiative, run by NHS England, is intended to reduce oral health inequalities and improve the oral health of children under 5 years of age. This is done by focusing on those children not currently regularly attending a dentist and starting treatment at an early age.

“Since it started in January, Starting Well has had about 400 new children from 0 to 5 that have gone into the practice from that event. We provide them with various resources to help them.”

Due to the initiative’s success, it is likely to soon be expanded to other London boroughs like Stratford and Hammersmith. This would likely involve commissioning new dental practices and including ad- ditable oral health promotion in their contracts.

It has worked so well for us and we are giving training to the dental care professionals on bedside fluoride exposure for teeth.

Though it will eventually be a national programme. Starting Well. A Smile4Life Initiative was launched in 13 high priority areas in January 2018, one of which was Ealing. These areas were chosen on the basis of local trends in oral health, existing oral health improvement plans and local authorities’ experience with tooth decay. At the recent BDSA Dental Showcase, Kelly Nizze, Regional Lead for Dental, Pharmacy and Optometric Services at NHS England’s London Region Team, outlined how well the initiative had performed.

“Starting Well: A Smile4Life Initiative is run by NHS England and aims to reduce oral health inequalities and improve the health of children under 5 years of age. (Photograph: Dmytro Zinkevych/Shutterstock)

About the author: Dr Alan Rees graduated from Newcastle Uni- versity in the UK and started his career as an oral surgery resident before working as an associate coach in several practices and opening two of his own. He sold his dental business in 2005 and, as a Coaches Training Institute-trainee coach and Kolbe consultant, now runs the Dental Business Coach, where he offers support and advice regarding practice organisation and management in the UK, Ireland and beyond.

Starting Well A Smile4Life Initiative is run by NHS England and aims to reduce oral health inequalities and improve the oral health of children under 5 years of age. (Photograph: Dmytro Zinkevych/Shutterstock)
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