



## Oral Health Status Among Brick Workers in Gautam Buddha Nagar-A Cross-Sectional Study

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### KEYWORDS

Brick workers,  
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### ABSTRACT:

**AIM :** This study aims to assess the oral health status and treatment needs among the workers of brick factories in GB Nagar.

**Materials and methods:** A cross-sectional study was conducted among brick factory workers in GB Nagar. A convenience sampling technique was used for the sample selection. The study group consisted of workers of all ages and genders. The oral health status was assessed using the WHO oral health assessment form, 2013. Personal interviews and clinical examinations were performed in order to collect the data.

**Result :** A total of 115 brick factory workers in Gautam Buddha Nagar were examined, with nearly equal numbers of male (49.5%) and female (50.4%) participants. The majority of workers were aged 26-35 years, with an average age of 19. The oral health findings revealed that 100% of workers had dental calculus, 32% experienced bleeding on probing, 11% had periodontal pockets, and 60% showed signs of gum recession. These results highlight significant oral health issues among the workers, pointing to the need for improved oral hygiene practices and access to dental care.

**Conclusion:** The study concludes that brick factory workers in Gautam Buddha Nagar face significant oral health challenges due to poor hygiene, limited dental care, and harmful habits. It highlights the need for oral health education, better access to dental care, and workplace interventions to improve workers' oral health and overall quality of life. [ Ref no 1&3]

**INTRODUCTION:** Oral health is an essential aspect of overall health, yet it is frequently overlooked when we discuss wellness. Poor oral hygiene can lead to a range of dental problems like dental caries, periodontal diseases, and breath problems, and has been linked to more serious systemic health condition. Lack of awareness about the importance of proper oral hygiene can lead to many serious health problems. Oral health depends on the environment in which a person lives, but also the one in which he/she works. Oral diseases can be considered a public health problems due to their high prevalence and significant social impact. Various factors, such as age, gender, socioeconomic status, and other

components in an individual, can affect both their habits and oral hygiene practices. The environment of a person's workplace majorly determines his health status because, on average, he spend one-third of his life at his workplace.

Human exposure to chemical pollutants is capable of producing various pathological effects like skin allergies, lung fibrosis, abdominal pain, indigestion, vomiting, presence of immature neutrophils, cancer of the respiratory tract, and also some dental-related problems like dental discoloration, oral ulcers etc. It is frequently seen that medical care is often prioritize by the factory



workers in order to maintain their long work hours but oral health care is usually neglected by them due to workload, requirement for many visits, financial conditions and limited availability of dental services to them. They do not consider oral health maintenance as equally mandatory as overall health

The brick factories are functional throughout the week, and the workers are engaged in labour work the entire day in alternate shifts. The physically tiring and long-duration work often leads them into tissue abuse habits, neglecting oral hygiene, which will eventually lead to deterioration of their general health as well as oral health. In addition, the oral health of brick workers often goes uncared for due to their stressful working conditions, busy schedules, and poor economic conditions. The dental changes recorded in workers of brick factories include dental caries, periodontal condition, wasting diseases, and pre-malignant lesions. Until now, there are very limited studies available regarding the oral health status of the brick factory workers in GB Nagar, Uttar Pradesh.

Due to unhealthy diet, tobacco use, inaccessibility to dental services, and lack of education among the brick workers, this study was conducted to assess the oral health status of the brick workers in GB Nagar. Most oral diseases and conditions require professional dental care, but due to limited availability and inaccessibility, the use of health services is markedly low among the workers of the brick factory. Therefore, it is important to assess the oral health status and treatment needs among these brick workers. [Ref no 4,2,3]

**OBJECTIVES:** The three main objectives of this study are

- To assess the oral health examination of the brick workers.
- To evaluate the need for treatment of the brick workers.
- To provide oral health education to the brick workers.

## **MATERIALS AND METHODS :**

A cross-sectional study of GB Nagar's brick factory workers was carried out. At the factory site where the subjects worked, personal interviews were conducted in the local language and clinical examinations were conducted to collect data. The oral cavity was examined in well ventilated space. As advised by the world health

organisation, examination was conducted using mouth mirror, explorers and Community Periodontal index (CPI) probes.

The data regarding age, gender, educational attainment, and marital status were gathered.

The job description includes their position, salary, type of employment and experience. Brushing frequency, oral hygiene technique and kind of dental hygiene tool used were all part of the oral hygiene practices. Habits of tissue abuse like smoking, alcohol consumption and tobacco use for a long time.

Because it was more convenient for the people working in the brick factory, the study was carried out in the day shift. Employees without any systemic condition, above the age of 15 and who are not edentulous were examined. Moreover, who wished to participate voluntarily were also included in the study. WHO Performa 2013 was used to examine all the employees present at that time. By recording the dental caries, gingival status and oral mucous lesions information were collected. Type IV examination is carried out. A team of four members under the supervision of two staff members were present at the examination site. The two recorder were recording the information with the help of WHO Performa form 2013 and the other two members were examining with the help of mouth mirror, explorers and CPITN probe. Information regarding presence of pre-malignant lesions were recorded among them. [Ref no 3,1]

## **INCLUSION CRITERIA**

All workers above the age of 15 years and of both gender were included in the study. [Ref no 4]

## **EXCLUSION CRITERIA**

children below the age of 15 years are excluded.

