

ORAL IMPACT ON DAILY PERFORMANCE AMONG CONSTRUCTION WORKERS

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Abstract

INTRODUCTION: In recent decades Oral impact on the daily performance scale, a validated OHRQoL tool which aids in promoting oral health. This scale aids in assessing how dental health affects an individual's daily functioning. Clinical dental indices and quality of life-related to oral health have been the conventional ways of measuring oral health. In terms of construct and criterion validity, researchers defined the ODP scale as a satisfactory tool. This article utilizes the Oral Impact on Daily Performance (OIDP) assessment to examine the associations between sociodemographic characteristics, dental status, and oral health-related quality of life. **AIM:** To Analyze the Oral Impact on Daily Performance (OIDP) of Chennai construction workers. **MATERIALS AND METHODS:** This cross-sectional analytical descriptive study was conducted from June to September 2022. The sample size was 300 construction workers with 200 males and 100 females, who were construction workers working in abc and residing in Chennai, Tamil Nadu. ODP form was used to examine oral health status and how it affects daily performance in eight different areas. **RESULTS:** Participant scores ranged from 0 to 24 out of a worst possible score of 40, and nearly 48% of the responders reported at least one impact during the past three months. The most prevalent oral health impact related to chewing and enjoying foods was reported by 36.8% of respondents. **CONCLUSION:** This study identified modifiable behavioural and oral health-related factors which are associated with OHRQoL in the Chennai population. Oral health interventions should target these modifiable factors to improve oral hygiene in these populations.

Keywords: ODP; Construction Workers; Daily Performance.

INTRODUCTION

Oral impact on daily performance scale, a validated OHRQoL tool for promoting oral health in the recent decade, helps in evaluating the impact of oral health on one's daily performance and has an essential role in understanding subjective patient experiences in oral health care. New strategies have been developed and evaluated among various groups in response to the concerns that clinical indicators alone may not be sufficient for determining the public's oral health needs(1,2). These tools are now being used more frequently to accompany other clinical indicators. The theoretical framework was revised from the WHO's International Classification of Impairments, Disabilities, and Handicaps, which was later adapted by Locker for dentistry. New innovative approaches should have benefits, including being quicker and making it simpler to quantify the behavioural effects on performance than the feeling-state

dimensions(3–5). The main modification was the establishment of different levels of consequence variables which comprised 8 items that measure how oral health issues affect common behaviours and activities that influence social, psychological, and physical aspects of daily life. Performances evaluated in the OIDP scale include Eating and enjoying food, Speaking and pronouncing, Cleaning teeth, Sleeping and relaxing, Smiling, laughing and showing teeth without embarrassment, Maintaining a usual emotional state without being irritable, Carrying out major work or social role and Enjoying contact with people (6,7). The first level is the oral status, which includes any oral defects and impairments, and is what the majority of clinical indices try to assess. The second level, referred to as "the intermediate impacts," addresses the potential initial adverse effects brought on by oral health statuses, such as pain, discomfort, functional limitation and Dissatisfaction with appearance. The third level, or "ultimate impacts," includes social, psychological, and physical performances. The scoring system quantifies the effects by utilising a score that reflects their frequency as well as a severity score that denotes how significant a particular influence is in the person's day-to-day existence(8). Different performance scores are calculated by multiplying the frequency and severity scores, and the overall result is expressed as a percentage of the performance scores added together divided by the highest attainable score multiplied by 100. It is essential to not Repeat the same effects at each of the three levels can help prevent, or at least lessen, overscoring. The OIDP weighted score is a stronger predictor than either the frequency or severity scores independently since it gives the respondents' opinions more emphasis and validity. As an alternative socio dental indicator, the OIDP quantifies the significant impact of oral health on a person's ability to lead a normal life(9,10). This strategy keeps the measure brief while covering the hallmarks. Other succinct indications focus on some of the Level Two intermediate effects, such as pain or chewing efficiency(11,12).

The OIDP is appropriate for its use in cross-sectional population-based surveys due to its simplicity for measuring behaviours and its terseness in the scoring system. Thus this tool measures the impact and extent to which an individual's daily activities may be compromised by their oral health and is commonly used to facilitate oral health service planning (13,14). Using the Oral Impact on Daily Performance (OIDP) assessment, this study investigates the correlations between sociodemographic characteristics, dental quality, and oral health-related quality of life. The study aims to examine Chennai construction workers' Oral Impacts on Daily Performance (OIDP).

