

Oral Health and Periodontal Status in jail – A review

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ABSTRACT:- This article identifies the medical and mental health issues among jail patients in comparison to the general population. This article will discuss the oral health of prisoners and those factors that impact upon their oral health including barriers to care. In general, the oral health of prisoners is poorer than that of age matched controls. A variety of factors including health related behaviours and pre-confinement access to dental services can influence this.

Keywords: -dental caries, oral health survey, prisoners, periodontal diseases.

Oral Health Of Prisoners - An Overview :-

There are few published studies available on prisoners' oral health in the United Kingdom, although some national centres have undertaken unpublished work. These studies have shown increased consumption of sugary drinks and food, drug abuse and oral neglect in the prison population. Studies have shown that people from lower socioeconomic classes do utilise preventive services less frequently and exhibit more unhealthy behaviours, such as smoking, drinking, consumption of unhealthy food and substance abuse. This correlates well with the clinical oral health findings, which demonstrate high levels of disease and unmet needs. Prisoners are likely to exhibit a higher degree of oral disease, a lower level of treatment and less motivation to maintain their oral health in comparison to the general population. Studies have demonstrated a trend towards an increased number of missing teeth and a higher DMFT index.

INTRODUCTION :-

The prisons population is unique and challenging with many health problems, including poor oral health.

Dental diseases can reach epidemic proportions in the prison setting. Many challenges exist in delivering services in the prison system, including service provision with respect to security procedures, recruitment and retention of dental staff in relation to strong demand and lucrative remuneration for dentists in private practice. There is currently no standardized system of assessment and prioritization of the dental needs of prisoners. ¹

The health of prisoners is of great concern, particularly because the number of persons under the jurisdiction of correction systems, including those on probation or parole, continues to increase dramatically. It is generally acknowledged from extensive research that correctional populations are more vulnerable to a wide range of health problems, most commonly alcoholism, drug abuse, infectious diseases, chronic illnesses, mental illnesses, and psychosocial and psychiatric problems ¹

Prisoners serving long-term or life sentences often experience differential treatment and worse

conditions of detention relative to other categories of prisoner.

Their conditions of detention, compounded by the indeterminate nature of their sentences, often have a profound sociological and psychological impact, which negates the rehabilitative purpose of punishment. Hardly any health professionals choose to work in the prison system. A lack of health concern, facilities and expertise further deteriorates the health of inmates. This explains the reason for such limited studies conducted in the prison system, especially in India. Several studies have reported higher prevalence of dental caries and periodontal diseases among incarcerated individuals. However, Clare reported a substantial reduction in the prevalence of dental caries and an improvement in periodontal health among prisoners who had served continually for 3 years in prison. ¹

In a developing country, such as India, the oral health problems of prisoners have received little attention. As the information is sparse, the objectives of the present study were to identify the oral health problems of life imprisoned inmates and to determine the existing oral healthcare facilities available in the central jails. ¹

Prisoners in India face serious public health challenges, especially poor oral health. Most of the prisoners come from disadvantaged backgrounds and have many unmet oral health needs. The prison population in India exceeds 400,000, housed in 1,387 prisons spread across the country. More than 14% of prisons are either overcrowded or at maximum capacity. ²

Despite carrying a higher burden of disease compared to general population, prisoners have very limited access to healthcare services. Prevention and treatment of oral health in the prison system is daunting due to a variety of reasons. First, prisons are mostly understaffed for general healthcare and seldom have dental services.²

As a result, prisoners report a disproportionately high prevalence of oral diseases. Second, the availability of alcohol, illegal drugs, and tobacco products, including cigarette smoking in the prisons worsen inmates' oral health. Third, dental health practitioners prefer not to work in prisons due to low remuneration, safety concerns, and lack of dental equipment and materials. ²

Addressing early symptoms of oral diseases can prevent expensive treatment procedures and limit more devastating prognosis such as oral cancer in future. Usually, only serious oral health issues are addressed among prisoners by referring them to nearby government or private dental colleges where dental students handle these cases as charity and/or dentists who are in training. This review aims to provide an overview of oral health status among prisoners in India and to discuss its public health significance. This paper will inform policy makers the need for oral health prevention and treatment of the prison population and urgency of allocating appropriate resources to address this public health issue in the prison system. ²

Decayed, missing, and filled teeth (DMFT):-

Prevalence of dental caries varied from 48% to 90% in most studies. For example, the prevalence of dental caries was around 79% with a mean DMFT score of

4.8 in one study which was lower compared to another study with a very high prevalence of 97% dental caries and DMFT score of 5.6 . According to another study, the high number of dental extractions might be due to fewer dental healthcare provisions available to conserve teeth in the prison system. Though most studies had higher male prisoners in prisons than females, yet females had higher (67%-93%), number of decayed and filled teeth compared to males Overall, the prevalence of dental caries was as high as 92% in one study and 79% in another. Some of the difference in the prevalence of dental caries could be attributed to the regional differences in diet pattern Dental caries is primarily accounted for loss of teeth among many prisoners However, two studies reported a higher number of missing teeth among prisoners. ²

