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Adherence to Recall Visits among Removable Partial Denture Wearers: Motivations, Limitations, and Implications

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ABSTRACT

Background: New denture wearers are reported to seek professional advice more frequently than individuals with longer denture experience. It is unclear, however, whether this translates into better adherence to recommended recall visits, which are critical for maintaining oral health.

Objective: To determine whether new denture wearers are more likely to maintain regular recall visits compared to those with longer-term use of removable partial dentures (RPDs).

Methods: This cohort study was conducted over two years and included consecutive patients seeking RPDs at four teaching hospitals in Nigeria: Lagos, Benin, Maiduguri, and Kano. Data on demographics and socioeconomic status were collected using an interviewer-administered questionnaire (Questionnaire 1). Information on recall visits, factors influencing maintenance attendance, and motivators for compliance were gathered using a second questionnaire (Questionnaire 2). Participants were categorized into three groups: new RPD wearers (0–2 years), old denture wearers (>2 to <4 years), and older denture wearers (≥4 years). Data were analyzed using SPSS version 20.

Results: Of the 381 participants (mean age: 46.25 ± 17.81 years; 50.7% male), only 132 (34.6%) attended one or more recall visits after denture insertion. No significant associations were found between sociodemographic variables and recall attendance. However, frequency of brushing and noticing changes in the oral mucosa were significantly associated with recall visits ($p = 0.026$ and $p = 0.01$, respectively).

Conclusion: This study found that both new and long-term removable partial denture wearers showed low adherence to recall visits, with no significant difference between the groups. The primary reasons for attending recall visits were to prevent further tooth loss and to follow the doctor's instructions, while the main barriers were a lack of instruction and a perceived lack of necessity. The most actionable finding is that 42% of non-attendees reported simply not being instructed to return for recall visits, representing a clear target for quality improvement. Additionally, noticing changes in the oral mucosa was linked to even lower adherence, highlighting poor dental health and denture maintenance-seeking behavior among participants. The null hypothesis remained unchallenged.

Keywords: Removable, partial, denture, recall visit, adherence, motivation

INTRODUCTION

The loss of teeth has been reported to have a negative impact on the aesthetics, function, and social and psychological well-being of the affected individual.[1] Some of these impacts result from positional changes that occur with the abutment teeth and the teeth opposing the edentulous space.[2]

This, as well as the presence of the denture, could subsequently also result in food impaction, plaque accumulation, predisposition to caries and periodontitis, culminating in further tooth loss and collapse of the dental arch.[3, 4] All these consequences affect quality of life (QoL), and there is an increase in concern for oral health-related quality of life (OHRQoL), especially in the elderly.[5] Hence, the need for tooth replacement.[6]

There are various tooth replacement options available, ranging from removable partial denture (RPD) and fixed partial denture (FPD) to dental implants, each with its own advantages and disadvantages.[7] The most common tooth replacement used is the RPD because it is cheaper and easier to fabricate,[8] although it has been reported to have low patient acceptance rates compared to other treatment options.[6] There is also the concern of a regular maintenance regimen, which enables detection of early signs of periodontitis or caries of the abutment teeth, thus avoiding further tooth loss. A qualitative study by Shaha et al.[9] reported that new RPD wearers seek advice more frequently than older wearers. This suggests that new denture wearers may be more motivated and will tend to have more regular recall visits than old wearers. This trend suggests that newer wearers may experience greater uncertainty or have more questions regarding the use, maintenance, and adjustment to their dental prosthetics compared to their more experienced counterparts. While the importance of recall (follow-up) visits for patients with removable partial dentures (RPDs) is well established—helping to maintain oral health, ensure prosthesis function, and prevent complications—there is limited understanding of why patients do or do not adhere to recommended recall visit schedules.

The study hypothesized that new removable partial denture wearers would demonstrate greater adherence to scheduled recall visits than long-term denture wearers.

METHODS

Study Design

This study was a cohort study of two years' duration (December 2023 to December 2025) among adult patients who were either new denture wearers or old denture wearers seeking tooth replacement with the option of removable partial denture (RPD) prostheses in the prosthodontic clinics of four tertiary teaching hospitals in Nigeria. The study was conducted in agreement with the STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) guidelines for observational studies.[12]

Study Location/Population

Consecutive consenting adults seeking removable partial dentures at the participating prosthodontic clinics were recruited. Inclusion criteria comprised consenting adults aged 18 years and older who were either new or existing denture wearers, with absence of uncontrolled systemic disorders. Participants were categorized into three groups based on the history of prior denture use and duration before enrollment: new RPD wearers (0–2 years), old denture wearers (>2 to <4 years), and older denture wearers (≥4 years). A "new wearer" means a patient with no prior denture experience receiving their first RPD, while an "old wearer" is a previous denture wearer receiving a replacement RPD. Considering the WHO age grouping[15] and the life expectancy of the population in Nigeria, age was grouped into three categories: <35 years (youth), 35–59 years (middle age), and ≥60 years (older population).

