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Patient preference between implant therapy and conventional prosthesis

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Abstract:
The replacement of missing teeth is a dilemma, as patient preferences are shaped by both clinical and personal considerations. This cross-sectional comparative survey involved 350 patients to evaluate preferences between implant therapy and traditional prostheses, as well as to discover factors influencing treatment selection. The research employed a structured questionnaire to document demographic information, awareness, treatment preferences, and factors influencing decision-making. Implant therapy was preferred by 56.6% of participants, while conventional prosthesis was chosen mainly because of affordability and avoidance of surgical procedures, with awareness and education showing significant association with implant preference. The study enhanced knowledge by elucidating patient-centered factors that affect prosthetic treatment decisions and underscoring the need of counseling and awareness

Keywords: Dental implants, conventional prosthesis, patient preference, prosthetic rehabilitation, treatment choice

Background:
The loss of teeth is a prevalent oral health issue that impacts mastication, communication, face aesthetics, and psychological well-being. Absent teeth can diminish self-esteem and adversely affect social interactions and everyday activities. The rehabilitation of edentulous or partially edentulous patients is a crucial aspect of restorative dentistry, aiming to restore oral function while enhancing quality of life and patient satisfaction **[1]**. Traditional prosthetic alternatives, including removable partial dentures, complete dentures, and fixed dental prostheses, have been utilized for the replacement of absent teeth for an extended period. These therapeutic techniques are broadly endorsed due to their cost-effectiveness, streamlined clinical processes, and reduced treatment duration. However, conventional prostheses may be associated with problems such as instability, discomfort, compromised chewing efficiency, and gradual alveolar bone loss, which can affect long-term patient satisfaction **[2, 3]**. Dental implant therapy has become a reliable and increasingly favoured method for tooth replacement. Implant-supported prostheses provide improved retention, better chewing ability, preservation of alveolar bone, and enhanced esthetics. Several recent studies have shown that implant rehabilitation contributes positively to oral health-related quality of life and patient-reported satisfaction, particularly regarding comfort and functional efficiency **[4, 5]**. Notwithstanding these benefits, implant therapy is not universally endorsed. Patient preference is influenced by multiple factors including cost, fear of surgical procedures, treatment duration, awareness, educational status, and personal expectations. Surveys conducted in recent years have reported that many patients perceive implants as expensive and surgically demanding, although they also recognize them as an advanced and effective treatment option **[6, 7]**. Contemporary dentistry practice prioritises patient-centred care, necessitating that treatment planning accounts for both clinical outcomes and patient expectations. Comprehending the reasons patients favour implant therapy over conventional prosthesis is essential for good counselling and collaborative decision-making **[8]**. Therefore, this study was conducted to assess patient preference between implant therapy and conventional prosthetics, as well as to discover factors influencing these treatment decisions.

Methodology:
This study was developed qualitatively to evaluate patient preferences between implant therapy and conventional prostheses, as well as to determine the factors influencing treatment selection. Patients attending the outpatient department for dental prosthesis were deemed eligible for participation. The study cohort comprised partially and totally edentulous adult patients pursuing prosthesis rehabilitation. The study included 350 individuals selected using convenience sampling, depending on eligibility criteria and their desire to participate. Prior permission was secured from the Institutional Ethics Committee prior to the initiation of the study. The purpose and procedure of the survey were explained to all participants, and written informed consent was obtained. Confidentiality and privacy of patient information were maintained throughout the study

Criteria for inclusion:
[1] Individuals aged 18 years and older
[2] Patients with one or more edentulous spaces necessitating prosthetic restoration

[3] Patients who are willing to participate and furnish informed consent
[4] Patients proficient in comprehending and responding to the questionnaire

Criteria for exclusion:
[1] Individuals with cognitive or communicative impairments
[2] Patients who received implant therapy or prosthetic rehabilitation in the preceding six months
[3] Medically compromised individuals who are unable to engage in the survey

Data collection:
Eligible patients visiting the outpatient department were recruited using the established inclusion and exclusion criteria. A pre-structured, verified questionnaire was employed for data collection. The questionnaire was developed in a language that facilitates comprehension and yields reliable responses. The survey comprised two segments. The initial portion documented demographic information like age, gender, educational attainment, occupation, and socioeconomic status. The second portion evaluated patient preferences concerning implant therapy versus traditional prosthetics. Information was collected on awareness of dental implants, prior prosthetic experience, sources of information on treatment options, preferred treatment modality, and factors influencing treatment choice. Factors including cost, aesthetics, comfort, chewing efficiency, treatment duration, surgical anxiety, maintenance demands, and long-term expectations were assessed. Participants were allotted sufficient time to complete the questionnaire. Support was offered whenever clarification was needed, ensuring responses aligned with the patient's views and preferences. Completed surveys were verified for completeness prior to their inclusion in data analysis.

Statistical evaluation:
The gathered data were analysed utilising Statistical Package for Social Sciences (SPSS) version 260. Descriptive statistics were employed to encapsulate demographic variables and response patterns. Categorical variables were expressed as frequencies and percentages. The relationship between patient choice and contributing factors was evaluated using the Chi-square test. A p-value less than 0.05 were deemed statistically significant.