Missing teeth and dental caries might interfere with an individual's psychological, social and functional aspects. It is generally observed that restoration of teeth is the most common solution, whether it is one surface or two surface followed by extraction These dental health needs among prisoners were reported to be much higher compared to the general population One study reported higher level of unmet treatment needs among prisoners: 48% needing one surface filling, 39% needing two or more surface fillings, and 62% needing extraction. It was suggested that prisoners required complex treatments due to the absence of regular dental health services in prisons. ²

Periodontal status:-

Ten studies reported periodontal status of prisoners. In one study, approximately 21% of prisoners had at least one sextant with a high Community Periodontal

Index (CPI) score at 4. Mean number of sextants for calculus and bleeding were 1.3 and , respectively Two studies reported approximately 98% prevalence of periodontal disease among prisoners and they were diagnosed with loss of attachment with 35% of them having more than 3 mm loss of attachment Similarly, many prisoners had poor periodontal conditions and it was found that about half of prisoners had calculus or hardened plaque deposits on their teeth It was also observed that all study participants required oral hygiene instructions and 53.1% required complex periodontal treatments that include placement of grafts or surgical procedures. ²

Oro-mucosal lesions:-

Oro-mucosal lesions included leucoplakias, Lichen planus, candidiasis, white lesions, red lesions and any other precancerous lesions. Several studies in this review reported prevalence of oro-mucosal lesions among 57% to 60% of the prisoners . Oral cancer was diagnosed in 0.1% in one of the studies Other oral conditions reported were ulcerations, abscess, oral sub mucous fibrosis, and smoker's melanosis. One study also reported 4% of the prisoners with candidiasis, 2.9% with acute necrotizing gingivitis, and a small percentage (0.2%) having an abscess . ²

Prosthetic status:-

Five studies assessed the prosthetic status and number of teeth present among the prisoner Among females, 8.6% had partial denture in the upper jaw while it was found in 5.7% in the lower jaw . In one study, 3.8% had prostheses either in the upper or lower jaw and 24% required prostheses . In the Haryana study , it was reported that 49.4 % prisoners in state prisons had edentulous areas in posterior region, of whom

7.1% were using prosthesis. With respect to dental arch wise prosthetic need, 54.3 % required prosthesis in maxillary arch and 78% required prosthesis in mandibular arch. Another study suggested a great need for prostheses (38.4%) among the prisoners, of them 1.4% needed complete dentures; 18.1% needed prosthesis in the upper jaw, and 20% needed in lower jaw. Surprisingly one study also found a very high need of 32.2% prisoners needed prosthesis. ²

The prison population is unique and challenging with many health problems, including poor oral health. Dental diseases can reach epidemic proportions in the prison setting. Many challenges exist in delivering services in the prison system, including service provision with respect to security procedures, recruitment and retention of dental staff in relation to strong demand and lucrative remuneration for dentists in private practice. There is currently no standardized system of assessment and prioritisation of the dental needs of prisoners. ³

The health of prisoners is of great concern, particularly because the number of persons under the jurisdiction of correction systems, including those on probation or parole, continues to increase dramatically. It is generally acknowledged from extensive research that correctional populations are more vulnerable to a wide range of health problems, most commonly alcoholism, drug abuse, infectious diseases, chronic illnesses, mental illnesses, and psychosocial and psychiatric problems. ³

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by the indeterminate nature of their sentences, often have a profound sociological and psychological impact, which negates the rehabilitative purpose of punishment. Hardly any health professionals choose to work in the prison system. A lack of health concern, facilities and expertise further deteriorates the health of inmates. This explains the reason for such limited studies conducted in the prison system, especially in India. Several studies have reported higher prevalence of dental caries and periodontal diseases among incarcerated individuals. However, Clare⁵ reported a substantial reduction in the prevalence of dental caries and an improvement in periodontal health among prisoners who had served continually for 3 years in prison. ⁴

CONCLUSION :-

In conclusion, this review underscores the urgent need to prioritize and improve oral health conditions for individuals in prison settings. The identified barriers at both organizational and individual levels highlight the importance of addressing systemic barriers to enhance oral health provision in these environments. By implementing evidence-based interventions we can significantly enhance the oral health-related quality of life for individuals in prison. However, achieving sustainable improvements requires concerted efforts and inter-institutional support to position oral health as an integral component of overall health and well-being.

Through a collaborative approach involving prison health services and a multidisciplinary team, will be effectively reduced the burden of oral diseases, ensure equitable access to essential and rehabilitation oral

health services, and ultimately improve the oral health outcomes

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