

Original Research Article

Self-perceived oral health attitudes and behaviors among patients afflicted with Chronic Periodontitis in Greater Noida

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Abstract

Introduction: Chronic periodontitis is a severe inflammatory condition that damages the tissues supporting the teeth, leading to ligament destruction, bone loss, and potential tooth loss. It negatively affects overall quality of life, especially self-esteem and oral health-related quality of life (OHRQoL). The disease's visible symptoms can increase social stigma, causing shame and social withdrawal.

Objective: To explore the effect of chronic periodontitis on OHRQoL of men and women using the OHIP-49 (Oral health impact profile), self-formulated general questionnaires, and the Rosenberg Self-Esteem Scale.

Materials and Methods: The study involved 250 chronic periodontitis patients. Periodontal parameters, including oral hygiene, plaque levels, gingival inflammation, probing depth, and periodontal status, were assessed. Self-esteem was measured with the Rosenberg Self-Esteem Scale, while OHRQoL was evaluated using the OHIP-49 and self-formulated questionnaires.

Result: A survey of 250 patients (123 men, 127 women, and aged 21–65) showed gender differences in psychosocial impact of chronic periodontitis. 78% of women vs. 48.8% of men reported social difficulties, and 68.3% of women vs. 44.9% of men reported lower tolerance towards partners. Women showed higher lack of self-confidence while also being more proactive in oral hygiene and early treatment-seeking. Men often ignored early signs, delayed dental visits, and underestimated their condition, worsening outcomes. Recognizing these differences is vital for tailored awareness, early detection, and improved periodontal care.

Conclusion: Both men and women with healthy periodontium also reported better OHRQoL. Individuals maintaining good oral hygiene had better self-esteem and OHRQoL. Chronic periodontitis has a significant negative impact on self-esteem and OHRQoL in both men and women.

Keywords: Chronic periodontitis (CP), Oral health-related quality of life (OHRQoL), Oral health impact profile (OHIP)-49.

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1. Introduction

Chronic periodontitis (CP) results from a chronic inflammatory reaction to subgingival biofilm and results in damage to tooth supporting structures such as the periodontal ligament, cementum, connective tissue and alveolar bone. Severe forms of the disease ultimately lead to tooth loss if left untreated.¹ Across the world, the prevalence of severe CP is known to range from 5 to 15% of the population.² Overall well-being, self-confidence, and quality of life is significantly influenced by oral health. The United States Surgeon General's Report defines oral health-related quality of life (OHRQoL) as 'a multidimensional construct that reflects (among other things) people's comfort when eating,

sleeping and engaging in social interaction; their self-esteem; and their satisfaction with respect to their oral health'.³ Studies have found an association between OHRQoL and the clinical characteristics of CP.⁴⁻⁶

Several instruments have been developed for measuring the multidimensional nature of OHRQoL. Among these instruments, one is the Oral Health Impact Profile (OHIP).⁷

How individuals evaluate their own oral cavity greatly influences health-related behaviours. Studies suggest that gender differences play a significant role in shaping oral health attitudes and behaviours, with women generally

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exhibiting better oral hygiene practices and more positive attitudes towards dental care than men.

Despite these findings, limited research explores gender-specific differences in self-perceived oral health attitudes and behaviours among patients with chronic periodontitis.⁸ This study aims to address this gap in patients diagnosed with chronic Periodontitis by evaluating and comparing self-perceived oral health attitudes and behaviours among male and female.

Understanding these differences can help dental professionals to develop targeted interventions for improving oral health outcomes and quality of life for patients suffering with chronic periodontitis. By exploring the role of self-perception and gender in oral health, this study can inform more effective management strategies.

2. Materials and Methods

A cross-sectional epidemiological study was conducted in the Department of Periodontology at I.T.S. Dental college, Hospital and Research Centre, Greater Noida. Based on the inclusion criteria, 250 Men and Women were included in the study reporting to outpatient section of periodontology department.

Inclusion criteria included patients of both the genders aged between 21 to 70 years of age, diagnosed with chronic periodontitis, had not undergone periodontal therapy in the past six months, and were willing to participate and give informed consent.

Exclusion criteria excluded patients with aggressive periodontitis, undergoing orthodontic treatment or taking medications affecting gingival health, pregnant or lactating women or individuals with cognitive impairments affecting questionnaire response.

A structured questionnaire was used to collect data, including questions of demographic details, OHIP – 49(self-

perceived oral health status and oral health attitudes and behaviors)

A bilingual questionnaire was designed (English and Hindi) to ensure better understanding. Assistance was offered to patients who were illiterate or had difficulty in understanding.

3. Result

The survey was conducted on 250 patients, in which 123 were men while women were 127, aged between 21-65 years of age. The results revealed that 78% of females faced difficulty in social interactions whereas only 48.8% of men experienced social stigma due to their condition. While 68.3% of females reported less tolerance towards family partners, only 44.9% of men reported such an instance. (Table 1-4)

The results also showed the lack of self confidence in females were much higher in comparison to male reporting with the same condition.