MATERIALS AND METHODS

This cross-sectional analytical descriptive study was conducted from June to September 2022. The sample size was 300 construction workers with 200 males and 100 females, who were construction workers working in Chennai, Tamil Nadu. All subjects provided written informed consent and were willing to participate in oral examinations and interviews. The questionnaire was divided into 2 sections. The first section was about the Personal behaviours comprising smoking, frequency of brushing and flossing, addiction, and alcohol consumption and the second section was about the demographic data including gender, occupation, income level, age, education level, and oral and dental disorders. Additionally, participants were questioned about whether they had encountered any of the 26 oral and dental issues listed in the OIDP inventory over the previous six months. The initial clinical evaluation of caries and tooth mobility (pathologic tooth motion greater than 1 mm) was done

using a tongue blade and a light source (flashlight). The participants were then questioned about the impact of each dental issue (11 out of 26 items) on their daily routines. The participants were then questioned about the impact of each dental issue (11 out of 26 items) on their daily routines. The frequency of each activity was graded on a Likert scale as follows: 1–4 (less than once a month), 1–2 (nearly once or twice a week), 3–4 (almost every day), and 9 (no clue). The past six months' frequency of mental instability was rated as 1, 5, or 9 (for five days or less, six days to one month, one to two months, two to three months, more than six months, and no idea, respectively). Additionally, a scale from 0 to 5 or 9 (representing no effect, very little effect, comparatively little effect, moderate effect, relatively severe effect, very severe effect, and no effect) was used to rate the severity of how oral health issues affected daily activities.

The OIDP score was calculated for each activity to determine how oral problems affected daily activities. To do this, the performance score (severity score frequency) was divided by 220 [11 (number of activities) 20 (maximum activity score)] as the maximum possible performance score for regular cases or by 275 (11× 25) as the maximum possible performance score for irregular cases. The sum of the various performance scores (26 items) was multiplied by 100 to produce the final OIDP score, which was then reported as a percentage score.

The mean ± standard deviation (SD) and absolute and relative frequencies, respectively, were used to express continuous and categorical variables. Using the Student's t-test, two groups were compared to one another. The analysis of variance was used to compare three groups or more (ANOVA). P values less than 0.05 were considered significant for all analyses, which were carried out in SPSS.

This is an alternate method for quantifying oral impacts that were previously suggested for the OIDP. The OIDP performance score is split into two groups using the 50th percentile, where a score of 0 indicates that there is no impact from oral conditions on OIDP and a score of >0 indicates that there is an impact from oral conditions.

RESULTS

280 male and 30 female employees who worked as construction workers in Chennai, Tamil Nadu were considered as the study population. There were no missing responses. The participants' average age was 34.00 ± 8.04 years (range: 20-50 years). The demographic details of the research population are shown in Table 1. OIDP scores had no statistically significant correlations with age ($p = 0.220$), smoking ($p = 0.087$), alcohol addiction ($p = 0.245$), and gender ($p = 0.478$). As opposed to this, the frequency of tooth brushing had a significant relationship with OIDP score ($P = 0.001$), i.e., people who washed their teeth more than twice a day had lower OIDP scores. OIDP scores were considerably lower in patients who used dental floss ($P = 0.002$). A statistically significant association was found on association with brushing and OIDP scores (0.004).

All participants (100%) said that during the previous six months, at least one of their everyday activities had been impacted by oral and dental issues. The three behaviours that had the most impact were eating (92.5%), cleaning one's teeth (60.9%), and smiling (64.8%). The least frequently affected activities are light physical activities like working at home (2.9%) (Table 2).

Table 1: Relative And Absolute Frequency Of Demographic Variables And Oral Impact On Daily Performance (OIDP) Scores Among The Study Population (N = 310)

VARIABLE	n(%)	OIDP SCORE	P
Gender			
Male	280(90.3%)	0.21± 0.21	
Female	30(9.6%)	0.16 ± 0.10	0.478
Age (years)			
20-30 years	120(38.7%)	0.17 ± 0.11	
30-40 years	153(49.3%)	0.19 ± 0.13	0.22
40-50 years	37(11.9%)	0.21 ± 0.12	
Smoking			
Yes	183(59%)	0.19 ± 0.08	
No	130(41.9%)	0.17 ± 0.12	0.087
Alcohol			
Yes	164(52.9%)	0.19 ± 0.08	0.245
No	146(47%)	0.17 ± 0.12	
Brushing			
Once a day	293(94.5%)	0.24± 0.09	
Twice a day	17(5.4%)	0.15 ± 0.13	0.004*

