Psychosocial Wellbeing of Oral Diseases among Malaysia Public University Patients

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ABSTRACT
Five dimensions that are important to individual well-being are including physical, material, social, emotional, and development and activity wellbeing. Although researches on oral diseases impact on psychosocial dimensions have been extensively studied among dental community however, still lack of study conducted in psychology field. The aims of the present study are to identify the psychosocial wellbeing of oral disease among patients in public university patients according to gender and age. 220 dental patients as respondents in public university dental clinics participated in this study. 120 of them were females (54.5%) and 100 males (45.5%), with age range between 18 - 74 years (M = 35.21 ± 15.8). For the evaluation, the Oral Health Impact Profile S-OHIP (M), instrument was utilised and One-way ANOVA was used for data analysis to measure different age patients.

Keywords: Oral Diseases, Psychosocial Wellbeing, Public University Patients.

INTRODUCTION
Psychosocial well-being is an interesting topic and has been gaining popularity in research for a long time. It is said that there is relationship between psychosocial well-being and health. In the field of dentistry, the psychological aspects such as stress, anxiety related to oral health patient has been proven to affect patients (Rosa et al., 2017). According to World Dental Federation (2015) that it is important for individuals to have healthy teeth for communicating, smile, eats for social activities. Oral health is not just biological concepts, but also extended to social and psychological functions (Hernández et al., 2015). World Health Organization (WHO, 2012) defined oral health as: “a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual’s capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing.” According to Felce and Perry (1995) Psychosocial well-being is “multidimensional and may be categorized within five dimensions: physical wellbeing, material wellbeing, social wellbeing, emotional wellbeing, and development and activity”.

LITERATURE REVIEW
The impact of physical and psychosocial dimensions due to oral health conditions has been revealed from previous studies (John et al., 2004; Locker & Allen, 2007; Settineri et al., 2014; 2017). However most of the researches were done in private clinic setting. Pain due to oral conditions will affect psychosocial well-being of people as it will create a stressful situation and psychological problems (Gross, 1998; Settineri et al., 2017). Different people will react differently to health related issues hence may result in different outcomes (Bowman, 2002), suggesting a correlation between emotions and health related issues. Different personality trait can also influence the outcome, such as “positive affectivity” trait compared with “negative affectivity,” (Kressin et al., 2001). Optimism personality could be a determinant for oral and general health (Ylöstalo et al., 2003). Studies has revealed that the impact of oral conditions can limit daily activities (Nuttall et al., 2001; John et al., 2004; Locker & Allen, 2007; Lacerda et al., 2008; Lawrence et al., 2008; Locker & Quiñonez, 2009; Tsakos et al., 2012; Settineri et al., 2014). Others finding indicates limited daily activities due to oral conditions which affecting physical, psychological and social of an individual, could
negatively impact quality of life and general wellbeing (FDI World Dental Federation, 2015; Hernández et al., 2015). Oral diseases can affect oral function, appearance, and interpersonal relationship can be affected by oral diseases (Locker, 1988; Naito et al., 2006; Heblinger & Pereira, 2007), affecting individuals’ diet, sleep, psychological status, social interaction, feelings of social well-being which may affect their opportunities in education, career, marriage and other social relationship (Hernández et al., 2015). Psychosocial dimensions were significantly impacted by severe periodontal diseases, loss of teeth and pain due to dental conditions (Petersen et al., 2005; Yang et al., 2015).

Reduce quality of life due to losing a teeth has serious consequences that causing aesthetic and functional problems, including problems with chewing and speaking (FDI World Dental Federation, 2015; O’Neill et al., 2014; Hanindriyo et al., 2018), unhealthy diet, nutritional status, social disability (Emami, de Souza et al., 2013), affecting masticatory function, impairment, limited oral function, psychological, physical and social disability and in certain cases, handicap (Locker, 1988). Individuals experiencing tooth loss are also at risk for systemic diseases (Emami et al., 2013). Studies has also indicated that problems related to loss of teeth and prevalence of tooth decay and gum diseases is expected to increase every year because of the changing life style and the increasing high sugar intake especially in foods and beverages (Kalra et al., 2011; Petersen et al., 2005).

