ORIGINAL RESEARCH

The Discrepancy between Perceived and Normative Oral Healthcare Needs among Older People in Kerala

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Abstract

Context: The normative need is based on clinical assessment. There is a difference of opinion between the dentist and his patient regarding needs. The perception of health is subjective, so the perception of need reflects the individual's experience with the health system and the treatment received. Oral health care needs to be assessed by a dentist. Perception of health is influenced by values and norms. According to studies, perceived and normative oral healthcare needs differ.

Aims: The aim of the present study is to assess the gap between clinical oral healthcare needs and perceived oral healthcare needs.

Settings and design: The study is a population-based cross-sectional survey conducted among the older population in South Kerala.

Materials and methods: A cross-sectional survey identified 399 older people aged 60 and older for the study. We conducted an interviewer-administered questionnaire (the questions regarding perceived oral healthcare needs), followed by an oral examination using WHO methods for assessing normative oral healthcare needs.

Statistical analysis used: To assess the relationship between clinically based oral healthcare needs and perceived oral healthcare needs, the sensitivity and specificity were determined. McNemar's test was done to find the association between associated variables.

Results: Disparities between perceived oral healthcare needs and normative oral healthcare needs were found in dental caries, gingivitis, and periodontitis. There was a significant association between perceived oral healthcare needs and normative oral healthcare needs for dental caries ($p < 0.000$) and gingivitis ($p < 0.000$).

Conclusion: The present study shows that there are significant differences in oral caries and gingivitis as well as periodontal disease. This study recommends improving dental literacy among the older population.

Key messages: This cross-sectional study reports a discrepancy between perceived need and normative oral healthcare needs (clinically assessed) in major dental diseases like dental caries, periodontal diseases, and gingivitis among the older population.

Keywords: Clinical assessment, Cross-sectional study, Dental care, Dental health, Discrepancy, Elderly, Elderly care, Normative need, Oral health, Perceived need.

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Introduction

The disease-oriented approach is used to determine normative or clinically assessed needs. Normative assessment in dental practice is determined by the kind and severity of the disease condition. The dentist and his patient have opposing views on what is required. A dentist assesses an oral disease with knowledge about disease and health.[1,2] The concept of perceived health status as an element of overall quality of life has been established.[3] In Bradshaw's taxonomy of social needs, a variety of factors influence perceived need, including socioeconomic, biological, and psychological considerations.[4,5] Helen C Gift indicated that socioeconomic status has the greatest influence on the need for dental treatment.

The factors influence are limited access to transportation, dependency, long waiting times at the dentist's office, and the cost of dental care. The majority of people with lower socioeconomic backgrounds tend to take care of their oral health at home and do not prioritize dental care over other healthcare needs. According to Gilbert et al.,[6] predisposing factors such as education, self-reported health status, and guidance from dental services influence the perception of need. There are also biological changes associated with perceived need. Visible changes to oral health usually trigger a person's need for dental care, and people interpret these changes as symptoms, leading them to seek dental care. The appearance of changes to the mouth or face is an important factor in the perception of care because it affects socialization and is central to communication.[7,8]

Symptoms such as difficulty carrying out daily tasks, feeling unwell in some way or being frequently stimulated to seek dental care. People's perceptions, attitudes, beliefs, and feelings are psychological factors that affect perceived needs. Some people have minor symptoms that are so common throughout their lives that they are unlikely to be perceived as needs. People's perceptions

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of symptoms can be enhanced by emotions, and their needs may be stimulated. Anxiety and fear can be considered psychological barriers to perceived needs. Psychological barriers to dental care include a lack of socialization. Dental care is neglected during the early years of life. The need for dental services is high, but uptake is low. People in some cultures withdraw when they are in pain, while others are more expressive and open about their pain.[9,10]

Health practitioner's and patients' perspectives on needs are likely to differ greatly. Oral health care must be evaluated by professionals who have been informed about their general health and complaints as well as their morals and values. Extensive examinations and expert judgment are used to determine deviations from optimum conditions. A person is deemed to be receiving therapy if his or her oral tissues were injured in any manner by pathological or traumatic reasons, or if they deviated from criteria defined by professionals.[11]

Therefore, discrepancies in opinion for treating oral diseases are found between the dentist and the patient. This discrepancy has not been assessed in any study of the elderly population in South Kerala. Thus, the aim of the present study is to assess the gap between clinical oral health care needs and perceived oral health care needs.

