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Assessment of Patient Satisfaction with Complete Denture Treatment Following Delivery of Postoperative Instructions Via Verbal and Handwritten Formats

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Abstract

Background: *Patient compliance with complete denture care is critical for prosthesis success. The format of postoperative instructions may influence both adherence and satisfaction.*

Objective: *To compare the impact of verbal and handwritten postoperative instructions on patient satisfaction, compliance, and adaptation to complete dentures.*

Methods: *A prospective, comparative study was conducted on 90 edentulous patients, divided into two equal groups. Group 1 received verbal instructions, while Group 2 received handwritten instructions. A structured questionnaire was administered at a 1-week follow-up to evaluate compliance, satisfaction, and instruction preference.*

Results: *Both groups demonstrated 100% compliance with denture hygiene. Group 2 (handwritten) showed better long-term recall and stronger preference for written instructions. Statistically significant differences were observed in daily routine impact ($p = 0.048$) and instruction format preference ($p = 0.001$), favoring handwritten instructions. However, no significant difference was found in overall satisfaction ($p = 0.487$).*

Conclusion: *Both formats were effective in maintaining hygiene and satisfaction. Handwritten instructions promoted better information retention and were the preferred choice. A multimodal strategy (verbal plus written) may optimize patient education and outcomes.*

INTRODUCTION:

Complete dentures restore oral function, esthetics, and patient self-confidence. In edentulous patients, the success of prosthodontic treatment is not determined only by fabrication quality but also by **effective patient education and compliance with postoperative instructions**. The communication method used to deliver such instructions—verbal or written—has been shown to influence understanding and retention (1,2).

While verbal instruction allows immediate interaction, studies suggest that elderly patients frequently forget or misinterpret oral communication due to reduced auditory processing or memory deficits (3,4). Written instructions, by contrast, provide continuous access for reinforcement and sharing with caregivers, yet literacy barriers may limit their utility (5). This study compares the influence of verbal versus handwritten instructions on compliance and satisfaction following complete denture insertion.

MATERIALS AND METHODS:

This prospective comparative clinical study was carried out among 90 completely edentulous patients seeking complete denture therapy. Ethical clearance was obtained from the institutional review board prior to the commencement of the study, and written informed consent was obtained from all participants.

The study population included patients above the age of 40 years who had not previously worn complete dentures. Only those who demonstrated adequate cognitive ability to understand and respond to instructions and who agreed to participate in the follow-up were included. Patients were excluded if they had systemic illnesses or conditions that could interfere with their compliance, such as advanced neurological disorders, or if they refused to participate in follow-up evaluations.

The total sample size was calculated using the G*Power software, considering an effect size of 0.556 and a statistical power of 80%. The required minimum sample size per group was 43 participants; however, this was increased to 45 per group to compensate for potential dropouts. Thus, the final study cohort consisted of 90 participants, divided into two equal groups of 45 each.

Patients were randomly allocated to one of the two intervention groups. Group 1 received **verbal postoperative instructions only**, delivered by the prosthodontist immediately following the insertion of the dentures. Group 2 received **handwritten instructions**, presented as a short and simple information sheet that outlined denture care, hygiene protocols, and guidelines for adaptation and follow-up. The instructions in both formats were standardized to ensure consistency in content, differing only in the mode of delivery.

A **structured questionnaire** was designed and validated to collect data on clarity of instructions, compliance with denture hygiene, satisfaction levels, perceived impact on daily routine, and preferences for instruction format. Responses were collected at a **1-week follow-up appointment**, during which patients were also examined clinically to assess oral health and prosthesis use. The questionnaires incorporated both closed-ended and open-ended questions to allow for quantitative scoring as well as qualitative patient feedback.

All data were coded and analysed using **SPSS version 21.0**. Descriptive statistics were computed to summarize demographic and clinical findings. Inferential statistics were performed to compare the two groups: Chi-square test for categorical variables, and Wilcoxon signed-rank and Kruskal–Wallis tests for continuous or ordinal data. A p-value <0.05 was considered statistically significant.

RESULTS:

A total of 90 patients completed the study, with 45 patients in each group. There were no significant differences in demographic characteristics, including mean age and sex distribution, between the verbal and handwritten groups, ensuring comparability of the two populations.

At the 1-week follow-up, **denture hygiene compliance was reported to be 100% in both groups**, indicating that regardless of the method of instruction, patients were able to implement and adhere to denture cleaning protocols. All participants acknowledged that the instructions were helpful, although none rated them as “very helpful”.