Oral condition such as dental caries is also a common problem affecting Malaysian adult population, as 90 percent of adult population had experienced dental caries (NOHSA, 2000; 2004). Dental caries prevalence among Malaysian adult population age 19-59 are high according to gender with 87.4 percent (Maykanathan & Kaur, 2015). Other study among adults in Malaysia also revealed the same findings with 90.8% of 153 adults aged between 18-59 showed high prevalence of dental caries. Data from NOHSA (2010) on 9,065 Malaysian aged 15 years and above shows overall high prevalence of periodontal conditions among adult population in Malaysia with the estimated periodontitis prevalence was almost half (48.5 percent) of the participants. Similarly, another study showed that 11.5 million people suffered a moderate or severe periodontitis (Mohd-Dom et al., 2014). Furthermore, quality of life not only affected negatively due to oral diseases but treatment experience endured by individuals due to oral conditions can also negatively affect the quality of life (Hernández et al., 2015).

Study found that physical disability had the most impact (Lawrence et al., 2008), while other studies found psychological dimensions were the most affected due to oral diseases. Study in Malaysia demonstrated that psychological dimension was shown to have the most impact followed by physical pain and physical disability (Kaur et al., 2015). Another study in Malaysia by Masood et al. (2013) revealed that in young adults with malocclusion, the highest reported impact was psychological discomfort. While other studies found that physical pain and psychological discomfort were most impacted on quality of life (Locker & Quiñonez, 2009; Rosell et al., 2013; Saub & Locker, 2006). Study among Russian undergraduate students also yielded the same finding, with dimensions that most affected were physical pain and psychological discomfort (Drachev et al., 2018).

Finding by Settineri et al. (2017) on the correlation between teeth and emotions, found that mood states were significantly correlated to physical and psychological dimensions of oral health. Anxiety and depression were found to be significantly related to oral health, along with aggression, fatigue, and confusion. Feeling of depression and confusion increased for patients with an average score of OHIP-14 (15 to 41), while aggression and fatigue were observed among patients who scores higher than 42 in OHIP-14 which suggest a poor OHRQoL.

In summary, the emotional aspects and social functions concept associated with oral conditions should also be included in the concept of well-being (Locker & Quin’onez, 2011). Collectively, oral conditions and oral diseases create not only pain, physical and psychological disability, in fact in could cause death in certain cases (Australian Research Centre for Population Oral Health, 2001). Even though studies have demonstrated that the impact and burden of illnesses and disabilities due to oral diseases (Petersen et al., 2005; Mirza et al., 2001), but this issues have never been studied among the university’s community in Malaysia. No comparable data on the impact of oral diseases are currently available in the university either central or department level. Effective preventive measures and policy making cannot be put in placed due to lack of available relevant data on individuals and community.

Therefore, knowledge and information of the psychosocial impacts of oral diseases on adults’ population in university’s community which is currently not available is needed in the higher learning institution. A large-scale survey of
METHODOLOGY

Research Design
A cross-sectional study was used in this study. Data collections were accordance with Declaration of Helsinki. Participants were informed about the study methods and study objectives. Participants were required to sign a consent form prior to answering the issued questionnaires.

Participants
Respondents were selected using simple random sampling method during study period. The sample selection inclusion criteria were respondents age 18 until 74 years old, with oral conditions such as gums problem, dental cavities, sensitive teeth, etc. were included in the study. A total of 220 dental patients in a public university Malaysia participated in this study, with 120 (54.5%) were females and 100 (45.5%) were males.

Instrument
For the purpose of this study, the short version of the OHIP that has been validated for Malaysia which is designated as S-OHIP (M), using English and Bahasa Melayu (Malay Language) which is the national language of Malaysia developed by Saub et al. (2005) which considered as a reliable tool will be used in this study. It is internally consistent and reliable, with Cronbach’s alpha 0.89. OHIP-14 has also been used in the United Kingdom (Kelly et al. 2000), Australia (Carter & Stewart, 2004) and Canada (Locker & Quíñonez, 2009). Language use for S-OHIP (M) are dual language (English and Malay) with responses, “never”, “hardly ever”, “occasionally”, “fairly often”, and “very often”, with scale 0 to 5, respectively. The scores of the 14 questions are added to obtain values between 0 and 14, with high scores indicating poor OHRQoL (Locker & Allen, 2002).

RESULTS AND DISCUSSION

The Level of S-OHIP (M)
Based on S-OHIP (M) indicates Physical Pain (M=3.02, SD=2.57) is higher, the second is Psychological Discomfort (M= 2.72, SD=2.45) and following Psychological Disability (M=2.37, SD= 2.35), for the details see in Table 1.