Sample Size

The sample size was determined using Open Epi (https://www.openepi.com/SampleSize/SSPropor.htm). Sample size was calculated using an expected proportion of recall attendance of 30%, a margin of error of ±5%, and a 95% confidence interval. Assuming that fewer than 10,000 patients are seen annually in the four clinics, the calculated sample size was 313, with a 10% attrition rate (approximately 32). A minimum sample size of 345 was calculated for the study.

Primary Outcome

Proportion of participants in each denture use group (new, old, older) who attended one or more recommended recall visits after RPD insertion during the two-year follow-up period of the study.

Secondary Outcomes

Association between duration of denture use and adherence to recall visits.

Sociodemographic and socioeconomic factors associated with recall attendance.

Motivators and barriers influencing compliance with recall appointments as reported in Questionnaire 2.

Frequency and timing of recall visits (e.g., number of visits per participant, time intervals between visits).

Data Collection

Data were collected by four trained and pre-calibrated investigators (kappa 0.90–0.96), one at each center (December 2023 to December 2025), using two-section standardized questionnaires. The first section was an interviewer-administered questionnaire (Questionnaire 1), which was used to gather information on participants' demographics and socioeconomic factors. The second part of the questionnaire was used to collect information on recall visits, factors influencing attendance of maintenance regime, and motivators for maintenance regimen (Questionnaire 2). Every participant was placed into one of three groups based on how long they had been using RPDs: new RPD wearers (0–2 years), old denture wearers (>2 years but less than 4 years), and older denture wearers (4 years and above).[9] Data collection continued at recall visits of 24 hours, 1 week, 3 months, 6 months, and 1 year after acrylic RPDs were fabricated and fitted for the participants. All RPDs were fabricated using standard laboratory processes and materials. Participants who did not come for recall visits were contacted via telephone calls and interviewed to gather data on reasons for not keeping recall visits. Of the 249 participants who did not attend recall visits, 184 (73.9%) were successfully contacted via telephone for interview.

Testing the Reliability and Validity of the Questionnaire[13]

The questionnaire was tested for reliability and validity.

Internal Consistency: Cronbach's alpha was calculated for each section to determine the items' internal consistency.

Test-Retest Reliability: The questionnaire was administered to a sample of 10 participants twice, with a two-week interval, and correlation coefficients were computed between the two sets of responses.

Content Validity: Two specialists reviewed the questionnaire to ensure each item was relevant and comprehensive.

Construct Validity: Factor analysis was conducted to verify that items grouped together as expected, reflecting underlying theoretical constructs.

Criterion Validity: The questionnaire scores were compared with the established American College of Prosthodontists (ACP) guideline for denture maintenance.[14]

Reliability Results: Cronbach's alpha values for each section ranged from 0.78 to 0.88, indicating good internal consistency. The test-retest correlations were 0.80–0.89, suggesting good reliability.

Validity Results: Content validity was confirmed by expert consensus, with all items rated as relevant. Factor analysis supported the expected factor structure, with items loading appropriately on their respective constructs. Criterion validity was established through significant correlations with established measures ($r = 0.62$, $p < 0.05$).

Data Analysis
Statistical analysis was performed after data cleaning using SPSS software for Windows (IBM Corp., Version 20, Armonk, NY, USA: IBM Corp.). Chi-square tests were used to assess associations between categorical variables. Logistic regression was performed for multivariable analysis. The level of significance was set at $p = 0.05$.

Ethical Considerations
Ethical approval (ADM/DCST/HREC/APP/3503) was obtained from the Health Research and Ethics Committee of the Lagos University Teaching Hospital before commencement of the study. The study was carried out in accordance with all relevant principles of the Declaration of Helsinki.[16] All participants provided written informed consent.

RESULTS

A total of 381 participants with a mean age of 46.25 ± 17.81 years were seen. The majority (45.4%) were in the 30–59 years age group. Half of the participants were male (50.7%), and 250 (65.6%) were classified as new denture wearers (Table 1).

Table 1: Sociodemographic and denture wear

Variables	Frequency (%)
Age	
<30 years	114 (29.9)
30–59 years	173 (45.4)
≥60 years	94 (24.7)
Sex	
Male	193 (50.7)
Female	188 (49.3)
Duration of denture use	
New denture wearer	250 (65.6)
Old denture wearer	51 (13.4)
Older denture wearer	80 (21.0)

Mean age = 46.25 ± 17.81 years
Range = 82

Table 2 summarizes the association between sociodemographic factors, duration of denture use, frequency of brushing, nocturnal wearing of denture (sleeping with denture), noticing changes in mucosa, and attendance of recall visits. Only 132 (34.6%) participants attended one or more recall visits after denture insertion. There was a significant association between frequency of brushing ($p = 0.026$), noticing changes in mucosa ($p = 0.01$), and attendance of recall visits. No significant association was found between duration of denture use and recall attendance ($\chi^2(2) = 0.42$, $p = 0.81$).