*p<0.05- statistically significant

Table 2: The Prevalence Of Each Activity In The Studied Subjects (n =310)

Code	ACTIVITY	n(%)	Less severe	Moderately severe	Severe
1	Eating	287(92.5%)	156(54.3%)	89(31%)	42(14.6%)
2	Clearly speaking	87(28%)	23(26.4%)	35(40.2%)	29(33.3%)
3	Cleaning the teeth or denture	189(60.9%)	56(29.6%)	96(50.7%)	37(19.5%)
4	Light physical activity like working at home	9(2.9%)	3(33.3%)	4(44.4%)	2(22.2%)
5	Sleeping	88(28.3%)	34(38.6%)	20(22.7%)	34(38.6%)
6	Smiling, laughing and showing teeth without discomfort and embarrassment	201(64.8%)	87(43.2%)	67(33.3%)	47(23.3%)
7	Emotional conditions (e.g. irritability)	16(5.1%)	4(25%)	10(62.5%)	2(12.5%)
8	Spending time with others	65(20.9%)	25(38.4%)	25(38.4%)	15(23%)
9	Jobs and work-related activities	67(21.6%)	20(29.8%)	20(29.8%)	27(40.2%)

DISCUSSION

The construction industry has a significant role in all aspects of the economy. After agriculture, it is the second largest employer. It directly or indirectly employs about 18 million people, and over the past five years, it has grown by more than 10% annually. Construction workers are known for their unpredictable pay, hazardous working environments, and lack of access to any type of healthcare. It is therefore important to study and analyse the challenges faced by them in maintaining their oral health and its influence on their day-to-day activities. This research aimed to determine the prevalence and severity of OIDP among construction workers in Chennai, Tamil Nadu. In the current study, every participant acknowledged that at least one aspect of their everyday lives had been impacted by oral and dental issues. In other words, OIDP was extremely prevalent(15,16). Previous studies carried out by other researchers

showed different results. The increased number of problems that were examined in our study and cultural variations amongst the study populations may have contributed to these differences.

Studies showed that subjects who visited public clinics had considerably higher OIDP scores than patients who were referred to private clinics. Other studies have revealed a substantial relationship between OIDP scores and locality (rural vs. urban areas), indicating that dental issues greatly impacted rural individuals' everyday activities(17–19). We assessed oral health practices by asking individuals how frequently they floss and clean their teeth. As we predicted, considerably lower OIDP scores were linked to better oral hygiene (18,20,21).

Oral health issues have been shown to have less impact on everyday activities in those who constantly wash their teeth. In line with earlier studies, we discovered that oral and dental issues most frequently interfere with people's ability to eat (22,23). Cleaning teeth was the second-most impacted activity. Other studies reported comparable outcomes. To the best of our knowledge, no research has previously examined the effects of flossing on OIDP scores(16,24). Appropriate instruction for denture use is crucial since elderly patients' regular maintenance of their dentures influences their level of happiness with them, the dentist's proficiency, and the patient's dental hygiene(25,26).

Construction employees are not protected from a variety of health risks at work. The situation is not acceptable because there is a lack of access to health services. The majority of them use tobacco, smoke, or chew due to low socioeconomic position and low literacy rates. Therefore, it is our duty to locate them and provide them with appropriate oral health education(27,28). When assessing prostheses for satisfaction, dentists and patients should have a good agreement. Denture maintenance routines and patient satisfaction are key factors in the ultimate success of dentures. Dentists could use this information to forecast whether dentures will be effective and durable. The need of adopting a healthy lifestyle pattern should be made clear to the employees, and guidance on adequate sleep and oral hygiene might well be provided.

This study's cross-sectional approach could be the only drawback since it makes hypothesis testing difficult because data on risk variables and outcomes are evaluated at the same time. Fortunately, this particular concern does not appear to have an impact on our findings. To understand more about the study, future longitudinal research is required.

CONCLUSION

Compared to other groups of people, OIDP was extremely common among our participants, and oral issues had a bigger influence on their daily lives. Therefore, it would appear essential to promote oral health. In addition, the majority of individuals visited dental clinics only when they had oral issues rather than regularly. The authorities are advised to encourage community prevention using the findings of this study and related studies. Additional research using a larger sample size will also unquestionably be helpful.

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