<table>
<thead>
<tr>
<th>OHIP-14</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional Limitation</td>
<td>1.32</td>
<td>1.85</td>
</tr>
<tr>
<td>Physical Pain</td>
<td>3.02</td>
<td>2.57</td>
</tr>
<tr>
<td>Psychological Discomfort</td>
<td>2.72</td>
<td>2.45</td>
</tr>
<tr>
<td>Physical Disability</td>
<td>1.77</td>
<td>1.98</td>
</tr>
<tr>
<td>Psychological Disability</td>
<td>2.37</td>
<td>2.35</td>
</tr>
<tr>
<td>Social Disability</td>
<td>1.80</td>
<td>2.13</td>
</tr>
<tr>
<td>Handicap</td>
<td>1.02</td>
<td>1.60</td>
</tr>
</tbody>
</table>

Note: M: Mean; SD: Standard Deviation

Respondents will be asked to answer all the question in the questionnaire, which will be divided into 5, section A - E:
Section A: Questions regarding socio demographic data of respondents (gender, age group, ethnicity and customer’s category).
Section B: Questions regarding “how often have you experiencing dental problem for the past 12 months” to measure how frequent the respondents experiencing dental problem during last 12 months before this study time. Respondents are required to answer only one answer in the appropriate box.
Section C: Questions regarding the use of denture among the respondents. Respondents are required to answer only one answer in the appropriate box.
Section D: Questions regarding the barriers in receiving dental treatment in Dental Service, University Health Centre. Respondents can answer more than one answer in this section.
Section E: Questions regarding S-OHIP (M). Respondents are required to answer all the questions using the scale given, by circling the answers.
groups: (a) 18 to 34 years; (b) 35 to 54 years; and (c) 55 to 74 years. The chi-square analysis showed that the age and gender groups were equals, as per requirement with Kaiser–Meyer–Olkin [KMO] = .89, p<.001).

Fig. 1: Differences of Mean in S-OHIP-(M) between age group

Note: FL: Functional Limitation; PP: Physical Pain; PDT: Psychological Discomfort; PD: Physical Disability; PDY: Psychological Disability; SDY: Social Disability; H: Handicap

Table 2 shows one-way ANOVA of the significant differences of scores obtained by respondents. The significant of homogeneity by Levene’s test and normality by Kolmogorov Smirnov test were shows more than 0.05. The results are indicated the assumptions of One-Way ANOVA are met.

Table 2: Differences in S-OHIP(M) between age group

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Age</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional Limitation</td>
<td>A1</td>
<td>-</td>
<td>1.72*</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>A2</td>
<td>1.72*</td>
<td>-</td>
<td>-80*</td>
</tr>
<tr>
<td></td>
<td>A3</td>
<td>.24*</td>
<td>.80*</td>
<td>-</td>
</tr>
<tr>
<td>Physical Pain</td>
<td>A1</td>
<td>-</td>
<td>1.88*</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>A2</td>
<td>1.88*</td>
<td>-</td>
<td>-92*</td>
</tr>
<tr>
<td></td>
<td>A3</td>
<td>.30*</td>
<td>.92*</td>
<td>-</td>
</tr>
<tr>
<td>Psychological Discomfort</td>
<td>A1</td>
<td>-</td>
<td>1.90*</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>A2</td>
<td>1.90*</td>
<td>-</td>
<td>-96*</td>
</tr>
<tr>
<td></td>
<td>A3</td>
<td>.36*</td>
<td>.96*</td>
<td>-</td>
</tr>
<tr>
<td>Social Disability</td>
<td>A1</td>
<td>-</td>
<td>2.63*</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>A2</td>
<td>2.63*</td>
<td>-</td>
<td>-82*</td>
</tr>
<tr>
<td></td>
<td>A3</td>
<td>.20*</td>
<td>.82*</td>
<td>-</td>
</tr>
<tr>
<td>Handicap</td>
<td>A1</td>
<td>-</td>
<td>-67*</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>A2</td>
<td>.67*</td>
<td>-</td>
<td>2.21*</td>
</tr>
<tr>
<td></td>
<td>A3</td>
<td>2.21*</td>
<td>2.44*</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: *Significant at 0.05; A1: age 18-34 years old; A2: age 35-54 years old; A3: age 55-74 years old; MD: Mean Difference

