



## Patient perspectives on implant-supported overdentures compared with conventional complete dentures: An observational questionnaire-based study

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### Abstract

**Aim:** To evaluate and compare patient perspectives on implant-supported overdentures and conventional complete dentures using a structured questionnaire in completely edentulous patients.

**Materials and methods:** This observational questionnaire-based study included 20 completely edentulous patients who were initially rehabilitated with conventional complete dentures and subsequently treated with implant-supported overdentures. Patient perspectives were assessed using a structured 15-item questionnaire evaluating satisfaction, functional performance, aesthetics, complications, and acceptance. Descriptive statistics and Chi-square test were used for statistical analysis, with significance set at  $p < 0.05$ .

**Results:** Implant-supported overdentures demonstrated significantly higher overall satisfaction, improved comfort, superior denture stability during mastication, and increased confidence during speech compared to conventional complete dentures ( $p < 0.05$ ). Prosthesis-related complications such as pain, gag reflex, and denture instability were reduced following implant overdenture rehabilitation. A majority of patients expressed a preference for implant-supported overdentures and willingness to recommend them.

**Conclusion:** Within the limitations of this observational study, implant-supported overdentures showed superior patient-reported outcomes compared to conventional complete dentures.

**Keywords:** Implant-supported overdenture, conventional complete denture, observational study, Overdenture, Patient perspective

### Introduction

Complete edentulism adversely affects mastication, speech, facial aesthetics, and psychosocial well-being. Conventional complete dentures (CCD) have traditionally been the treatment of choice; however, patient dissatisfaction—particularly with mandibular dentures—remains common due to poor retention, instability, and discomfort [1, 2]. Implant-supported overdentures (ISOD) offer improved retention and stability, resulting in enhanced functional efficiency and patient comfort. Several studies have demonstrated superior patient satisfaction and quality of life with implant-supported overdentures compared to conventional complete dentures [3-5]. The McGill consensus statement recognised mandibular two-implant overdentures as the minimum standard of care for edentulous patients [3]. Since prosthodontic success is largely determined by patient perception, questionnaire-based observational studies provide valuable insight into real-world treatment outcomes. The present study aimed to evaluate patient perspectives on implant-supported overdentures compared with conventional complete dentures using a structured questionnaire.

### Materials and Methods:

#### Study Design

This was an observational, cross-sectional, questionnaire-based study conducted in the Department of Prosthodontics, Adhiparasakthi Dental College and Hospital, Melmaruvathur.

### Study Population

A total of 20 completely edentulous patients were included. All patients had initially worn conventional complete dentures for a minimum of three months and were later rehabilitated with implant-supported overdentures.

### Inclusion Criteria

- Completely edentulous patients
- Patients previously treated with conventional complete dentures
- Patients rehabilitated with implant-supported overdentures
- Patients willing to participate and provide informed consent

### Exclusion Criteria

- Implant-supported fixed prostheses
- Maxillofacial defects
- Neuromuscular or psychological disorders affecting response reliability

### Questionnaire Assessment

Patient perspectives were assessed using a structured 15-item questionnaire developed based on previously validated studies assessing denture satisfaction, functional outcomes, and oral health-related quality of life [6-9]. The questionnaire was administered in English and the local language.

## Questionnaire Items

### Part I: Overall Satisfaction and Functional Performance

1. How would you rate your overall satisfaction with implant-supported overdentures compared to conventional complete dentures? (Much worse / Slightly worse / No difference / Better / Much better)
2. Compared to conventional complete dentures, are you more comfortable wearing implant-supported overdentures during daily activities? (Yes / No)
3. Do implant-supported overdentures provide better stability during eating when compared to conventional complete dentures? (Yes / No)
4. Do you feel more confident while speaking in public with implant-supported overdentures compared to conventional complete dentures? (Yes / No)
5. Compared to conventional complete dentures, is it easier to insert and remove implant-supported overdentures? (Yes / No)
6. Compared to conventional complete dentures, is maintenance and cleaning easier with implant-supported overdentures? (Yes / No)