Table 2: Association between sociodemographic, denture wear and attending recall visit

Variables	Came for recall visit n (%)	Did not come for recall visit n (%)	Total n (%)	χ^2 (df)	p-value
Age Group				$\chi^2(2) = 4.09$	0.13
<30 years	43 (37.7)	71 (62.3)	114 (100)		
30–59 years	51 (29.5)	122 (70.5)	173 (100)		
≥60 years	38 (40.9)	55 (59.1)	93 (100)		
Sex				$\chi^2(1) = 0.46$	0.50
Male	70 (36.3)	123 (63.7)	193 (100)		
Female	62 (33.0)	126 (67.0)	188 (100)		
Duration of denture use				$\chi^2(2) = 0.42$	0.81
New denture wearer	84 (33.6)	166 (66.4)	250 (100)		
Old denture wearer	18 (35.3)	33 (64.7)	51 (100)		
Older denture wearer	30 (37.5)	50 (62.5)	80 (100)		
Frequency of Brushing				$\chi^2(2) = 7.28$	0.026*
Once daily	61 (29.0)	149 (71.0)	210 (100)		
Twice daily	70 (42.4)	95 (57.6)	165 (100)		
Thrice daily	1 (33.3)	2 (66.7)	3 (100)		
Sleeping with Denture				$\chi^2(1) = 1.09$	0.30
Yes	26 (29.9)	61 (70.1)	87 (100)		
No	100 (36.0)	178 (64.0)	278 (100)		
Noticed Change in Oral Mucosa				$\chi^2(1) = 6.75$	0.01*
Yes	7 (17.1)	34 (82.9)	41 (100)		
No	122 (37.7)	202 (62.3)	324 (100)		

*Statistically significant at $p < 0.05$

Multivariate Analysis (Logistic Regression) of Factors Predicting Recall Visit

Factors found to be significantly associated with recall visits in the bivariate analysis were included in a multivariate logistic regression model. The results of the multiple logistic regression analysis are shown in Table 3. The dependent variable in Table 3 is recall visit, which is a binary (yes/no) outcome.

Table 3: Results of Logistic Regression Analysis for factors associated with recall visit

Variables	Odds Ratio	SE	Wald Statistic	p-value	95% CI
Brushing frequency **(ref = Once daily)**					
Twice daily	0.67	1.265	0.097	0.76	(0.06, 8.05)
Thrice daily	—	—	—	—	—
Noticed Change in Mucosa (ref = Yes)					
No	0.35	0.43	5.81	0.02*	(0.15, 0.82)

*Statistically significant at $p < 0.05$

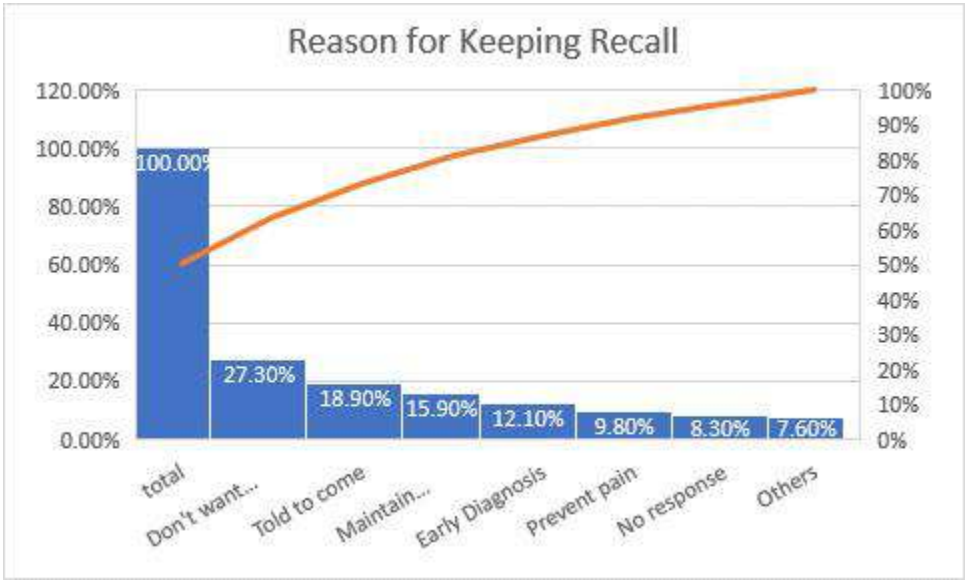
Logistic regression findings:
Participants who brushed their teeth twice a day had lower odds of attending recall visits compared to those who brushed once daily (OR = 0.67, p = 0.76, 95% CI: 0.06–8.05). This association was not statistically significant, and the extremely wide confidence interval suggests model instability, likely due to sparse data in some response categories or quasi-separation. This result should be considered exploratory rather than conclusive.

In contrast, participants who noticed changes in their oral mucosa were significantly less likely to keep recall visits (OR = 0.35, p = 0.02, 95% CI: 0.15–0.82). This indicates that noticing mucosal changes was associated with lower odds of attendance.