Based on the finding, the Physical Pain, Psychological Discomfort and Psychological Disability dimensions were high among the patients. This finding similar with other study by Locker and Quirón (2009) in Canadian adults which also found that the dimensions that had most impacted on the sample of the study were physical pain and psychological discomfort. Finding in this study is similar with the finding from Husain and Tatengkeng (2017) in Indonesia which found that the most impacted dimension was Physical Pain, Psychological Discomfort and Psychological Disability for both the rural and urban adult respondents in the study. While study by Saub and Locker (2006) among Malaysian adult revealed that the most impacted dimensions were Psychological Discomfort, followed by Functional Limitations and Physical Pain. Slade et al. (2005) also pointed out that the most severely impacted dimensions in the UK and Australian samples in the study were Physical Pain and Psychological Discomfort. While other study by Lawrence Thomson et al. (2008) found that Physical Disability were reported as the most affected dimensions.
Finding from this study and previous studies had demonstrated that the most impacted dimensions on adult were Physical Pain and Psychological Discomfort, due oral diseases were affecting individual’s function, psychological and social (FDI World Dental Federation, 2015). Pain due to oral diseases could create a substantial pain and suffering which substantially affect daily life to the degree of disability or dysfunction to individual (Hernández et al., 2015; Australian Research Centre for Population Oral Health, 2001). Finding from this study supported the previous finding that oral health affects people physically and psychologically that will influence peoples’ growth, appearances, communication, chewing and their social well-being (Locker, 1997; Xavier et al., 2012).

This study also found that patients from the middle age group (35-54 years old) had demonstrated that the Functional Limitation, Physical Pain, Psychological Discomfort, Social Disability dimensions were the most affected. Furthermore, finding also indicates that adult patients from the age group of 35 to 54 years scored worse in almost all dimensions of S-OHIP (M). Another finding among Thai adult population revealed that age of 35-44 years old had higher impact due to oral diseases compared to other age group (Srisilapanan & Sheiham, 2001). Result from this current study is also similar with study by Saub and Locker (2006) which found that more impact affected age group of 40-59 years old compared to younger age group and older age group. However, the dimensions of OHIP-14 that were most impacted are slightly different, whereas Saub and Locker (2006) found that a higher proportion of middle-aged group (40-59 years old) had their Physical Disabilities and Psychological Disabilities dimensions impacted due to oral diseases compared to Functional Limitation, Physical Pain, Psychological Discomfort, Social Disability dimensions impacted in the current study.

This study also showed that older patients of the age of 55-74 years old, Handicap dimensions were the most impacted compared to other dimensions. This is due to poor oral health status among older people compared to younger age group, as study revealed that older people usually have oral problems which leads to loss of teeth (edentulous) and a small proportions of elderly people having a few remaining teeth (Petersen, 2003). Tooth loss causing aesthetic and functional issues. Tooth loss can affect masticatory function, which leads to poor diet, causing social disability, and oral diseases (Emami et al., 2013). Due to oral health conditions, many older adult experiencing pain, problem with chewing, eating and social issues (Shimazaki et al., 2001; Oral Health Division, 2004). This study corroborated the previous studies that showed older people with poor oral health had social and interpersonal relationship issues that would lead to depression and affecting their wellbeing (Avcu et al., 2005), and poor oral conditions could also lead to impairment, functional limitation, physical disability, psychological and social disability and also handicap (Locker, 1988).

However, on the contrary, finding from a study among 1277 elderly the UK showed that Pain dimensions received the highest score while the lowest score was social disability. The study also found that the impact of pain due to oral conditions could further lead to physical, psychological and social disability, and also handicap amongst older people (Masood et al., 2017). Study in Poland for elderly of 55 – 93 years old samples also showed that pain and psychological impact dimensions were the highest in the study (Rodakowska et al., 2014), which is contrary to the current finding.

CONCLUSION
Poor oral health conditions could lead to pain and suffering. There was a correlation between oral pain with psychological discomfort, physical discomfort, social disability and handicap (Masood et al., 2017). Even though oral problems are not a death risk, however the experience of pain and impairment, functional, aesthetic and psychological issues caused by oral conditions had a significant impact on daily activities and could decrease the quality of life (Petersen et al., 2005; FDI World Dental Federation, 2014; Spanemberg et al., 2019). Furthermore, good oral health enables people to participate in all of their daily activities (Petersen, 2003).

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REFERENCES


