ASSESSMENT OF ANXIETY RELATED TO DENTAL SCIENCES AMONG MENIAL JOB WORKERS IN ROHILKHAND CAMPUS OF BAREILLY, INDIA

Yadav K[1] , Lakshminaryan N [2]

[1]Department of Public Health and Community Dentistry, Nepal Medical College Teaching Hospital, Kathmandu Nepal,
[2]Department of Public Health and Community Dentistry, Bapuji Dental College and Hospital Davangere, Karnataka India.

ABSTRACT

Oral health status of an individual is determined by multiple intrinsic and extrinsic factors. Dental health care seeking behaviour is an intrinsic factor which can influence the oral health status of an individual. Assess the Dental Anxiety among Menial job workers in Rohilkhand campus, Bareilly. It is a Cross-sectional survey to asses four hundreds subjects engaged in menial jobs from Rohilkhand campus, in the age group of 18-50 years, participated in the study. After obtaining informed consent, sociodemographic details were recorded in a questionnaire and dental anxiety was measured using Modified dental anxiety scale (MDAS) in Hindi version which is pre-validated for language translation. Comparisons were done using 'Z' test and Kruskallwallis Analysis of Variance. A majority of the subjects were dentally anxious and had a mean score of more than 11. Dental anxiety was higher among females (17.80%) than males (11.07%). Sweepers and house maids had significantly high dental anxiety when compared to other menial job workers. Age and past dental history did not significantly influence the dental anxiety.

KEYWORDS

Cross-sectional survey, dental anxiety, menial job workers,

CORRESPONDING AUTHOR

Dr. Karnika Yadav MDS,
Department of Public Health and Community Dentistry, Nepal Medical College Teaching Hospital, Kathmandu Nepal,
Email: Karnikayadav 63@gmail.com

INTRODUCTION

Anxiety and fear has been a constant dynamic of the dental patient since the beginning of human kind. Anxiety is defined as apprehension of danger and dread, accompanied by restlessness, tension, tachycardia and dyspnea unattached to a clear unidentifiable stimulus.[1] Dental anxiety is ranked fourth among common fears and ninth among intense fears.[2] It may be the result of conditioning via traumatic dental experiences or vicarious learning. It has its origins in a constitutional vulnerability to anxiety disorders, as evidenced by general anxiety states, severe fear complex and other disorder of mood.

Weiner and Sheehan (1990) have suggested that dentally anxious people could be classified into two groups, exogenous and endogenous with respect to the source of their anxiety.[1]Mehrstedt *et al* and Crofts Barnes *et al* have reported that those experiencing high levels of dental anxiety are among those with the poorest oral health related quality of life. Prevalence of dental anxiety among adult patients has been found to be 46%, which suggest that despite the technological advances made in modern dentistry, anxiety. Its association with dental treatment is widespread and anxious dental patients who avoid dental treatment, seek emergency dental care, postpone their dental visit and have more number of missing and decayed teeth.[3,4]

Measuring dental anxiety is important because line of treatment has to be customized. There are numerous indices and scales to measure dental anxiety. Each index has its own advantages and disadvantages. Modified Dental Anxiety Scale (MDAS) is more useful in a clinical setting for screening and diagnosing patients with dental anxiety. As it is simple and easy to complete and takes minimum time. It has been pre-validated in earlier studies. Completion of the questionnaire does not increase patient fear, and has been shown to reduce state trait anxiety in clinical settings and was developed from Corah's Dental Anxiety scale.[5] Corah's scale has been found to be reliable and valid, cross culturally and translated in different languages like Spanish, Greek, Chinese, Romanian and Turkish.[2]

Dental anxiety is a common problem which afflicts a significant proportion of people of all ages from different social classes and often results in poor oral health by complete avoidance of dental treatment, irregular follow up in dental attendance or poor co-operation by patient. Dental anxiety is based on several factors like family and social environment, general fearfulness, pain and post traumatic, unpleasant experiences.[6] Many treatment modalities have been suggested to reduce the anxiety status and facilitate their cooperation. These had included `1).Pharmacological strategies involving the use of benzodiazepines and anti depressants 2).Biofeedback 3).hypnosis 4). Behavioral interventions.[7]

Levels of Dental anxiety in menial job workers may be probably associated with their poor oral health status. A dentally anxious individual tends to avoid regular and conventional care and thus rely on self-care, emergency services and traditional or parallel remedies to relive dental pain.[8] Exploration of available and accessible literature revealed that there are no studies done in this respect among menial job workers. Hence, the present study was conducted with an aim to assess the Dental Anxiety among Menial job workers in Rohilkhand campus of Bareilly.

