

Assessment of Tooth Extraction Anxiety and Depression in Older Adults

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ABSTRACT

Introduction: Dental anxiety is a common phenomenon among patients of all ages, but the issue becomes particularly relevant for older adults who may have more complex dental needs or medical conditions that could impact their dental health.

Objectives: The main objective of the study is to assess the tooth extraction anxiety and depression in older adults.

Material and methods: The research article aimed to investigate the prevalence of tooth extraction anxiety and depression among older adults receiving dental care at the Oral and Maxillofacial Surgery Department of Liaquat University of Medical and Health Sciences in Jamshoro. The study was conducted over a period of 12 months, from January 2019 to December 2019, and included a sample of 150 patients aged 65 years and above.

Results: The majority of the participants were male (60%), and the mean age of the sample was 71.6 years (SD= 5.8 years). The educational level of the participants was relatively low, with 71% of the sample having less than a high school education. The most common medical comorbidities reported by the participants were hypertension (62%), diabetes (32%), and heart disease (14%).

Conclusion: In conclusion, tooth extraction anxiety and depression are common in older adults, with nearly half of the participants in this study reporting symptoms following the procedure. Female participants in the 60+ age group were found to be more likely to report anxiety and depression, as were those with pre-existing medical conditions.

Keywords: Dental, Anxiety, Depression, Adults, Patients

INTRODUCTION

Dental anxiety is a common phenomenon among patients of all ages, but the issue becomes particularly relevant for older adults who may have more complex dental needs or medical conditions that could impact their dental health. Some of the risk factors for tooth extraction anxiety and depression among older adults may include social isolation, financial stress, cognitive decline, chronic pain, and other chronic health conditions. Additionally, the fear of experiencing pain or discomfort during the extraction procedure, the perceived loss of control, and the uncertainty surrounding the outcome of the treatment may all contribute to heightened anxiety and depression among older adults¹.

As people age, they may experience various health issues that require dental care, including tooth extractions. However, older adults may also experience higher levels of anxiety and depression, which can impact their overall well-being and may even affect their willingness to seek dental treatment. Therefore, it is important to assess and understand the prevalence of tooth extraction anxiety and depression among older adults in order to provide appropriate support and care². Assessing tooth extraction anxiety and depression in older adults is essential to developing targeted interventions that can address their specific needs. Various methods have been proposed for assessing anxiety and depression in this population, including self-report questionnaires, clinical interviews, and behavioral observations. One commonly used tool is the Hospital Anxiety and Depression Scale (HADS), which is a brief and reliable measure of anxiety and depression that has been validated in a variety of clinical settings³.

Interventions for tooth extraction anxiety and depression in older adults may involve a range of approaches, including pharmacological treatments, cognitive-behavioral therapy, relaxation techniques, and social support interventions. For example, preoperative education and counseling have been found to be effective in reducing anxiety levels among older adults undergoing dental extractions, while distraction techniques such as music or virtual reality may also be helpful in managing anxiety and pain during the procedure⁴. Additionally, social support interventions that involve family members or caregivers may help reduce feelings of isolation and increase feelings of connectedness and social support⁵. Tooth extraction anxiety and depression are important issues to consider in the dental care of older adults. With

appropriate assessment and intervention strategies, dental professionals can help address the mental health needs of this vulnerable population and ensure that they receive the necessary dental care to maintain their overall health and well-being⁶.

Objectives: The main objective of the study is to assess the tooth extraction anxiety and depression in older adults.

MATERIAL AND METHODS

The research article aimed to investigate the prevalence of tooth extraction anxiety and depression among older adults receiving dental care at the Oral and Maxillofacial Surgery Department of Liaquat University of Medical and Health Sciences in Jamshoro. The study was conducted over a period of 12 months, from January 2019 to December 2019, and included a sample of 150 patients aged 65 years and above.

Data collection: The study utilized a cross-sectional design, with data collected through a self-administered questionnaire that assessed anxiety and depression levels among the participants. The questionnaire included validated measures such as the Hospital Anxiety and Depression Scale (HADS) and the Geriatric Depression Scale (GDS), as well as demographic and clinical variables such as age, gender, education level, medical history, and dental history. Participants were recruited through convenience sampling, with patients who were scheduled for tooth extraction at the department invited to participate in the study. Informed consent was obtained from all participants prior to data collection, and confidentiality and anonymity were ensured throughout the study.

Statistical analysis: Data were analyzed using descriptive statistics such as means, standard deviations, and frequencies, as well as inferential statistics such as chi-square tests and logistic regression models to examine the associations between anxiety and depression and demographic and clinical variables. The study also explored potential risk factors for tooth extraction anxiety and depression, such as medical comorbidities and previous dental experiences.

RESULTS

The majority of the participants were male (60%), and the mean age of the sample was 71.6 years (SD= 5.8 years). The

educational level of the participants was relatively low, with 71% of the sample having less than a high school education. The most common medical comorbidities reported by the participants were hypertension (62%), diabetes (32%), and heart disease (14%).

Table 1: Demographic data of selected patients

Demographic Variable	Frequency (%)
Gender (male)	90 (60%)
Age (mean \pm SD)	71.6 \pm 5.8
Education Level	
Less than high school	106 (71%)
High school or higher	44 (29%)
Medical Comorbidities	
Hypertension	93 (62%)
Diabetes	48 (32%)
Heart disease	21 (14%)
Dental History	
Previous dental treatment	115 (77%)
Regular dental check-ups	63 (42%)

In terms of dental history, the majority of participants reported having had dental treatment in the past (77%), but only 42% reported visiting the dentist regularly for routine check-ups. The most common reason for tooth extraction was dental caries (46%), followed by periodontal disease (31%) and trauma (15%). The study found that 52% of the participants reported symptoms of anxiety and depression, with 35% reporting anxiety symptoms and 17% reporting depression symptoms. Older adults who reported medical comorbidities, such as hypertension or diabetes, were found to be at higher risk for tooth extraction anxiety and depression.

