

Assessment of Oral Health Status and Treatment Needs Among Sex Workers of Belagavi District – A Cross Sectional Study

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Abstract

Background: Professional sex workers are a vulnerable lot with respect to both systemic as well as oral health. Sex workers have no felt need for oral health and much of the stress has always been on sexually transmitted infections (STIs). There is a need for a baseline data about the oral health status to plan preventive, promotive and curative services for sex workers. **Aim:** To assess the oral health status and treatment needs among sex workers and to suggest measures for improving their oral health status. **Materials and methods:** The present study was a cross-sectional study conducted among 246 commercial sex workers from different areas of Belagavi district. General information and information related to habits were collected by interview method. It was followed by dental caries examination of based on DMFT INDEX 1938 using mouth mirror and explorer. periodontal status was assessed using Russel's periodontal index 1956. Chi-square test was done to find the association between the study variables. Level of significance was set at $P < 0.05$ The data collected were subjected to statistical analysis and analysis was done using SPSS package 16.0. **Results:** Mean DMFT is 3.15 of the total participants 37% had periodontal problems 43% of them had some or the other kind of personal habits. 68% of them requires various dental treatments. **Conclusions:** It was found that these people are more emotionally deprived having increased stress being prone to poor oral health quality of life. Hence it is necessary to start suitable community dental health program to improve the oral health status.

Keywords: Oral health, sex worker, habits

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Introduction

That woman in sex work are more prone to sexually transmitted diseases and psychological problem is a well-known fact.^{1, 2} The overall rehabilitation of women in sex work is unfortunately limited most of the time only to move them to another profession, but focus should be on including health as an important factor.³ Oral diseases are preventable and even if this is a known fact, still, the burden of oral

diseases keeps increasing worldwide. Educational level, income, occupation, socioeconomic status, and the community index are significantly associated with a greater occurrence of dental caries.² People with low income have the most limited access to education, prevention, and treatment. Factors that restrict regular dental care include misconceptions, dental fear and expense of dental care, unpleasant dental experiences, and socioeconomic factors,³ but such a direct

correlation cannot be made in the case of such women under study. The focus in terms of health has always been on human immunodeficiency virus (HIV) and sexually transmitted infections (STIs),⁴ while oral health fails to find even a mention. For example, an estimate indicates 57% of all men and 11% of women between 15 and 49 years of age use some form of tobacco,⁵ leading to morbidity as well as mortality; still, it has managed to grab only attention, but no productive action. The need to prevent disease occurrences in case of the sex workers is essential for their upliftment. Thus a comprehensive oral health program was designed to provide baseline data which would yield valuable information about the oral health status so as to plan preventive, promotive and curative services. There is a need for a baseline data for the oral lesions of these women to further assist in the policy formulations and training of personnel for the identification of the oral conditions which need treatment. This will help to study the pattern of the oral disease and their distribution and suggest the treatment needs for the same. This assessment will help to formulate a comprehensive treatment plan to this community. Thus, the present study to assess the oral health status and treatment needs among sex workers and to suggest measures for improving their oral health status.

Materials and Methods

Subjects

The study was cross-sectional in nature ethical clearance (vide no. IL0213003/1260) was obtained from the institutional ethical committee of KLE VK Institute of Dental Sciences, Belagavi. Consent was taken from all participants. Convenience sampling was done in which whoever came for the camp was included in the study.

Sample size estimation

Sample size was calculated utilizing the formula $4pq/d^2$

$P=70\%$

$Q=1-p$

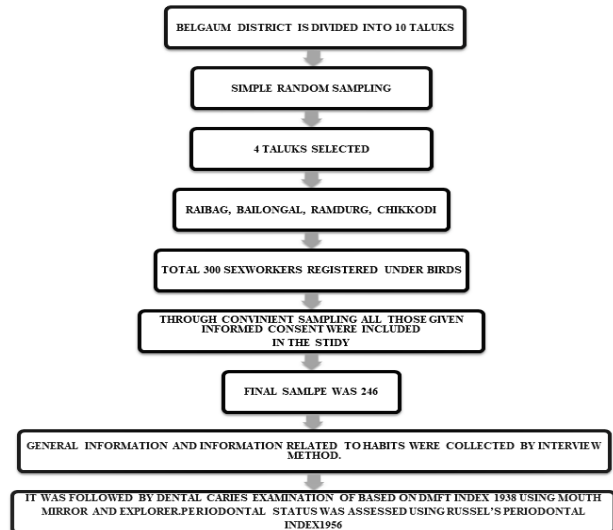
$D=6$ (allowable error)