Materials and Methods

A cross-sectional survey was conducted among older people aged sixty years and above residing in South Kerala. The total sample size is 399, based on the prevalence of unmet tooth extraction needs among older people in South India reported in another study.

Prior to the start of the study ethical clearance was sought from Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala (IEC/I142). The consent was obtained from older people who were willing to participate in the study and procedures were explained. A questionnaire was used to assess sociodemographic data, and perceived oral health care needs. oral examination was done by the WHO oral health assessment form. CPI probe and mouth mirror were used for oral assessment.

The data were entered in Microsoft Excel and analyzed using the statistical package, SPSS/Version 17. An assessment of the relationship between perceived and clinically assessed oral healthcare needs was conducted. To find the association between variables McNemar's test was done. The results were expressed as the sensitivity and specificity of a response to questions as a predictor of clinically assessed needs.

Results

There were 399 participants enrolled in the study. Almost 76.2% of the participants belonged to the age-group 60–69 and 92.3% were reported to be married. Almost 40.3% had completed matriculation (Table 1).

Table 2 explains that 66.7% had exact dental caries and 33.3% had incorrectly perceived the need for treatment for tooth decay which was not clinically present. A total of 55.3% were truly free of tooth decay but 44.7% who had dental caries did not perceive the need for treatment. A significant association ($p < 0.000$) has been found between variables. There was a marked disparity between the perceived and clinically diagnosed dental caries.

Table 3 showed that only gingivitis was found in 48% of participants while the need for treatment for gingivitis was wrongly perceived by 52% which was not clinically present. While, 54.5% who had bleeding gums were truly free of clinically diagnosed gingivitis, but 45.5% who had bleeding gums did not perceive the need for treatment. A significant association ($p < 0.000$) has been found between variables (Table 3).

Table 4 showed that 64.6% had clinically diagnosed periodontitis while 35.4% had incorrectly perceived the need for treatment for periodontitis which was not clinically present. A total of 83.8% were truly free of clinically diagnosed periodontitis but 44 (16.2%) who had periodontitis did not perceive the need for treatment. No association was found between the variables (Table 4).

Table 1: Sociodemographic details of the study population

S. No.	*Characteristics*	*Categories*	*Frequency n (%)*
1	Age (65.3 ± 5.5)	60–69 years	302 (76.2)
		70–79 years	88 (21.5)
		80–89 years	9 (2.2)
2	Gender	Female	200 (50)
		Male	199 (50)
3	Marital status	Married	372 (92.3)
		Others	27 (7.7)
4	Education status	Postgraduation	8 (2.0)
		Graduation	60 (14.8)
		Completed secondary education	64 (16.0)
		Competed matriculation	159 (40.3)
		Primary education	107 (26.8)
		No formal education	1 (0.3)
5	Occupation	Professional	44 (11.0)
		Skilled	41 (10.0)
		Semi-skilled	32 (8.3)
		Unskilled	128 (32.3)
		Presently unemployed	154 (38.5)
6	Income	AAY	39 (9.8)
		BPL	208 (52.1)
		APL	152 (38.0)

Table 2: Perceived need for treatment of tooth decay vs clinically assessed dental caries

Perceived need for treatment of tooth decay	*Clinically assessed dental caries*		*p-value*	*Total*
	Present	*Absent*		
Yes	60 (66.7)	30 (33.3)		90
No	138 (44.7)	171 (55.3)	0.000*	309
Total	198	201		399

*p-value significant at <0.05

Discussion

Older people are more likely to suffer from dental diseases such as dental caries and periodontal disease. Screenings, self-administered questionnaires, and clinical methods are used for assessing oral diseases. Using treatment information, it is possible to assess the outcome of care by measuring the reduction of need, prioritizing services accordingly, and planning services according to the impact of need.[12,13] Oral health care needs for older people are evaluated based on symptoms and functional impacts.[6] According to previous

Table 3: Perceived need for treatment of gum diseases vs clinically assessed gingivitis

Perceived need for treatment of gum diseases	*Clinically assessed gingivitis*		*p-value*	*Total*
	Present	*Absent*		
Yes	12 (48)	13 (52)		25
No	170 (45.5)	204 (54.5)	0.000*	374
Total	182	217		399

**p*-value significant at <0.05

Table 4: Perceived need for treatment of loose teeth vs clinically assessed periodontitis