When reviewing professional follow-up trends, a higher proportion of patients in the verbal group returned for unscheduled professional advice (28.89%) compared with the handwritten group (13.33%). Although this difference was not statistically significant, it suggested a greater reliance on verbal reinforcement and clarification within the verbal-only group.

Analysis of the **impact on daily routine** revealed a statistically significant difference ($p = 0.048$), with participants in the verbal group reporting more frequent difficulties in adapting their daily activities to denture use compared to those in the handwritten group. This finding suggests that having written instructions for reference may reduce anxiety and support smoother day-to-day adaptation.

Regarding **patient satisfaction**, mean scores were comparable between the two groups: 6.77 for the verbal instruction group and 6.91 for the handwritten instruction group. The difference was not statistically significant ($p = 0.487$), indicating that satisfaction with the prosthesis itself was not greatly influenced by the instructional method in the short-term follow-up.

In terms of **instruction format preference**, the majority of patients expressed preference for the method they had received initially, but the handwritten instruction group demonstrated a stronger preference overall. Statistical analysis confirmed this difference as significant ($p = 0.001$).

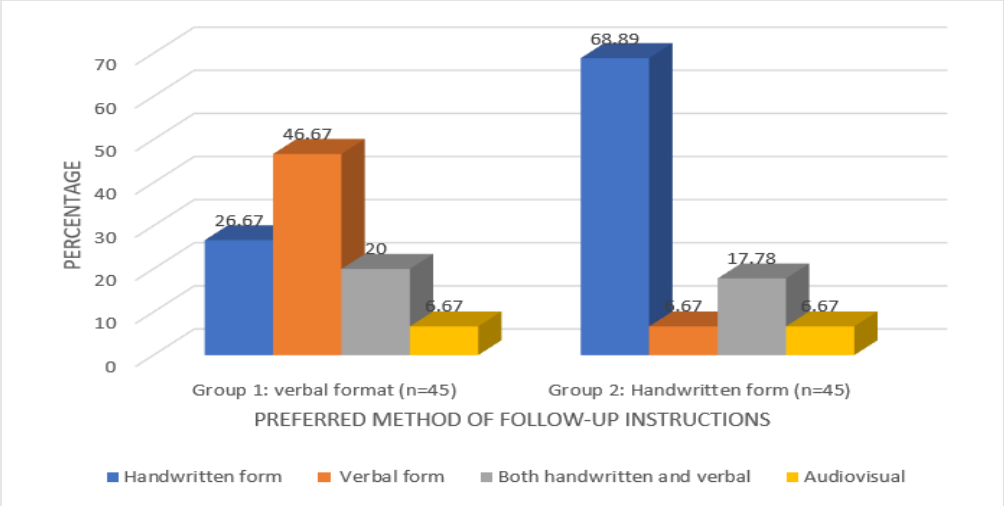
Qualitative feedback further enriched the results. Patients in the verbal instruction group frequently reported difficulties with recall, occasional confusion in understanding the prosthodontist’s explanations, and the need for repeated clarification. Conversely, patients in the handwritten group noted the benefit of being able to revisit the instructions at any time, share them with family members or caregivers, and use them as a reinforcement tool. The limitations cited by this group included the tendency to misplace the instruction sheets and issues of literacy or vision in a minority of patients. Interestingly, several

patients across both groups suggested a **preference for combining written and verbal instructions**, reinforcing the potential value of a multimodal educational approach.

Table 1: Comparison Of Distribution of Patients According to What Way of Follow-Up Instruction They Would Prefer Among Both Groups

	Group 1: verbal format (n=45)		Group 2: Handwritten form (n=45)	
	N	%	n	%
Handwritten form	12	26.67	31	68.89
Verbal form	21	46.67	3	6.67
Both handwritten and verbal	9	20.00	8	17.78
Audiovisual	3	6.67	3	6.67
Chi-square value, p-value	23.206, 0.001*, sig			

Chi-square test, level of significance set at p < 0.05, Ns: non significant, significant



Graph 1: Comparison of Patients According to Preferred Method for Receiving Follow-Up Instructions

This table provides valuable insights into patient preferences regarding future communication methods. A notable difference was observed between the two groups:

In Group 1 (verbal format), 21 participants (46.67%) favored verbal instructions, 12 (26.67%) preferred handwritten ones, 9 (20.00%) liked both verbal and handwritten formats, while 3 (6.67%) chose audiovisual methods.

