Dental Reasons for Non-Reporting of Referred Patients from Rural Health Centre and the Effect of Awareness Created for the Same

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Abstract:

Introduction: Oral diseases are prevalent chronic conditions, with a significant disparity in healthcare access between urban and rural areas. Despite producing around 26,000 dental graduates annually, rural regions face a Dentist: Population ratio of 1:2,50,000, leading to inadequate oral healthcare services. **Objectives:** This study aimed to identify reasons for non-reporting of referred patients from rural health centers to the Tertiary care centre (TCH) and to assess the impact of an educational video on referral compliance. **Methodology:** This study is a combination of retrospective and prospective components. A retrospective analysis was conducted by reviewing referral records from a rural health center in Vayalanallur to TCH over one month. Non-reporting patients were contacted to determine the reasons for their absence. Based on these findings, an educational video was created and presented to similar patients in a prospective study over the following month. The impact was measured through subsequent referral rates. **Results:** Out of 157 referred patients, only 14(22%) reported to TCH. Key reasons for non-reporting included lack of transportation, low awareness about oral health, and misconceptions about treatment costs. The educational video improved awareness and referral compliance. **Conclusion:** Targeted educational interventions can significantly enhance oral healthcare utilization in rural India.

Keywords: Oral Diseases; Rural health centres; Referral; Awareness

Introduction:

India has a population of about 1.311 billion and but still has about 70% of its population residing in the rural areas [1]. Oral diseases are one of the most recurrent chronic diseases, but there are few organized dental care systems to manage with these

problems. There are about 26,000 dental graduates each year [2] with a Dentist: Population ratio being 1:10,000 but in the rural areas it is 1:2,50,000[1] Few studies that were carried out in the rural India have shown that the treatment needs of the rural population are very high and the services are very low[3-6]. Dental caries and periodontal diseases are the two most common oral problems with very high prevalence in India[7]. Oral problems are generally neglected to be considered as a public health issue due to the lack of threat to life and lack of immediate consequence.[8] Oral health issues not only cause pain, suffering, functional and aesthetic problems but also lead to loss of working man-hours. Hence, over the years, they are bound to have a notable impact on our economy as a whole.[9]

India is divided into 29 states and seven union territories[10] with 640 districts, 5,924 subdistricts (tehsils/taluks), 7,935 towns, and more than 6,38,588 villages.[11] The seeds for the delivery of oral care through health centres were sown as early as 1946, through the recommendations of Bhore Committee.[12] People with the increased healthcare requirements often receive the least healthcare services. This phenomenon, the "inverse care law," has implications for healthcare and outcomes for vulnerable populations.[13] India being a part of 'the BRICS' countries (Brazil, Russia, India, China, and South Africa) has declared to look into and treat common health problems and thus promote health for all by supporting other countries.[14]

As on March 2011, there were 23,887 primary health centres (PHCs) and 4,809 community health centres (CHCs) functioning in the country,[15] but these centres can provide only basic health care facilities. For complex procedures, patients are usually referred to hospitals in the urban area but hardly people go to the hospitals to get their procedures done. With this data in mind, a first of its kind study was planned to explore the reasons for non reporting of referred patients and the effect of awareness created for the same.

Methodology

Ethical clearance

The Institutional Ethics Committee examined and approved all methods and tools used for gathering data (Ref. no.: CSP/17/MAR/55/78).

Data Source

The samples were collected from outpatient departments of Rural Health and Training Center (RHTC), Vayalanallur.

Data Collection

Data was collected from the records on the number of patients being referred from rural health centre, Vayalanallur to tertiary care centrefor a duration of one month.The patients who failed to report back to tertiary care hospital were personally contacted and reasons for not reporting were elicited.

Inclusion and exclusion criteria

Both male and females were enrolled in this study. Patients of all age group were included in the study

Outcomes and variables measured

The prospective component of the study was for a duration of 1 month during which awareness was created to the subjects through oral health educational video formulated based on the reasons reported by the patients. The impact of this was assessed by checking the referral rate of patients.

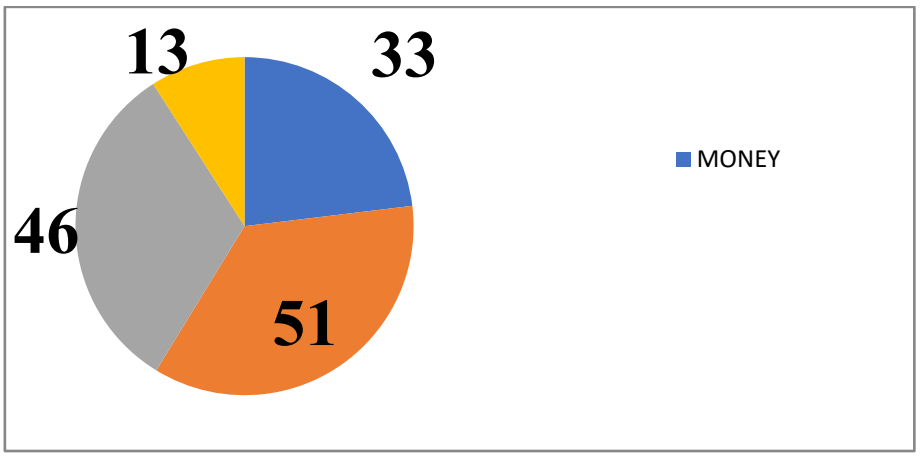
Data analysis

Descriptive statistics will be calculated in terms of percentage.