MATERIALS AND METHODS

A cross- sectional questionnaire survey was carried out among menial job workers in Rohilkhand Campus of Bareilly in 2015.[9] Ethical approval was obtained from the 'Ethical Review Board' of 'Institute of Dental Sciences', Bareilly. A copy of that is enclosed as Annexure no: Two The participitation of each subject was voluntary and consent was obtained from all participants.[10]

A total 400 subjects (male and female) aged between 18-50 years of age were selected for the study.[11] The questionnaire was divided into two parts, the first part contains the demographic profile, which includes age, gender, qualification, employment, residence, past dental visit. The second included the assessment of dental anxiety which was captured by the Modified dental anxiety scale (MDAS).[12] The questionnaire was translated into Hindi (local language) and pre-validated.[13]

These questions inquired about participant's feelings pertaining to specific situations, namely:

* Prior to visiting the dentist

* When they are waiting in the reception area

* When they are sitting in the dentist's chair and the dentist gets the drill ready

*When they are sitting in the dentist's chair and the dentist or hygienist is preparing the instruments to scrape their teeth around the gums

* When they are sitting in the dentist's chair and the dentist is about to put a local anaesthetic injection in their gums.

Participants were allowed to choose from five responses (scored 1 to 5), ranging from **'not anxious' to 'extremely anxious'**. People with total values between 5 to18 were categorized in the low dental anxiety group and those with total values between 19 and 25 in the high anxiety group.[14] Statistical comparisons were done using 'Z' test and Kruskallwallis Analysis of Variance.

RESULTS

A total 400 subjects (male and female) aged between 18-50 years of age were selected for the study. A majority of the subjects were dentally anxious and had a mean score of higher than 11. Dental anxiety was higher among females (17.80 %) than males (11.07%). This was statistically significant at p<0.05. Sweepers and House maids had significantly high dental anxiety when compared to other menial job workers. Age and past dental history did not significantly influence the dental anxiety.

Table 1: Comparison of Dental anxiety in age and gender

Age	Gender	Number of Subjects	Percent
<25 years	Male	55	30.6
	Female	125	69.4
	Total	180	100
26-45 years	Male	61	34.5
	Female	116	65.5
	Total	177	100
>45	Male	10	23.3
	Female	33	76.7
	Total	43	100

Table 1 shows the age and gender distribution of the patients. Out of 180 subjects in the below 25years strata, 55 were males and 125 were females, followed by 25-45 years age group in which out of 177 subjects, 61 were males and 116 were females and the least number of subjects were in the above 45 years age group, where out of 43 subjects 10 were males and 33 were females.

Table 2 and 4 shows age and past dental history. They did not show significant influence on dental anxiety. Mean anxiety score of subjects in each group was found to be more or less similar in all the three age groups. The mean anxiety scores were13.02±4.45, 13.27±4.41 and 13.58±5.10 in less than 26years, 26-45 years and more than 45 years were respectively. These differences were statistically not significant (p=0.66). Mean anxiety scores based on the past dental experience were found to be very similar with mean anxiety scores of 13.29± 4.13, 13.76+4.58, 12.67±4.69 and 13.28± 4.47 for subjects with past dental experience classified as good, bad, not too good and not too bad, these differences were found to be statistically not significant (p=0.56).