The model demonstrated a good fit, as indicated by a non-significant Hosmer and Lemeshow goodness-of-fit test ($\chi^2 = 0.88$, p = 0.96).

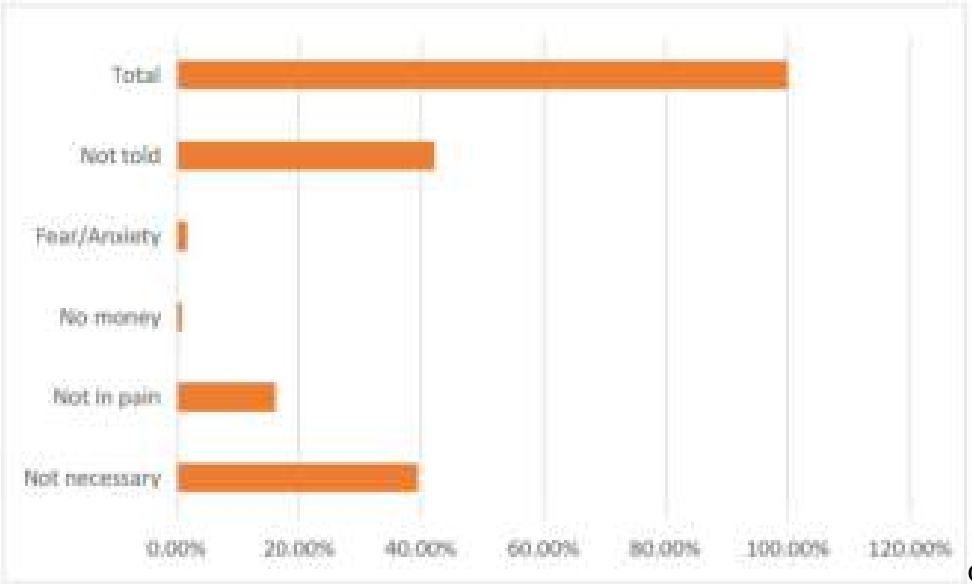
Figure 1 depicts the reasons for attending recall visits, with the most common reasons being to prevent further tooth loss (27.3%) and the doctor's instructions (18.9%).

Figure 1: Distribution of the reasons for recall attendance



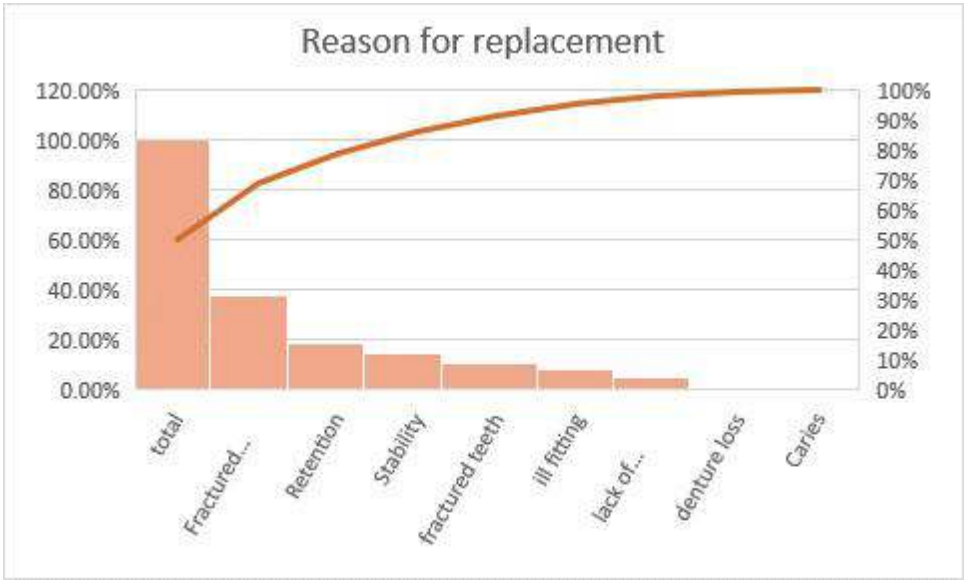
The most common reasons for not attending recall visits were participants not being instructed to do so (42%) and participants not thinking it was necessary (40%) (Figure 2).