Results:

Out of the 157 patients that were referred from Vayalanallur rural health centre to tertiary care centre in one month, only 14 patients (22%) came to tertiary care centre. the major reason elicited for non-reporting was the lack of transportation from rural areas and the lack of awareness about the impact the dental problem could have on their day-to-day life. One more reason found was that the rural patients were not aware about the low cost of treatment or consider that the cost of treatment is high.

Reasons for non-reporting of patients from rural health centre to the referred hospital



After this, a video was formulated to create awareness about the problems that they have been referred for, consequences of non-treatment or delayed treatment, and its impact on the general health and well-being as a whole. The video also highlighted the progression of dental caries, the impact of periodontal health on general health and the importance of replacing missing teeth for the betterment for mastication, body orientation etc. A chart on how much each treatment would cost was also put up in the video.

This video was shown to all the patients being referred for the next one month and data was collected subsequently from the department. It was noted that 56% of the patients

had come to the Department of Public Health Dentistry showing an increase of greater than 50%.

Discussion

Oral health problems have been a major public health problem for decades together but because of the lack of awareness about the importance of treating them and their ill effects of not doing so has made oral health a neglected entity.

The Indian Dental Association (IDA) conscripted the National Oral Health Policy (NOHP) in 1986. The Central Council of Health and Family Welfare accepted NOHP as an integral part of National Health Policy (NHP) in one of its conferences in 1995[16]. But because of the less mortality rate related to oral health not much of implementation has been done. With increasing evidence showing the link between oral hygiene to various medical conditions like pancreatic cancer in men, stroke or ischemic attacks, type 1 and 2 diabetics, pre term deliveries[17] and a drastic change in the lifestyle, educating the public about the same is the need of the hour. Negligence by the government leads to the public neglecting it as well and becomes a vicious cycle, leaving the dental problems unattended, and hence its time the government begins its work towards the national oral health policy and allocates resources for the same. As stated above there are 23,887 primary health centres (PHCs) and 4,809 community health centres (CHCs) while only 20% of them have a dentist appointed and even if a dentist is appointed because of the poor infrastructure not much is done. An agenda of 1 dentist for 30,000 people seems like a practical goal if proper actions are taken by the government [1].

The current study reported that the major reason for not reporting of patients was lack of transportation. As all the rural areas are not very well connected and the non life threatening consequences of oral problems has a very big impact on the maintenance of oral health by the rural population which accounts to be 70% of our population. Another common problem faced is the lack of awareness about the importance of treating the problems they have been referred for. Oral health is much neglected among the general population and the main reason being the lack of awareness about its impact on general health, economy and the well being. It was also noted that patients are not aware about the cost of treatment. When being referred to hospitals they assume that the cost of treatment would be high and fail to report or feel the cost of treatment is high.

Recommendations:

1) **For problems related to transportation**
    - A vehicle can be allotted for every rural health centre to bring the patient every morning to the hospital and drop them back in the evening if not every day but at least thrice in a week

- Every village should be well connected to the nearby hospital by means of public transportation and higher frequency of the same
- Rural health centres with lack of dentist should have medical doctors well trained to handle dental emergency and refer the patients to the nearby centre with a dentist or refer them to hospital
- Rural health centres should be well equipped with machinery to perform most of the treatment and also should be connected by video calls to the main hospital in order to receive instructions in case of any emergency

2) For problems related to lack of awareness about the importance of treating oral problems

- Awareness videos to be shown to the patients about the ill effects of not treating the problems the patient had been referred for. The current study reported that greater than 50% increase was seen in the number of patients who came back to the hospital after awareness.
- Pamphlets about the link of oral health to general health to be given to each and each patient who comes to the rural health centre
- Medical doctors to be made well aware about the ill effects and to refer patients to the dentist
- Awareness programs to be conducted in the villages by the public health dentist.

3) For problems related to cost

- Allocate resources for treatment
- Inform the patients about the cost of the treatment they have been referred for

Conclusion

The study concludes that if patients are referred from rural health centre to the tertiary care centres, the overall oral health will be improved thereby improving the overall health.

Conflict of interest

The authors have no conflicting of interest to declare that are relevant to the content of this article.

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Approval of institutional ethical review board

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Conceptualization
Dr. Akila Ganesh, Dr. Dakshayani B; Methodology and data collection:Dr. Akila Ganesh; Formal Analysis and Interpretation: Dr. Akila Ganesh Writing- original draft preparation: Dr. Akila Ganesh; Writing – review and editing: Dr. Dakshayani B, Dr. Bhavyaa R, Dr. Rajkumar M , Dr. Shanthi, Dr.Ashritha MCV; Supervision: Dr. Akila Ganesh. All authors read and approved the final manuscript.

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