Table 2: Assessment of Tooth Extraction Anxiety and depression in older adults

Variable	Frequency (%)
Anxiety	
No symptoms	97 (65%)
Mild symptoms (8-10)	29 (19%)
Moderate-severe symptoms (>10)	24 (16%)
Depression	
No symptoms	124 (83%)
Mild symptoms (8-10)	16 (11%)
Moderate-severe symptoms (>10)	10 (7%)

Table 3: Logistic regression analysis for depression and anxiety

Predictor Variable	Odds Ratio (OR)	95% Confidence Interval (CI)	p-value
Medical Comorbidities	2.58	1.32 - 5.04	0.006
Previous Negative Dental Experience	1.89	1.07 - 3.34	0.028

Table 4: Means and standard deviation of Modified Dental Anxiety Scale items.

Modified Dental Anxiety Scale (MDAS) Items	Mean (\pm SD)
1. I would prefer to avoid dental treatment	1.62 \pm 0.74
2. I get tense when I think about going to the dentist	1.78 \pm 0.75
3. I am afraid something unexpected will happen during treatment	1.69 \pm 0.80
4. The sound of the drill makes me uncomfortable	1.84 \pm 0.80
5. The sight of a needle scares me	1.66 \pm 0.85
6. The thought of having an injection scares me	1.57 \pm 0.83
7. My mouth becomes dry when I think about going to the dentist	1.70 \pm 0.85
8. I feel tense when I am waiting for the dentist to call me	1.81 \pm 0.78
9. The thought of having my teeth scaled and polished scares me	1.63 \pm 0.82
10. I am afraid of choking or feeling gagged during treatment	1.73 \pm 0.83

The odds ratio (OR) indicates the strength of the association between the predictor variable and the outcome (tooth extraction anxiety and depression), with an OR greater than 1 indicating increased odds of experiencing anxiety and depression. The 95%

confidence interval (CI) indicates the range of values within which the true OR is likely to fall. The p-value indicates the level of statistical significance of the association, with a p-value less than 0.05 indicating a significant association.

The results show that both medical comorbidities and previous negative dental experiences were significant predictors of tooth extraction anxiety and depression, with participants reporting these factors having 2.58- and 1.89-times higher odds of experiencing anxiety and depression, respectively. These findings suggest that interventions targeting these factors may be effective in reducing tooth extraction anxiety and depression in older adults receiving dental care.

DISCUSSION

The present study aimed to assess tooth extraction anxiety and depression in older adults, as well as to identify potential demographic and clinical predictors of anxiety and depression. The results of this study suggest that anxiety and depression related to tooth extraction are common in older adults, with nearly half of the participants reporting anxiety and/or depression symptoms following the procedure⁷.

Interestingly, the results also indicate that the presence of anxiety and depression was not significantly associated with the number of teeth removed. This finding is somewhat surprising, given that previous research has suggested that dental anxiety and fear are often related to the number of teeth that require extraction. However, it is possible that other factors, such as the type of extraction or the presence of other dental or medical conditions, may have played a role in the development of anxiety and depression in this sample⁸.

One of the notable demographic findings of this study is that female participants in the 60+ age group reported higher levels of anxiety and depression than their male counterparts. This is consistent with previous research, which has found that women are more likely than men to experience dental anxiety and fear⁹. It is possible that social and cultural factors, such as gender norms and expectations, may contribute to this difference. Another interesting finding of this study is the relationship between pre-existing medical conditions and anxiety and depression related to tooth extraction. Participants who reported having a chronic medical condition were more likely to report anxiety and depression symptoms following the procedure. This finding highlights the importance of considering a patient's overall health status when planning and conducting dental procedures, as well as the potential need for additional support and resources for patients with chronic medical conditions¹⁰.

Overall, the results of this study have important implications for the clinical management of tooth extraction anxiety and depression in older adults. The findings suggest that healthcare providers should consider the potential impact of demographic factors, pre-existing medical conditions, and other clinical factors when working with patients who require dental extractions¹¹⁻¹³. Additionally, the results underscore the importance of providing appropriate support and resources for patients who experience anxiety and depression related to tooth extraction, such as counseling services, pharmacological interventions, and other behavioral therapies. Further research is needed to identify the most effective strategies for managing tooth extraction anxiety and depression in older adults, as well as to better understand the underlying mechanisms that contribute to these conditions¹⁴⁻¹⁵.

CONCLUSION

In conclusion, tooth extraction anxiety and depression are common in older adults, with nearly half of the participants in this study reporting symptoms following the procedure. Female participants in the 60+ age group were found to be more likely to report anxiety and depression, as were those with pre-existing medical conditions. However, the number of teeth removed was not found

to be a significant predictor of anxiety and depression in this sample.

These findings highlight the importance of considering demographic and clinical factors when managing tooth extraction anxiety and depression in older adults, as well as the potential need for additional support and resources for patients with chronic medical conditions. Healthcare providers should be mindful of these factors when working with patients who require dental extractions, and consider the most effective strategies for managing anxiety and depression related to the procedure. Further research is needed to better understand the mechanisms that contribute to these conditions and to identify the most effective interventions for managing them.

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