Figure 2: Distribution of reasons for non-attendance of recall visits



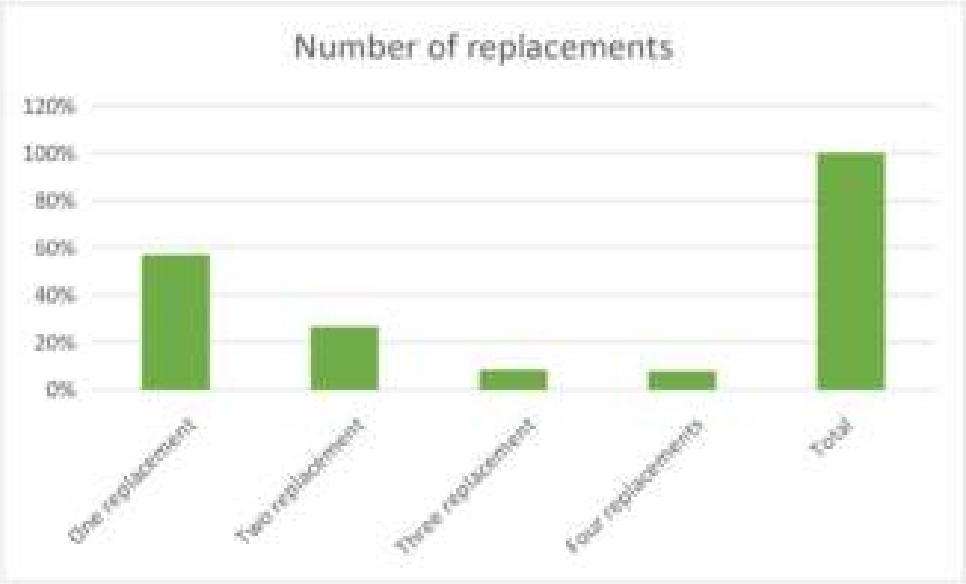
One hundred and eighty-five (48.6%) of the total participants had their RPDs replaced during the study period. Of the 185 participants who had their RPDs replaced, 90 (48.6%) were new denture wearers receiving their first replacement during the study period. The major reason for replacement was fracture of the existing denture (38%) and lack of retention (18%) (Figure 3).

Figure 3: Reasons for replacement of dentures



The average time of replacement was 1.16 ± 3.38 years, and the majority (52%) of the participants had only one replacement (Figure 4).

Figure 4: Distribution of Number of Replacements



Survival Analysis (Kaplan–Meier)

The primary survival endpoint was continued attendance at recall visits. An event was defined as failure to attend a scheduled recall visit within 4 weeks of the appointment date. Participants who completed the study period without missing a recall visit or who were lost to follow-up for reasons unrelated to attendance (e.g., relocation, death) were censored.

Total number of participants = 381

Total number of events = 54

Censored = 327

Percent censored = 85.8%

Kaplan–Meier survival analysis demonstrated relatively stable survival probabilities during the early follow-up period, with most participants remaining event-free during the first 20 weeks. However, a sharp decline was observed near the end of follow-up. This terminal decline should be interpreted cautiously because the survival estimates were based on very few participants remaining at risk due to the high censoring proportion (85.8%).

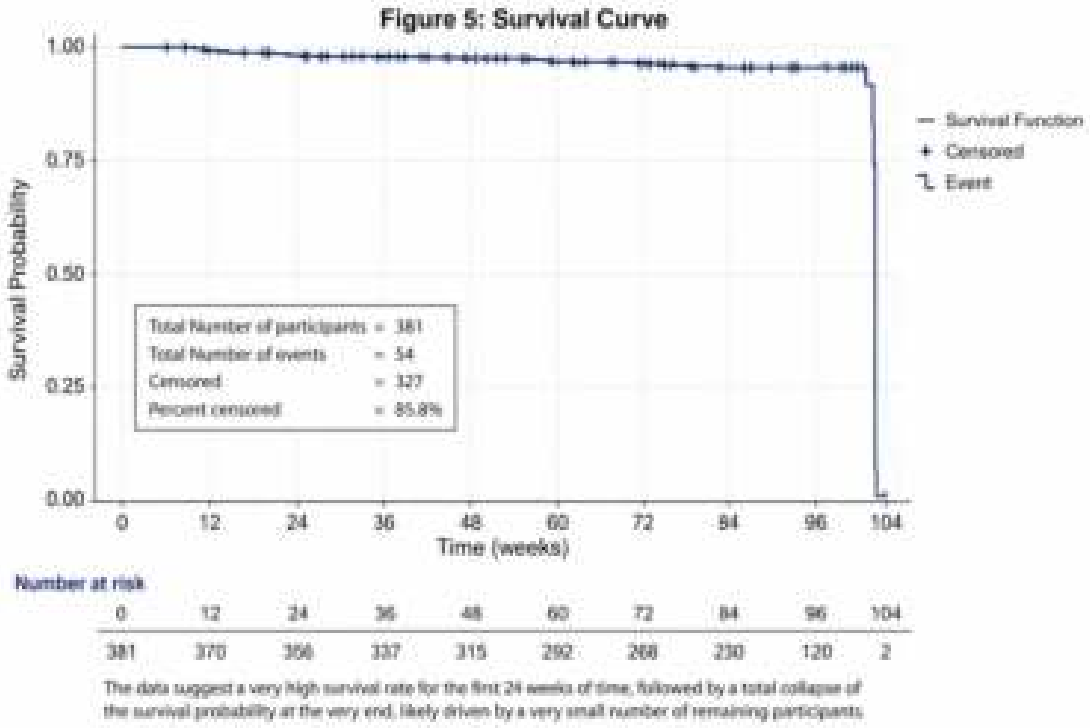


Figure 5: Survival curve (Kaplan–Meier plot with numbers at risk table below)

Numbers at risk table

Time (weeks)	Number at risk	Number of events	Number censored	Survival probability
0	381	0	0	1.00
4	375	6	0	0.984
8	362	8	5	0.963
12	310	12	40	0.925
16	201	10	99	0.879
20	98	8	95	0.862
24	12	10	76	0.140*

*Interpret with caution – very small numbers at risk.