Perceived need for treatment of loose teeth	*Clinically assessed periodontitis*		*p-value*	*Total*
	Present	*Absent*		
Yes	82 (64.6)	45 (35.4)		127
No	44 (16.2)	228 (83.8)	1.000	272
Total	126	273		399

studies, there is a gap between perceived oral healthcare needs for tooth decay, gum diseases, loose teeth, and sensitivity and clinically diagnosed oral diseases.[6,14]

In this study, 30 (33.3%) of the patients incorrectly perceived a need for dental treatment for dental caries that was clinically absent, and 138 (44.7%) were unaware of the need for treatment for dental caries. Despite clinically diagnosed tooth decay, there was a marked disparity that was observed. As a result many people treat oral disease when in acute pain and when teeth are filled or extracted and the cause of discomfort is resolved, they will no longer report any treatment needs. People without decay perceived need more highly than those with decay. Another reason for this gap may be that they did not feel the need to treat the decay because it was asymptomatic. Even when they are aware of the existence of treatment, patients may not know about a disease until it is diagnosed or treated.[13]

In the study subjects, the number of decayed teeth was underestimated. Given several factors, the elderly may have a higher error rate in identifying problems with their teeth. There was a higher incidence of decay and loss of teeth among those in the earlier age-group, which would make it harder to distinguish them from other teeth. If people had been able to detect many missing teeth, the error margin would have been smaller. As part of natural aging, older people may have lost more teeth or could have extracted due to dental caries or periodontitis. Most of the older people do not know all the dental problems which were affecting them. In clinical settings, the DMFT index of decayed missing teeth has been strongly used to assess dental caries prevalence and oral health needs in older patients, although it is still not widely used.

Subjective assessment plays a large role in reporting dental caries, as the proximal effect of dental caries is pain. Once the pain is present, most older people will only think of a need to be treated. In terms of quality of life in the elderly, untreated tooth decay and its consequences have a negative impact.[15] This study also found that, because of their lack of dental education, people who are not affected by the disease have been reported to be having problems with dental literacy.

The extent and inflexibility of periodontal conditions increase with age, according to research conducted worldwide. Maintaining proper oral hygiene is crucial to preventing and treating periodontal conditions.[16] It was more difficult to self-assess periodontal conditions such as gingival inflammation and severity of periodontitis. Kallio et al. suggested self-reports of gingival status are not valid enough to screen for gingivitis.[17] Heloe set up that gingival complaint was underreported by self-assessment.[18] There was no correlation between the perceived need for dental treatment and clinical epidemiological oral health indicators in this study. There was no correlation between bleeding from the gingiva and the perceived need for periodontal health, although bleeding gums and loose teeth affect a person's quality of life physically, socially, and psychologically.

It is possible that the marked disparity between clinically assessed gingivitis and the perceived need for gum diseases can be explained by the method used to assess them. Using indices like the sulcus bleeding index that correlates severe levels of inflammation would have resulted in greater agreement with the subjective assessment.[6]

A measure such as the sulcus bleeding index, which has been correlated with a high degree of inflammation, would be more appropriate for agreement with personal assessment. Most participants did not know about the presence of gum bleeding. It may be that the asymptomatic phase of the disease at first stage is a possible reason for this.[16,19] The results of this study are inconsistent with the Gilbert et al.[6] study, which was conducted.

Using indices like the sulcus bleeding index, which correlates with severe inflammation, would have improved agreement with subjective assessment. The majority of participants were unaware that their gums were bleeding. It is possible that the disease, at least in its early stages, is relatively asymptomatic.[16,19] The results of this study show a disagreement with the study done by Gilbert et al.[6]

It is similar to the research done by Buhlin et al. in which people were asked if their gums usually bleed when brushing or otherwise and clinically assessed by bleeding on probing.[14] In gingivitis and periodontal diseases, there is a marked difference between self-assessment and clinical assessment, suggesting that dental literacy and motivation are imperative for maintaining oral health. In spite of the fact that the assessment works on different dimensions of health, it is expected that there will be a minimum validity gap between actual and presumed need assessments for dental care.

Conclusion

This study explored a marked discrepancy between subjective oral healthcare needs and normative oral healthcare needs and the study population has barriers in the utilization of dental services. Older people and dentists define oral health differently, which is probably why many people do not seek dental care. Dental literacy among older people should be improved to resolve such disparities which helps to improve utilization of dental services.

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