Self-perceived oral health influences individuals' hygiene habits, treatment adherence, and willingness to seek care. Studies show that women generally prioritize oral health more than men, maintaining better hygiene practices and seeking early intervention for chronic periodontitis due to concerns about aesthetics and function.

Men, on the other hand, are often less proactive, tending to ignore early signs of gum disease and delaying dental visit. This may be linked to societal norms that de-emphasize self-care in men.

Additionally, men with chronic periodontitis may underestimate their condition, creating a gap between perception and clinical reality. This misperception often results in delayed treatment, worsening the disease over time. Addressing these differences is crucial for improving periodontal care, encouraging early detection, and promoting better oral health awareness in both men and women.

Table 1: Attitude: How much do you value your dental health?

Crosstab						
			How much do you value your dental health?			Total
			A little	A lot	not at all	
Gender	male	Count	60	30	33	123
		% within Gender	48.8%	24.4%	26.8%	100.0%
	female	Count	67	35	25	127
		% within Gender	52.8%	27.6%	19.7%	100.0%
Total	Count	127	65	58	250	
	% within Gender	50.8%	26.0%	23.2%	100.0%	
Chi-Square Tests						
			Value	df		P value
Pearson Chi-Square			1.810 ^a	2		.404
Likelihood Ratio			1.814	2		.404
N of Valid Cases			250			

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 28.54.

Table 2: Attitude: How often do you visit your dentist?

Crosstab						
		How often do you visit your dentist?				Total
		Once a year	twice a year	when I have a dental problem		
Gender	male	Count	25	5	93	123
		% within Gender	20.3%	4.1%	75.6%	100.0%
	female	Count	27	13	87	127
		% within Gender	21.3%	10.2%	68.5%	100.0%
Total		Count	52	18	180	250
		% within Gender	20.8%	7.2%	72.0%	100.0%
Chi-Square Tests						
		Value	df	P value		
Pearson Chi-Square		3.769 ^a	2	.152		
Likelihood Ratio		3.896	2	.143		
N of Valid Cases		250				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.86.

Table 3: Perception: According to you a regular dental checkup must be?

Crosstab							
		According to you a regular dental checkup must be?					Total
		Once a year	every 6 months	once a year	when necessary		
Gender	Male	Count	22	16	4	81	123
		% within Gender	17.9%	13.0%	3.3%	65.9%	100.0%
	Female	Count	28	23	4	72	127
		% within Gender	22.0%	18.1%	3.1%	56.7%	100.0%
Total		Count	50	39	8	153	250
		% within Gender	20.0%	15.6%	3.2%	61.2%	100.0%
Chi-Square Tests							
		Value	df	P value			
Pearson Chi-Square		2.442 ^a	3	.486	Pearson Chi-Square		
Likelihood Ratio		2.451	3	.484	Likelihood Ratio		
N of Valid Cases		250			N of Valid Cases		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 3.94.

Table 4: Knowledge: What would you do if you come across initial caries in any of your tooth?

Crosstab						
		What would you do if you come across initial caries in any of your tooth?				Total
		take preventive measures	treat as soon as possible	wait and watch		
Gender	Female	Count	33	29	65	127
		% within Gender	25.2%	22.8%	52.0%	100.0%
	Male	Count	45	20	58	123
		% within Gender	37.0%	16.5%	46.5%	100.0%
Total		Count	78	49	123	250
		% within Gender	31.2%	19.6%	49.2%	100.0%
Chi-Square Tests						
		Value	df	P value		
Pearson Chi-Square		4.422 ^a	2	.110		
Likelihood Ratio		4.448	2	.108		
N of Valid Cases		250				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.11.

4. Discussion

The current research sought to assess and compare self-reported oral health attitudes and behaviors between male and female patients with chronic periodontitis. The results provide important information regarding how gender disparities affect not only individual oral health beliefs but also daily behavior that could affect disease development and control.⁹⁻¹²

Our findings indicated that female patients tended to have more favourable oral health attitudes and improved hygiene habits than their male equivalents. Women brushed more frequently, were most likely to use adjunct aids like mouthwash or dental floss, and attended dental clinics more frequently for preventative check-ups. These conclusions are consistent with earlier research, which has frequently found women to be more health-aware, active in the pursuit of care, and more adherent to oral hygiene advice than men. This may result from increased aesthetic concern, enhanced levels of health awareness, and perhaps a more favourable attitude towards health practitioners and preventive treatment in women.