Sample size obtained was 233

Since there are 246 people already registered, we included all of them.

Details of statistical analysis

Data were entered in Microsoft Excel and analyzed using SPSS Statistics software, version 17 (IBM, Chicago IL, USA). Frequency distribution and Chi-square test was done (to know the association between the study variables). Level of significance was set at $P < 0.05$.



Results

During the study period, 300 SW registered under BIRDS (Belagavi Integrated Rural Development Society). Among them, 246 who gave consent participated in the study. Out of the total participants 75.6% (189) were females and 24.4% (61) were males. 51.3% of the females were of age group 20-25 and 35% of the males were of age group greater than 45 years. 42.6% of the participants (males-16.2% females-26.4%) had habit of tobacco smoking and pan chewing and among that 8.1% males and females had a habit of tobacco smoking, 4.1% males and 14.1% females had pan chewing habit. 4.1% males and females were alcohol consumers. Mean DMFT was 3.15

Figure 1: Age Wise Distribution of Participants

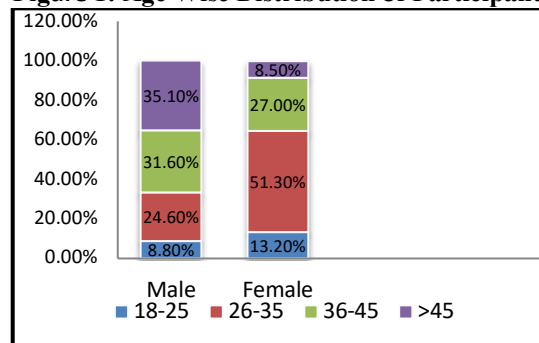


Table 1: Oral Health Status of the Participants

	Present	Absent	Chi square	p value
Toothache			0.028	0.868
Male	10(4.1%)	47(19.1%)		
Female	35(14.2%)	154(62.6%)		
Stains				
Male	38(15.4%)	19(7.7%)	14.434	0.001*
Female	133(54.1%)	56(22.8%)		
Calculus				
Male	30(12.2%)	27(11.0%)	0.283	0.624
Female	148(60.2%)	41(16.7%)		
Bleeding gums				
Male	4(1.6%)	53(21.5%)	0.032	0.768
Female	12(4.9%)	177(72%)		
Recession				
Male	17(6.9%)	40(16.3%)	2.103	0.153
Female	39(15.9%)	150(61%)		
Mobility				
Male	11 (4.5%)	47(18.7%)	12.389	0.001*
Female	9(3.7%)	180(73.2%)		
Malocclusion				
Male	2(0.8%)	55(22.4%)	1.849	0.258
Female	17(6.9%)	172(69.9%)		

P value <0.05 statistically significant*

Table 2: Distribution according to personal habits

Habits	Tobacco smoking	Pan chewing	Alcohol consumption	None	p value
Male	20(8.1%)	10(4.1%)	10(4.1%)	17(6.9%)	0.04*
Female	20(8.1%)	35(14.1%)	10(4.1%)	124(50.4%)	

P value <0.05 statistically significant*

Table 3 Distribution according to treatment needs

Status	Male	Female
Free from caries	28(11.4%)	51(20.7%)
Needs restoration	10(4%)	8(3.2%)
Needs pulp therapy	5(2%)	5(2%)
Needs extraction	11(4.4%)	9(3.6%)
Needs orthodontic correction	2(0.8%)	5(2%)
Oral prophylaxis	32(13%)	60(24.3%)
Periodontal therapy	1(0.4%)	5(2%)
Prosthetic rehabilitation	8(3.25%)	6(2.4%)