DISCUSSION

Findings: This study found that only 34.6% of removable partial denture wearers attended one or more recall visits over the study period, with no significant difference between new and long-term wearers ($\chi^2(2) = 0.42$, $p = 0.81$). This study reports the findings of removable partial denture (RPD) wearers and their motivation for recall visits across four teaching hospitals, with the aim of providing information on factors motivating RPD wearers to attend recall visits and how this can be used to enhance patients' prosthetic maintenance regimes.

The majority of participants seen were male. Only 34.6% of study participants attended one or more recall visits after denture insertion. There was no significant difference between new and older denture wearers in attending recall visits. A notable operational finding was that 42% of non-attendees reported never having been instructed to return for recall visits. A trend emerged suggesting that participants who brushed their teeth twice a day were also more likely to attend recall visits, although this finding was not statistically significant. However, participants who noticed changes in their oral mucosa were significantly less likely to keep their recall appointments.

Implications: The demographics were similar to previous studies,[9, 17] with an almost equal split of male and female sex. It is reported that there is more tooth retention in adults now than before due to restorative treatments; therefore, partial edentulism with increased partial denture demand is expected in this group.[18]

The study found no significant difference in recall visit attendance between new and existing denture wearers. This aligns with previous research,[19] which indicated that patients with fixed prostheses are more likely to attend recall visits than those with removable prostheses; however, that study did not distinguish between new and old denture wearers. Another investigation[20] focusing on removable partial denture users reported no difference between patient satisfaction and their expectations, though it did not address recall visits specifically. Importantly, other research[21] has shown a positive relationship between patient satisfaction and adherence to recall appointments. These findings suggest that while the type of prosthesis and patient satisfaction may influence recall visit attendance, the duration of denture use—whether new or old—does not appear to be a determining factor. This has implications for clinicians, indicating that strategies to improve recall attendance might more effectively focus on enhancing patient satisfaction rather than targeting new or long-term denture wearers separately.

In this study, the factors significantly associated with recall visits were frequency of brushing and noticing changes in oral mucosa. Previous studies have documented that these factors are related to oral health behaviors, including oral hygiene and denture hygiene.[22, 23] Denture maintenance is reported to be dependent on patients' understanding of proper denture care, their hygiene practices, and the level of motivation among geriatric patients.[23] Participants with higher tooth brushing frequency were more likely to keep recall visits, although this was not a predictor of recall visits in this study. However, noticing a change in mucosa—which may be caused by plaque accumulation[24]—is a predictor of not keeping recall visits. Changes in mucosa include redness, swelling, ulceration, white patches, or hyperplasia, which may indicate the development of oral pathology and may pose health risks, ranging from simple irritation or denture-induced trauma to fungal infections (like denture stomatitis), allergic reactions, or even early signs of precancerous or cancerous lesions.[25]

A study in the UK[26] concluded that the form in which denture care advice is given is associated with the level of cleanliness by the wearers. This was reiterated in nearly half of the participants in this study who missed their recall visits; they reported during phone interviews that they had not received instructions about the recall appointment or its importance when their dentures were fitted. The insertion of dentures increases the risk of food debris/plaque accumulation, caries, gingivitis, further tooth loss,[27, 28] colonization of microbes from dental and denture plaques, and aspiration into the lungs that might result in aspiration pneumonia, especially in the elderly.[29] There is also the problem of participants' attitudes toward denture maintenance, as 40% of the participants who never attended recall visits felt it was not necessary. A study conducted in our environment reported poor attitudes of participants toward dental care, among other factors such as financial constraints, low motivation, and long clinic-to-hospital distance.[30] The results of this study also suggest poor attitudes toward professional denture care. There is a need to educate patients on the importance of denture maintenance regimens and also to send regular information and reminders to patients when necessary.

The results showed a high rate of denture replacement, affecting both pre-existing and new dentures. The main reason for replacement of dentures was fracture of the existing denture. Fracture of acrylic resin dentures is reported to be a common clinical finding,[31] showing susceptibility to fracture, with major concerns being impact failure and flexural fatigue failure that cause the fracture.[32] Reinforced acrylic dentures have been reported to have improved physical properties and better impact strength.[33] There is a need to educate patients on the limitations of acrylic resin to prevent fracture, and reinforced acrylic base denture use should also be encouraged in our clinics.

