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Original Research

Oral Health Status and Treatment Needs of Police Personnel in Mathura City

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Abstract:

Background: All men are born equal and are endowed by their creator with some basic rights. As the military is to defend the country from external threats, so is the police for maintenance of the internal peace of the community. The irregular shifts in their work schedule lead to neglecting or skipping of their regular diet and indulging into adverse habits. It is the responsibility of the society to safeguard the health of their defenders.

Materials and Methods: A cross-sectional study was carried out on 475 central reserve police personnels in Mathura city. Consent was obtained from the concerned authorities and the subjects were clinically examined using WHO 2013 "Oral Health Assessment Form."

Results: This study revealed that 99.6% subjects were males, 62% subjects were of 21-35 years age group, mean dentition status was found to be 0.66 ± 2.08 and, most of the subjects needed prompt treatment including scaling.

Conclusion: Police personnels provide a unique opportunity to study a large population from diverse geographic backgrounds. Prevention oriented health education lectures should be delivered and possibly, should also form part of their training curriculum.

Key Words: Central reserve police force, dentition status, intervention urgency, tobacco consumption

Introduction

Health is a state of complete physical, mental, and social well-being and not merely an absence of a disease or infirmity.[1]

Health is not something that one possesses as commodity but connotes rather a way of functioning within one's environment.[2]

Oral health is an integral part of general health.[3] Loss of tooth reduces the quality of life. Prevalence of dental caries and periodontal disease determines the oral health, the former being one of the most widespread chronic diseases in the world. Dental caries is modern civilization scourge, and no nation or race has escaped the ill effects.[4]

Oral health consists of two dimensions. First, the physical, oral health status in terms of number of teeth, mouth opening, periodontal status etc., second, individual perception of oral health. These dimensions are needed for characterization of oral health.[5]

The essential part of achieving and maintaining readiness to deploy and fight is oral health. The dental health of the central reserve police personnel has a significant impact on their operations since the untreated oral conditions can result in increased rates of disease and non-battle injury for deployed police personnels.[6]

Central Reserve Police Force (CRPF) is the largest of India's Central Armed Police Forces. It functions under the aegis of Ministry of Home Affairs, Government of India.[7]

No data on the oral health status among the central police personnel's of Mathura city is available. Hence, this study was undertaken to assess oral health status and treatment need of central reserve police personnels of Mathura city.

Materials and Methods

The present study was conducted upon total 475 CRPF personnels of Mathura city. The study was carried out in the month of August-October 2014. The police personnels who were absent on the day of examination were examined on the next scheduled date. The average time for the examination and data collection were 10 min for each subject. The daily and weekly schedules were prepared and in a single day maximum of 20-25 subjects were examined. The examinations were carried out on all the week days excluding the second Saturdays, Sundays, and holidays. Clinical examinations were done using WHO standard criteria as mentioned in WHO Oral Health Proforma, 2013 to assess the oral health status. The clinical examination was carried out by a trained examiner who was initially trained and supervised by an expert clinician in the Department of Public Health Dentistry. The ethical clearance was approved from the Ethical Committee of KD Dental College and

Hospital, Mathura prior to the start of the study and consent was obtained from CRPF authorities.

The collected data were entered in the Microsoft Excel Sheet and analyzed using the SPSS, Version 22.0 statistical package (IBM Corporation). *A t*-test was used to compare the distribution of oral health status variables, according to age groups. $P \leq 0.05$ was considered to be statistically significant.

Results

Four hundred and seventy-five central reserve police personnels were selected from Mathura city out of which 473 (99.6%) were males and 2 (0.4%) were females. Total 62.3% subjects belonged to 21-35 years age group (Table 1). Among the 475 (100%) central reserve police personnels, 382 (80.4%) subjects had healthy teeth (Table 2). Mean dentition status among study subjects was found to be 0.66 ± 2.08 (Table 3). Gingival bleeding was present in 122 (25.7%) study subjects. Pockets were present in 28 (5.3%) study subjects, enamel fluorosis was present in 116 (24.4%) study subjects, and none of the study subjects had oral mucosal lesions. Total 9 (1.9%), and 4 (0.8%) study subjects needed partial denture in upper and lower arch, respectively. In the subjects above 35 years of age mean bleeding, pocket, loss of attachment, and enamel fluorosis were 0.24, 0.06, 0.17, and 0.34, respectively (Table 4). Among the 475 (100%) central reserve police personnels, no treatment was needed for 24 (5.1%) subjects while 56 (11.8%) needed preventive or routine treatment, prompt treatment including scaling was needed for 382 (80.4%) subjects and, immediate treatment (urgent treatment needed due to pain or infection of dental and or oral origin) was needed for 13 (2.7%) subjects (Table 5).