Results:
The study comprised 350 patients requiring dental prostheses for lost teeth. The survey evaluated their awareness, preferences, and motivations for choosing between implant therapy and traditional prosthetics. The majority of individuals were aged between 31 and 60 years. More than half of the patients had multiple missing teeth **(Table 1)**. Awareness of dental implants was reported by 65.1% of participants, and the dentist was the most common source of information. Among 350 individuals, 198 patients (56.6%) favoured implant therapy, whereas 152 patients (43.4%) opted for conventional prosthesis **(Table 2)**. The primary reasons for selecting implants were comfort, chewing efficiency, aesthetics, and long-term benefits. The primary reasons for selecting a conventional prosthesis were reduced cost, apprehension about surgery, and a shorter treatment period. A statistically significant correlation was identified between treatment preference and awareness of implants, educational attainment, and prior prosthetic experience. Patients with knowledge of implants, higher educational attainment, or prior experience with prosthetics exhibited a greater inclination for implant therapy. The study indicated that a greater percentage of patients favored implant therapy over conventional prosthesis. Nonetheless, traditional prostheses continued to be a prevalent option due to their cost-effectiveness and the desire to circumvent surgical procedures. Awareness, education, and prior experience with prosthesis significantly influenced patient preference.

Table 1: Demographic profile and awareness regarding treatment options among study participants

Variable	Category	Frequency (n=350)	Percentage (%)
Age group	18–30 years	58	16.6
	31–45 years	112	32.0
	46–60 years	126	36.0
	>60 years	54	15.4
Gender	Male	192	54.9
	Female	158	45.1
Educational status	Up to school level	104	29.7
	Graduate	156	44.6
	Postgraduate and above	90	25.7
Type of edentulism	Single missing tooth	76	21.7
	Multiple missing teeth	198	56.6
	Completely edentulous	76	21.7
Previous prosthetic experience	Yes	184	52.6
	No	166	47.4
Awareness about dental implants	Aware	228	65.1
	Not aware	122	34.9
Main source of information	Dentist	142	40.6
	Family/friends	72	20.6
	Internet/social media	58	16.6
	Not aware before consultation	78	22.3

Table 2: Patient preference and factors influencing choice of prosthetic treatment

Variable	Category	Frequency (n=350)	Percentage (%)	p-value
Preferred treatment option	Implant therapy	198	56.6	
	Conventional prosthesis	152	43.4	
Reason for preferring implant therapy	Bet.ter comfort	52	26.3	
	Bet.ter chewing efficiency	48	24.2	
	Bet.ter esthetics	42	21.2	
	Long-term treatment option	38	19.2	
	Feels more natural	18	9.1	
Reason for preferring conventional prosthesis	Lower cost	62	40.8	
	Fear of surgery	34	22.4	
	Shorter treatment time	26	17.1	
	Familiar treatment option	18	11.8	
	Medival concern/age factor	12	7.9	
Preference according to awareness	Implant preferred among aware patients	158/228	69.3	<0.001*
	Implant preferred among unaware patients	40/122	32.8	
Preference according to education	Implant preferred among school-level patients	42/104	40.4	0.002*
	Implant preferred among graduates	94/156	60.3	
	Implant preferred among postgraduates	62/90	68.9	
Preference according to previous prosthetic experience	Implant preferred among patients with previous prosthesis	118/184	64.1	0.006*
	Implant preferred among patients without previous prosthesis	80/166	48.2	

Discussion:

This study evaluated patient preference for implant therapy over traditional prosthesis among 350 participants. The results indicated that 56.6% of patients favored implant therapy, whilst 43.4% preferred traditional prostheses. This indicates that implants are increasingly being embraced by dental patients, mostly because to their functional and aesthetic advantages. The current study revealed that 65.1% of participants were aware of dental implants. Patients informed about implant treatment exhibited a markedly higher desire for implants than those who were uninformed. This finding agrees with recent surveys that reported awareness and knowledge as important factors influencing treatment acceptance **[7, 9]**. A comprehensive comprehension of implant processes and outcomes frequently enhances patient confidence in selecting this treatment option. The dentist served as the primary source of information in this study. Comparable results have been documented in several studies indicating that patients see dentists as the most trustworthy source of information for tooth replacement alternatives **[10, 11]**. This underscores the significant role of dental practitioners in patient education and treatment guidance. Among patients favoring implant therapy, the predominant reasons were enhanced comfort, increased chewing efficiency, aesthetics, and long-term advantages. These results align with recent studies indicating that implant-supported prostheses yield higher satisfaction and enhanced oral function relative to traditional prosthetic alternatives **[12, 13]**. Patients frequently regard implants as more natural and stable, which favorably affects their treatment preferences. Concurrently, traditional prostheses continued to be a prevalent option. The primary factors influencing the selection of conventional treatment were reduced expenses, apprehension regarding surgery, and abbreviated treatment duration. Recent study has shown analogous hurdles, including treatment expense and surgical fear as significant impediments to implant acceptability **[14, 15]**. The current investigation revealed that advanced education and prior prosthetic experience greatly affected implant selection. Informed patients and those with prior prosthetic interventions exhibited a greater propensity to choose implants. Prior research has also indicated that educational attainment and treatment experience affect awareness, expectancies, and ultimate treatment selection **[10, 15]**. The study suggests that while implants are becoming more favored, economic and psychological variables still affect patient choices. Effective counselling and enhanced understanding may assist patients in making more informed decisions.

Conclusion:

More than half of the participants favoured implant therapy due to its superior comfort, chewing capability, aesthetics, and long-term advantages. Traditional prostheses continued to be a prevalent option, mostly due to their reduced expense and apprehension of surgical procedures. Awareness, education, and prior prosthesis experience substantially impacted patient preference.

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