Trade-Offs (Limitations): This study has several limitations that should be acknowledged. First, relying on self-reported data from questionnaires may introduce recall bias and social desirability bias, potentially affecting the accuracy of reported behaviors and motivations. Second, the study was conducted across four teaching hospitals with varying sample sizes, which may limit the generalizability of the findings to other populations or clinical settings. Additionally, differences in clinical follow-up recommendations and individual variations in oral health literacy were not accounted for—factors that could influence adherence to recall visits. The relatively short duration of follow-up for some participants may also fail to fully capture long-term adherence patterns or the impact of denture use over time.

Additional limitations specific to the survival analysis: The high proportion of censored participants (85.8%) limits the precision of late survival estimates. The sharp terminal decline in the Kaplan–Meier curve is an artifact of very few participants remaining at risk rather than a true behavioral phenomenon. The wide confidence interval for the toothbrushing frequency estimate (0.06–8.05) suggests model instability, likely due to sparse data in some response categories or quasi-separation.

Potential biases should also be considered. Attrition bias may have influenced the results, as long-standing denture wearers who were less compliant with recall visits or dissatisfied with their dentures may have been lost to follow-up, leading to underrepresentation of this group. Recall bias is another concern, especially for long-standing denture wearers who may have difficulty accurately remembering past dental visits or instructions. These biases could affect the accuracy of self-reported adherence and the generalizability of the study's findings.

Take-Home (Conclusion): This study highlights the low adherence to recall visits among removable partial denture wearers, with no significant difference between new and long-term wearers. The null hypothesis could not be rejected. The main motivators for attending recall visits were the desire to prevent further tooth loss and to comply with the doctor's instructions, while lack of instruction and perceived lack of necessity were major barriers. The most actionable finding is that 42% of non-attendees reported simply not being instructed to return for recall visits, representing a clear target for quality improvement. Notably, noticing changes in the oral mucosa was significantly associated with reduced adherence to recall visits, underscoring poor dental health and denture maintenance-seeking behavior.

Expectations for Future Research: There is a need for future large, multi-center longitudinal studies on denture maintenance as well as the development of models to enhance patient attentiveness to oral health and compliance. Such research would also create opportunities for dentists to further educate patients about self-monitoring and the importance of regular recall visits. Quality of Life Assessment metrics should be included in future research to better understand the impact of denture maintenance and recall visits on patients' overall well-being.

RECOMMENDATIONS

Interdisciplinary Collaboration should be promoted between dentists, dental hygienists, and other healthcare providers to develop comprehensive care plans for denture wearers, ensuring consistent patient support and follow-up.

Digital health tools should also be encouraged, such as mobile apps or teledentistry platforms, to monitor denture maintenance and facilitate communication between patients and dental professionals.

Standardized Assessment Protocols should be developed for assessing oral mucosa and denture fit during recall visits, enabling early detection of complications and more consistent patient care.

Patient-Centered Care Models should be designed and implemented. These models should address barriers to recall attendance, such as transportation, cost, or health literacy, making it easier for patients to maintain regular follow-ups.

Tailored Educational Materials can also be created and distributed. These should be culturally appropriate and easy-to-understand educational materials that emphasize the importance of oral health maintenance and regular dental visits for denture wearers.

Tooth loss is known as a public health issue. More reliable data are needed on motivation for tooth replacement and maintenance regimes. This information can help detect individual oral health needs and choose the best care approach. Accurate data, effective public health policies, and impactful implementation can improve oral health status and quality of life (QoL).[10, 11]

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REFERENCES

1. Burt B, Eklund SA. Dentistry, Dental Practice and the community. 5th ed. Philadelphia: W. B. Saunders C; 2005. pp. 203–211.

2. Petridis HP, Tsiggos N, Michail A, Kafantaris SN. Three-dimensional positional changes of teeth adjacent to posterior edentulous spaces in relation to age at time of tooth loss and elapsed time. Eur J Prosthodont Restor Dent. 2010;18(2):78–83.

3. Kiliaridis S, Lyka I, Friede H, et al. Vertical position, rotation, and tipping of molars without antagonists. Int J Prosthodont. 2000;13:480-486.

4. Craddock HL. Occlusal changes following posterior tooth loss in adults. Part 3. A study of clinical parameters associated with the presence of occlusal interferences following posterior tooth loss. J Prosthodont. 2008;17:25-30.

5. Liu N, Zeng L, Li Z, Wang J. Health-related quality of life and long-term care needs among elderly individuals living alone: a cross-sectional study in rural areas of Shaanxi Province, China. BMC Public Health. 2013;13:313.

6. Elias AC, Sheiham A. The relationship between satisfaction with mouth and number and position of teeth (Review). J Oral Rehabil. 1998;25:649-661.

7. Christensen GJ. Elective vs. mandatory dentistry. J Am Dent Assoc. 2000;131(10):1496-8.

8. Azodo CC, Akinboboye B. Removable partial denture use among a selected group of Nigerian undergraduates. European Journal of General Dentistry. 2012;1:30-33.

9. Shaha M, Varghese R, Atassi M. Understanding the impact of removable partial dentures on patients' lives and their attitudes to oral care. British Dental Journal. 2021;1-7.