Table 1: Distribution of study subjects according to age groups.

Age group (in years)	Number of subjects	Percentage
21-35	297	62.3
36-56	178	37.7
Total (N)	475	100

Table 2: Distribution of study subjects according to dentition status.

Permanent teeth status	Number of subjects	Percentage
Healthy	382	80.4
Caries	43	9.1
Filled/caries	12	2.5
Filled no/caries	12	2.5
Missing due to caries	9	1.9
Missing for another reason	1	0.2
Fissure sealant	00	00
Fixed partial denture	3	0.6
Unerupted	00	00
Not recorded	00	00
Caries and missing due to caries	3	0.6
Caries and filled with caries	4	0.8
Caries, fixed partial denture, and filled with no caries	3	0.6
Total	475	100

Table 3: Mean dentition status among study subjects.

Dentition status	
Mean±SD	0.66±2.08

SD: Standard deviation

Discussion

No data on the oral health status among the central police personnel's of Mathura city is available. Hence, this study was undertaken to assess oral health status and treatment need of police personnels in Mathura city.

In our study, a total of 475 (100%) central reserve police personnels were selected, out of which 297 (62.3%) were of the age group below 35 years, and 178 (37.7%) were of the age group above 35 years. Mean age of study subjects was 35.3 years, in the study conducted by Spalj *et al.*[8]

In our study, mean dentition status among study subjects was found to be 0.66 ± 2.08. However, mean dentition status was 1.02 ± 0.94, 2.98 ± 3.12, and 2.69, in the studies conducted by Sohi *et al.*,[9] Bhardwaj *et al.*,[10] Naveen and Reddy,[11] respectively.

Among the 475 (100%) central reserve police personnels, bleeding was present in 122 (25.7%) study subjects. This was similar to study conducted by Ahuja and Darekar[12] in which 74% subjects were healthy and 25% subjects presented with bleeding on probing.

No treatment was needed for 24 (5.1%) subjects while 56 (11.8%) needed preventive or routine treatment, prompt treatment including scaling was needed for 382 (80.4%) subjects, and immediate treatment (urgent treatment needed

Table 4: Mean distribution of oral health status variables according to age groups.

Variables	Age group	N	Mean±SD	*t*-test	*P*	NS/S
Bleeding	Below 35 years	297	0.27±0.44	0.589	0.556	NS
	Above 35 years	178	0.24±0.43			
Pocket	Below 35 years	297	0.07±0.28	0.215	0.830	NS
	Above 35 years	178	0.06±0.26			
Loss of attachment	Below 35 years	297	0.06±0.33	1.739	0.083	NS
	Above 35 years	178	0.17±1.01			
Enamel fluorosis	Below 35 years	297	0.42±0.81	1.113	0.266	NS
	Above 35 years	178	0.34±0.77			

Table 5: Distribution of study subjects according to intervention urgency.

Intervention urgency	Number of study subjects	Percentage
No treatment needed	24	5.1
Preventive or routine treatment needed	56	11.8
Prompt treatment (including scaling) needed	382	80.4
Immediate (urgent) treatment needed due to pain or infection of dental and/or oral origin	13	2.7
Referred for comprehensive evaluation or medical treatment (systemic condition)	00	00
Total	475	100

due to pain or infection of dental and or oral origin) was needed in 13 (2.7%) subjects in the present study. Parker *et al.*[13] found that oral prophylaxis was needed by 89.4% examined subjects. However, 17% subjects required fixed prosthesis in the study conducted by Moss.[14]

Conclusion

The sample of police personnel provides a unique opportunity to study a large population from diverse geographic backgrounds. The adverse outlook of this occupation makes it necessary for the government to either build health care, clinics equipped with efficient manpower, especially for the police personnel or to regularly organize treatment camps. The study concludes that prompt treatment is required in large section of this study population.

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