Table 3 shows that dental anxiety was higher among females (17.80%) than in males (11.07%). This difference was statistically significant at p<0.001. Table5 shows that the mean dental anxiety scores were 13, 11.50, 13.86, 14.48, 12.68, 10.82 and 14.18 among gardeners, vegetable vendors, attenders, sweepers, gaurds, mess workers and maids respectively. These

Table 2: Comparison of total anxiety scores based on age

Age	Number of subjects	Mean anxiety scores	SD	Confidence interval	
<25 years	180	13.02	4.45	12.36 -13.67	H=.81
26 -45 years	177	13.27	4.41	12.62 -13.93	P=.66
> 45 years	43	13.58	5.10	12.00 -15.15	

Table 3: Comparison of total anxiety scores based on gender

Gender	Number of subjects	Mean anxiety scores	SD	Mean difference	Confidence interval	
Females	126	17.80	3.14			Z=13.77
				6.72	6.03-7.41	P< 0.001
Males	274	11.07	3.28			

Table 4: Comparison of total anxiety scores based on the past dental experience

Past dental experience	Number of subjects	Mean anxiety scores with SD	Confidence interval	
Good	35	13.29(4.13)	11.85-14.73	H=2.04
Bad	42	13.76(4.58)	12.33-15.19	P=0.56
Not too good	94	12.67(4.69)	11.70-13.63	
Not too bad	229	13.28(4.47)	12.75-13.87	

Table 5: Comparison of total anxiety scores based on occupation					
Occupation	**Number of subjects**	**Mean anxiety scores**	**SD**	**Confidence interval**	
Gardener	17	13.00	4.59	10.63-15.36	H=35.36
Vegetable vendors	8	11.50	2.56	9.35-13.64	P<0.001
Attenders	76	13.86	4.36	12.87-14.86	
Sweepers	83	14.48	4.25	13.55-15.41	
Guards	80	12.68	4.30	11.72-13.64	
Mess workers	70	10.82	4.42	9.77-11.88	
Maids	66	14.18	4.48	13.08-15.28	

differences were found to be statistically significant at p<0.001. Mess workers had the least and maids had the highest dental anxiety. This may also be because that a majority of mess workers were males and a majority of the maids were females.

DISCUSSION

A total of 400 subjects were included in the study. Studies reported in the literature differ in the methodology employed or the study population chosen, valid comparisons were not possible. Notwithstanding, we have tried to compare our findings with such studies which are showing similarity to some extent. Majority of the study subjects were found to be dentally anxious and this finding was in concordance with few other studies[8,15,16] and in discordance with one another study[2]. In this study, participants who were sweepers and housemaids had higher degree of anxiety as compared to other menial job workers. None of the studies reported in the literature have analyzed the relationship of the nature of job with dental anxiety. The possible reasons behind these results as found in this study might be, the interaction of various factors like low age, level of education, level of rationalization of the situation, stressful condition of the subjects. They are majorly daily wage earners and fend for daily living. They don't have sufficient funds to pay for dental services. Hence early treatment is not sought. Untreated lesions advance to irreversible stage. Such lesions need exhaustive, expensive, slightly painful and traumatic treatment. This creates anxiety and adds to the existing anxiety of the subject. Anxiety adding on to further anxiety is something like a 'Feedback loop'. The situation becomes complex and needs special attention towards behavioural management.

The possible reason for the high levels of anxiety may be due to higher percentage of young patients (less than 26years) in our sample and also because of more females (125), who are usually apphrensive.[17] Literature shows that women have a lower tolerance to pain and generally report higher levels of anxiety.[18,19] Similar results were obtained in the present study which reports a significant difference in the anxiety of males and females. This finding may be explained on the basis that women have higher levels of neuroticism than men.[7,8,15,16,20,21,22,27]

The present study showed that age did not significantly influence the dental anxiety and this finding was in concordance with other studies[1,23,45,25,26] and in discordance with few other studies[27,28] reported in the literature.

In the present study past dental experience was not found to significantly influence the mean MDAS scores. There are no studies reported in the literature which have considered past dental experience as an influential factor in estimating the present dental anxiety levels. The levels of anxiety may also vary with the quality of dental care received in the past. Sometimes, people with **'good'** dental experience have more anxiety as compared to people having **'not too good'** experience. The explanation given may be that people having good previous experience have the fear of future treatment failure. Whereas people who have frequently experienced bad dental treatment are used to going to the dentist again and again, hence they become familiar with the procedure and their dentist. In a way they get conditioned, and thus fear less for failure.

In conclusion, the findings of this study suggest that prevalence of dental anxiety was high among the study subjects. Amongst the various socio-demographic factors, gender and occupation were found to be significantly associated with dental anxiety. Further studies are needed to address the dental anxiety levels in different populations, which will help dental care providers to better manage their patients.

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