10. Kassebaum NJ, Bernabe M, Dahiya B, Bhandari CJ, Murray L, Marcene W. Global burden of severe tooth loss: a systematic review and meta-analysis. Journal of Dental Research. 2014;93:20-28.

11. Kassebaum NJ, Smith AGC, Bernabe E, et al. Global, regional and national prevalence, incidence, and disability-adjusted life years for oral conditions for 195 countries, 1990-2015: a systematic analysis for the global burden of diseases, injuries, and risk factors. Journal of Dental Research. 2017;96:380-387.

12. Malta M, Cardoso LO, Bastos FI, Magnanini MM, Silva CM. STROBE initiative: guidelines on reporting observational studies. Rev Saude Publica. 2010;44(3):559-65.

13. Ranganathan P, Caduff C, Frampton CMA. Designing and validating a research questionnaire - Part 2. Perspect Clin Res. 2024;15(1):42-45.

14. Felton D, Cooper L, Duqum I, et al. American College of Prosthodontists. Evidence-based guidelines for the care and maintenance of complete dentures: a publication of the American College of Prosthodontists. J Prosthodont. 2011;20:S1-S12.

15. World (WHO 2000-2025) Standard. Surveillance, Epidemiology and End Results Program. https://seer.cancer.gov/stdpopulations/world.who.html (Accessed 18/02/2026)

16. World Medical Association. World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. JAMA. 2013;310(20):2191-4.

17. Ogunrinde TJ, Opeodu OI. Denture care practice among patients attending the prosthetic clinic in a Nigerian teaching hospital. Niger Med J. 2015;56(3):199-203.

18. Kim JJ. Revisiting the removable partial denture. Dent Clin North Am. 2019;63(2):263-278.

19. Wolfart S, Weyer N, Kern M. Patient attendance in a recall program after prosthodontic rehabilitation: a 5-year follow-up. Int J Prosthodont. 2012;25(5):491-6.

20. Subramanian D, Govindarajulu RT, Narayanan V, Kalimuthu ND. Comparison of expectation and satisfaction among new and existing denture wearers and correlation of duration of previous denture-wearing experience to satisfaction in completely edentulous patients: a pilot study. J Indian Prosthodont Soc. 2019;19(4):324-331.

21. Park S, Kim HK, Choi M, Lee M. Factors affecting revisit intention for medical services at dental clinics. PLoS One. 2021;16(5):e0250546.

22. Fernandez de G G, Ehlinger V, Godeau E, et al. Changes in tooth brushing frequency and its associated factors from 2006 to 2014 among French adolescents: results from three repeated cross sectional HBSC studies. PLoS One. 2021;16(3):e0249129.

23. Turgut Cankaya Z, Yurdakos A, Gokalp Kalabay P. The association between denture care and oral hygiene habits, oral hygiene knowledge and periodontal status of geriatric patients wearing removable partial dentures. Eur Oral Res. 2020;54(1):9-15.

24. Ghiţă RE, Scrieciu M, Mercuţ V, et al. Oral mucosa changes associated with wearing removable acrylic dentures. Curr Health Sci J. 2020;46(4):344-351.

25. Fitzpatrick SG, Cohen DM, Clark AN. Ulcerated lesions of the oral mucosa: clinical and histologic review. Head Neck Pathol. 2019;13(1):91-102.

26. Milward P, Katechia D, Morgan MZ. Knowledge of removable partial denture wearers on denture hygiene. Br Dent J. 2013;215:E20.

27. Akinboboye BO, Umeizudike KA, Uzoije U, Arigbabu OA. Abutments and periodontal parameters in prospective denture wearers. Afr J Med Sci. 2021;50:383-389.

28. Preshaw PM, Walls AW, Jakubovics NS, Moynihan PJ, Jepson NJ, Loewy Z. Association of removable partial denture use with oral and systemic health. J Dent. 2011;39:711-719.

29. Majchrzak K, Mierzwinska-Nastalska E, et al. Comparison of staphylococcal flora in denture plaque and the surface of the pharyngeal mucous membrane in kidney transplant recipients. Transplant Proc. 2016;48(5):1590-7.

30. Akinboboye BO, Malomo BI, Gbiri CA, Ogunyemi AO, Arikawe AP, Obashoro-John OA. Oral health literacy: effectiveness of a homegrown intervention among community-dwelling older Nigerians. BMC Oral Health. 2025;25(1):1119.

31. Seó RS, Neppelenbroek KH, Filho JN. Factors affecting the strength of denture repairs. J Prosthodont. 2007;16(4):302-10.

32. Chand P, Patel CB, Singh BP, Singh RD, Singh K. Mechanical properties of denture base resins: an evaluation. Indian J Dent Res. 2011;22(1):180.

33. Diwe I, Mgbemere H, Adeleye O, Akinboboye B. Comparative evaluation of the effects of yttrium stabilized zirconia nanoparticles (YSZrO2-NP) and porcelain particles on property enhancement of polymethylmethacrylate (PMMA) denture composites. JBBBE. 2026;70:21-41.