The edentulous patients are excluded.

Patient having any medical condition are excluded.

[Ref no 4]

## **RESULT :**

A total of 115 subjects were examined from brick factories workers at Gautam Buddha Nagar. There were 49.5% (57) are males workers and 50.4% (58) are



females workers in the study. Majority of the workers belongs to the age group of 26- 35 (36% of workers ) with the mean age of 19 years ( Table 1) .[5] Table 1: Demographic details of the subjects

Among 115 workers, 37 (32%) workers had bleeding on probing, 115(100%) had calculus, 13 (11%) had pockets and 70(60%) of the study subjects have recession problems.[6]

Table 1: Demographic details of the subjects -

Variable	Frequency,n%
Total,n%	115(100)
<b>Gender</b>	
Male	57(49.5%)
Female	58(50.4%)
<b>Age</b>	
15-25	23(20%)
26-35	42(36%)
36- 45	22(19%)
46- 55	12(10%)
56- 65	13(11%)
66 and above	3 (2%)

Table :2: Periodontal condition among brick factory workers

Peritoneal status	n ( % )
Bleeding on probing	37(32%)
Calculus	115(100%)
Pocket	13(11%)
Recession	70(60%)

12.17% of the study subjects were found having Oro - mucosal lesions, among them 4 (3.5%) workers had leukoplakia, 1(0.9%) had lichen planus, 3(2.6%) had ulceration and 6 (5.2%) workers had found other abnormal conditions (Table 3) .[7]

Buccal mucosa 10(8.9%) is the most common site involved followed by hard/soft palate 3(2.6%), lips 2 (1.7%) , and alveolar ridge 2(1.7%) ( Table 4) .[8]

Table 3 : Distribution of Oro - mucosal lesions among the subjects

Oro-mucosal lesions	Frequency,n%
No abnormal conditions	101(87.8%)
Malignant tumour	0(0)
Leukoplakia	4(3.5%)
Lichen planus	1(0.9%)
Ulceration ( aphthous, herpetic, traumatic)	3(2.6%)
ANUG	0(0)
Candidiasis	0(0)

Table :4 Location of the Oro- mucosal lesions

Variable	Frequency,n%
Commisures	0(0)
Lips	2(1.7%)
Sulci	0(0)
Buccal mucosa	10(8.7%)
Floor of the mouth	0(0)
Tongue	0(0)
Hard/Soft palate	3(2.6%)
Alveolar ridge / Gingiva	2(1.7%)



## **DISCUSSION**

The oral health of Gautam Buddha Nagar's brick factory workers was examined in this study and revealed some alarming results. Nearly all of the workers had dental calculus (100%), and significant numbers presented with symptoms of gum problems such as bleeding (32%) and recession (60%). Even some had deeper pockets around the teeth (11%), which indicates severe periodontal disease.[6] These results are consistent with the hypothesis that lack of access to dental care and poor knowledge of oral hygiene practices contribute significantly to negative oral health outcomes.

Their socioeconomic condition, the stressful work they do, along with the likelihood that a lot of workers might not have the time or means to go for regular dental checkups, appears to be a primary factor. Habits such as smoking, alcohol consumption, and tobacco use could also be contributing to these dental problems, although the study did not target these habits directly.

The majority of the workers were aged between 26 and 35, with an average age of 19, and both men and women were equally impacted by oral health issues. This emphasizes that poor oral health is a problem for all members of the workforce, irrespective of gender. Although the workers were relatively young, the fact that there were severe oral health issues indicates just how critical it is to begin education and intervention early. [5][10]

In brief, this research emphasizes the necessity of improved oral health education and preventive treatment. Educating employees on proper brushing, providing them with simple dental equipment, and educating them on the ill effects of smoking and alcohol can be a significant improvement. Employers and public health officials should consider providing periodic dental examinations and educational programs to enhance employees' oral health and overall health.[11]

Finally, this research demonstrates how important it is to take notice of the oral well-being of industrial workers. Through this, we can make them stay away from severe oral health conditions and enhance their quality of life.

## **CONCLUSION**

This study sheds light on the serious oral health issues faced by brick factory workers in Gautam Buddha Nagar.

Many workers show signs of gum problems, like bleeding, recession, and advanced dental disease, which is largely due to poor oral hygiene and limited access to dental care. The demanding nature of their work, along with a lack of proper education on oral health, seems to contribute to these issues.

The results underscore the need for increased education on dental care, as well as improved access to dental checkups and necessary tools. It's also important to address harmful habits like smoking and drinking, which can worsen oral health. Providing oral health education at the workplace and making dental care more accessible can help workers improve their oral health and overall well-being.

Ultimately, this study demonstrates that prioritizing workers' oral health isn't just about preventing dental problems—it's about enhancing their overall quality of life. By offering the right resources and support, we can help workers maintain good oral health, feel better, and be more productive.

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