Discussion

This study revealed the oral health related information of sex workers residing in Belagavi district. A total of 246 subjects -57 males and 189 females were recruited in the study. Different populations and cultures around the world have practiced oral hygiene measures since antiquity. ⁶ It has been observed that oral hygiene has mostly remained as an ignored and unrealized major social problem. ⁷ In the present study 18.3% of the participants had experienced toothache which was less when compared to the study conducted by Muralidharan et al; ⁷ and the mean DMFT is 3.15. Majority of the people are

unaware about the relationship between oral hygiene and systemic diseases or disorders. Most diseases show their first appearance through oral signs and symptoms and they remain undiagnosed or untreated because of this missing awareness. ⁸ >60% of the participants had stains and calculus on their teeth, which was higher when compared to study conducted by Nouaman et al; ⁹ and this was mainly due to lack of proper oral hygiene practices, their deleterious habits, poor dental care utilization and the attitude and lack of awareness among these population. Periodontal disease is one of the most prevalent dental diseases affecting the whole adult population throughout the world varying only in degree from mild to severe depending on multiple factors. Gingival and periodontal diseases affect 90% of the population. In our study 6.5% of the participants had bleeding gums this was less compared to the study conducted by Nouaman et al; ⁹ 22.8% had recession and 8.1% had mobility with their teeth. the reason behind this must be due to improper brushing patterns which will lead to the accumulation of calculus, plaque and debris. nutrition lacking food habits presence smoking and alcohol consumption Smoking may alter neutrophil chemo taxis, phagocytosis and oxidative burst. It can also increase secretion of tumor necrosis factor alpha, prostaglandin E2, neutrophil collagenase and elastase in gingival crevicular fluid.

The public equates good dental appearance with success in many pursuits. In general, societal forces define the norms for acceptable, normal, and attractive physical appearance. Fundamentally, the difficulties seen are since malocclusion is not a disease but a morphological variation which may or may not be associated with pathological conditions. Malocclusion can be defined as an occlusion in which there is a mal relationship between the arches in any of the planes or in which there are anomalies in tooth position, number, form, and developmental position of teeth beyond normal limits. Genetic, environmental, or a combination of both factors, along with various local factors such as adverse or deleterious oral habits can cause malocclusion. In the present study 7.7% of the participants had malocclusion. We have noticed that the participants even had deleterious habits like tobacco smoking

(16.2%), pan chewing (18.2%) and alcohol consumption (8.1%) which was less when compared to study conducted by Nouaman et al;⁹. Unlike in other parts of the world, the attitude towards a sex worker in Indian society is discriminatory and biased in general. They are considered as the most vulnerable, frustrated, and insecure community of the country. They are also denied general, oral health and psychological assistance, because of this they even hesitate to take up proper professional support. There is every possible chance that this neglected special group of population may have heavy stress and indulge in alcoholism, pan chewing and smoking habits. These factors may cause many oral health problems which can make their lives worse.

Conclusion

The results of the current study showed poor oral hygiene status among sex workers. This indicates that comprehensive oral hygiene instruction and dental prophylaxis need to be initiated. To improve the dental health status and to eradicate the present dental health problem suitable community dental health programs should be conducted to improve the overall wellbeing of the population.

Limitations

Proper training was not given to the dental surgeon who performed the clinical oral examination. In detail periodontal status was not examined. Oral lesions were not diagnosed properly. Quality of life and structured questionnaire was not included.

Key Message

Given the many problems that these people faces, oral health-related issues also seem to be a concern, and hence, there is a need for sensitizing them with regard economic burden is an important factor that influences their attitude toward oral health, and is likely to be inherited by their next generation also. These factors need to be considered and a separate, comprehensive intervention be applied concentrating on such a key population facing increased risks of poor dental hygiene; assistance to these women in whichever way possible to help them achieve

optimum oral health should be essentially practiced.

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