### Part II: Aesthetic and Psychological Perception

1. Do implant-supported overdentures provide better facial appearance compared to conventional complete dentures? (Yes / No)
2. Compared to conventional complete dentures, do implant-supported overdentures reduce the gag reflex? (Yes / No)
3. Compared to conventional complete dentures, have implant-supported overdentures reduced alteration in taste sensation? (Yes / No)
4. Compared to conventional complete dentures, do implant-supported overdentures reduce the occurrence of halitosis? (Yes / No)

### Part III: Complications, Acceptance, and Compliance

1. Compared to conventional complete dentures, do implant-supported overdentures cause less pain or a burning sensation? (Yes / No)
2. Do implant-supported overdentures feel less bulky or heavy in the mouth when compared to conventional complete dentures? (Yes / No)
3. Have implant-supported overdentures reduced the need to discontinue denture use due to discomfort when compared to conventional complete dentures? (Yes / No)
4. Overall, do you feel implant-supported overdentures are superior to conventional complete dentures in terms of function and comfort? (Yes / No)
5. Would you recommend implant-supported overdentures over conventional complete dentures to friends or family members? (Yes / No)

## Statistical Analysis

Data were entered into Microsoft Excel and analysed statistically. Descriptive statistics were used to calculate frequencies and percentages. Comparative analysis was performed using the Chi-square test, with a  $p$ -value  $<0.05$  considered statistically significant.

## Results

Overall satisfaction with implant-supported overdentures was significantly higher, with 85% of patients reporting improved satisfaction compared to conventional complete

dentures ( $p < 0.01$ ). Improved comfort during daily activities was reported by 80% of patients, and 90% experienced better denture stability during mastication. Confidence during speech improved in 75% of participants. Aesthetic satisfaction, particularly facial appearance, was positively reported by most patients. Prosthesis-related complications such as pain, gag reflex, and denture instability were more frequently associated with conventional complete dentures and were significantly reduced after implant overdenture rehabilitation. A majority of patients expressed preference for implant-supported overdentures, and 80% were willing to recommend implant-supported overdentures to others.

## Discussion

The present observational study demonstrated that implant-supported overdentures provide superior patient-reported outcomes compared to conventional complete dentures. Improved retention and stability appear to be the primary contributors to enhanced comfort, masticatory efficiency, speech confidence, and overall satisfaction. Mandibular denture instability has been widely reported as a major cause of dissatisfaction with conventional complete dentures. Carlsson and Zarb highlighted that instability compromises chewing efficiency and quality of life [1, 2]. The improved masticatory stability observed in this study is consistent with findings by Chen and Xie and Fontijn-Tekamp *et al.*, who reported improved bite force and chewing efficiency with implant-supported overdentures [10-13]. Speech confidence and psychosocial well-being improved following implant overdenture therapy. Allen and McMillan reported that improved denture stability positively influences social interaction and psychological comfort [7]. Improved facial appearance observed in the present study may be attributed to predictable prosthesis positioning and better lip support, as reported by Mericske-Stern [8]. A reduction in complications such as pain, gag reflex, and discomfort was observed following implant overdenture rehabilitation. Fenlon *et al.* identified discomfort and soreness as major determinants of denture dissatisfaction [9]. Improved load distribution and reduced mucosal pressure with implant support may explain these findings. High acceptance and willingness to recommend implant-supported overdentures support the McGill consensus statement and subsequent studies advocating implant overdentures as the preferred treatment modality for edentulous patients [3, 4].

The present study was limited by a small sample size and a single-center design, which may restrict the generalizability of the findings. Owing to its observational, cross-sectional nature, the study allows assessment of patient perspectives but does not permit establishment of causal relationships. The reliance on self-reported responses introduces the possibility of subjectivity and recall bias. Furthermore, the duration of prosthesis use was not standardized across participants, and long-term outcomes were not evaluated.

## Conclusion

Within the limitations of this observational questionnaire-based study, implant-supported overdentures demonstrated superior patient satisfaction, improved functional performance, enhanced aesthetics, and reduced prosthesis-related complications compared to conventional complete dentures.

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