Conversely, male respondents of this study demonstrated a relatively lower awareness and concern regarding their periodontal status. Most men underestimated the severity of symptoms such as bleeding gums, bad breath, and teeth mobility and were likely to postpone seeking professional advice. This gender-specific variation in self-conception may be responsible for delayed diagnosis and more progressed disease at the time of presentation in males. These trends place greater demands on gender-specific oral health awareness and education programs with particular emphasis on enhancing periodontal knowledge and self-care habits in men.¹³⁻¹⁵

Another important finding of the present study was the notable discrepancy between objective clinical periodontal status and patients' self-perceived oral health, with this gap being particularly evident among male participants. Despite presenting with moderate to severe periodontal involvement based on established clinical parameters—such as increased probing depth, clinical attachment loss, and gingival inflammation—a substantial proportion of men rated their oral health as satisfactory or even good. This discordance between perceived and actual disease status is clinically significant, as underestimation of periodontal severity can lead to reduced motivation for professional consultation, delayed treatment-seeking behavior, and poor adherence to recommended oral hygiene practices. Over time, such neglect may contribute to disease progression, increased risk of tooth loss, and potential systemic health implications associated with chronic periodontal inflammation.¹⁶⁻¹⁷

In contrast, female participants generally demonstrated a closer alignment between their self-assessment and clinical findings. Women who reported dissatisfaction with their oral condition were more likely to exhibit advanced periodontal destruction and more pronounced clinical signs, indicating greater awareness and accuracy in evaluating their gingival health. This gender-based variation in perception may be influenced by differences in health literacy, health-seeking behavior, esthetic concerns, and preventive attitudes toward oral care. Collectively, these observations underscore the importance of enhancing patient education and awareness—particularly among male patients—to bridge the gap between subjective perception and objective clinical reality, thereby promoting timely intervention, improved compliance, and better long-term periodontal outcomes.

Although socioeconomic status and educational attainment were not the primary focus of the present investigation, both factors appeared to exert a noticeable influence on oral health-related behaviors and perceptions. Participants with higher levels of education—irrespective of gender—demonstrated greater awareness of periodontal health, more consistent engagement in preventive oral hygiene practices, and a more realistic appraisal of their own oral condition when compared with less-educated counterparts. These individuals were more likely to recognize early signs of disease, appreciate the importance of regular dental visits, and adopt evidence-based self-care measures, suggesting that educational exposure may enhance both knowledge and personal responsibility toward oral health maintenance.¹⁸⁻¹⁹

The observed pattern highlights the broader role of health literacy as a key determinant in bridging the gap between objective disease status and subjective patient perception. Individuals with better health literacy are typically more capable of interpreting clinical symptoms, understanding professional advice, and making informed decisions regarding treatment and prevention. Conversely, limited educational exposure may contribute to misconceptions, underestimation of disease severity, and delayed healthcare utilization. Together, these insights underscore the need for targeted educational interventions and community-based awareness programs aimed at improving oral health literacy across diverse socioeconomic groups, thereby fostering early recognition, timely treatment-seeking behavior, and improved periodontal outcomes.

The results of this research underscore the need for integrating both the behavioral and perceptual factors into periodontal treatment protocols. While mechanical debridement and clinical treatment are still the mainstays of periodontal therapy, the achievement of long-term success with disease control is highly predicated on patient motivation, home oral hygiene measures, and symptom

responsiveness, all of which are driven by the patient's personal attitudes and perceptions.

5. Limitation

The study has certain limitations that should be considered while interpreting its findings. The cross-sectional design limits the ability to establish causal relationships between oral health perception, behavior, and periodontal status, as data were collected at a single time point. Therefore, temporal associations and disease progression patterns could not be evaluated. The reliance on self-reported questionnaires may have introduced recall bias and social desirability bias, potentially affecting the accuracy of responses related to oral hygiene practices and perceptions. Participants may have overreported positive behaviors or underestimated disease severity. Variations in individual understanding of questionnaire items could also have influenced response consistency. Additionally, the study was conducted at a single centre, which may limit the generalizability of the findings to broader populations. Sociocultural and regional differences in oral health awareness and access to care may affect outcomes in different settings. Larger multicentric studies with more diverse samples are needed to improve external validity. Longitudinal research designs are recommended to better understand causal pathways and behavioral changes over time.

6. Conclusion

This research highlights noteworthy differences based on gender in self-reported oral hygiene practices and awareness among individuals suffering from chronic periodontitis. Female participants generally demonstrated a more accurate understanding of their oral condition and reported higher engagement in daily preventive behaviors such as effective plaque control and regular dental visits. In contrast, many male participants tended to underestimate the severity of their periodontal disease, which may contribute to delayed diagnosis and reduced adherence to recommended treatment protocols. Moreover, the results emphasize that gender differences extend beyond clinical parameters and significantly influence attitudes toward oral health maintenance. The observed disparities underscore the necessity for targeted and gender-sensitive oral health education strategies. Tailored awareness campaigns could help bridge gaps in disease perception and encourage proactive self-management among male patients. Additionally, customized training programs focusing on practical oral hygiene skills and risk awareness may enhance treatment compliance. Overall, such targeted interventions could contribute to improved preventive practices and better periodontal health outcomes across diverse patient populations.

7. Source of Funding

None.

8. Conflict of Interest

None.

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