In Group 2 (handwritten format), a clear majority (31 participants, or 68.89%) preferred handwritten instructions. Only a small number—just 3 participants (6.67%)—preferred verbal instructions, while 8 (17.78%) opted for both formats, and 3 (6.67%) selected audiovisual.

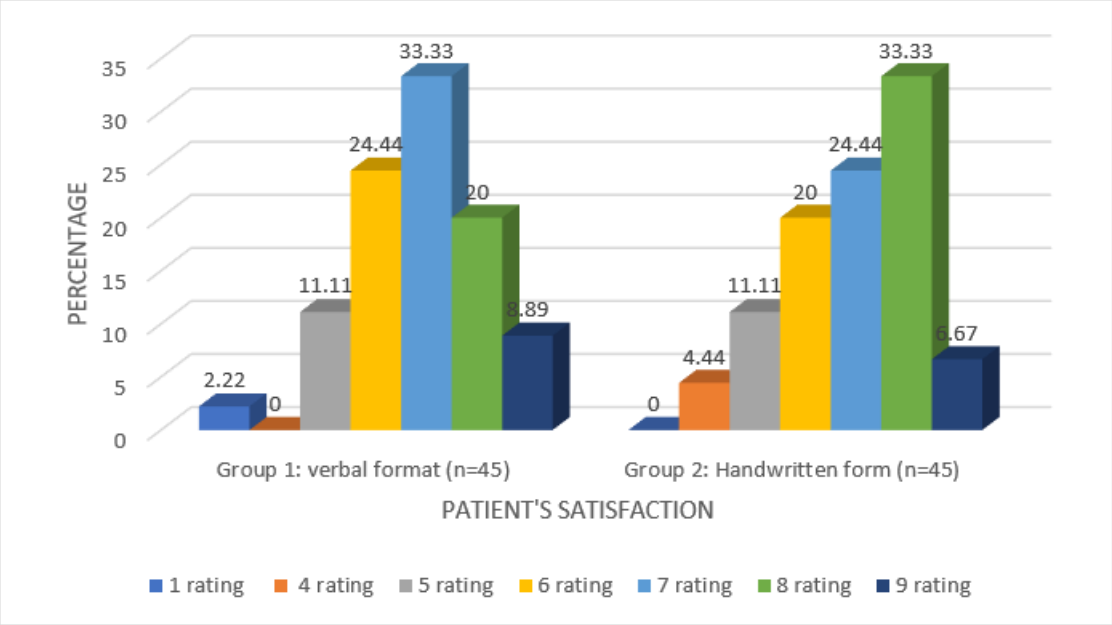
The chi-square test indicated a statistically significant difference between the two groups (chi-square = 23.206, p = 0.001*), suggesting that the method of instruction significantly influenced patient preferences. Participants exposed to a specific mode of instruction were more inclined to favor that format. Group 1 showed a preference for verbal communication, whereas Group 2 exhibited a strong preference for written materials.

Table 2: Comparison of Distribution of Patients According to How Would They Evaluate Their Satisfaction With Denture Among Both Groups

	Group 1: verbal format (n=45)		Group 2: Handwritten form (n=45)	
	N	%	n	%
1 rating	1	2.22	0	0.00
4 rating	0	0.00	2	4.44
5 rating	5	11.11	5	11.11
6 rating	11	24.44	9	20.00

7 rating	15	33.33	11	24.44
8 rating	9	20.00	15	33.33
9 rating	4	8.89	3	6.67
Chi-square value, p-value	5.458, 0.487, ns			
Mean (sd)	6.77 (1.42)		6.91 (1.29)	
Median (mon-max)	7 (1-9)		7 (4-9)	

Chi-square test, level of significance set at p < 0.05, Ns: non significant, significant



Graph 2: Comparison of Patients According to Satisfaction with Their Denture

This table evaluates patients' overall satisfaction with their dentures through a numerical rating scale. In Group 1 (verbal format), ratings varied across multiple points, with most patients demonstrating high satisfaction. In detail, 15 participants (33.33%) rated their satisfaction as 7, followed by 11 participants (24.44%) who rated it as 6, and 9 participants (20.00%) who chose an 8. Fewer participants opted for ratings of 5 (11.11%) and 9 (8.89%), and only one person rated it as low as 1 (2.22%). No participant was assigned a rating of 4.

In Group 2 (handwritten form), satisfaction ratings showed a similar distribution but leaned slightly toward higher ratings. The most significant percentage of responses (33.33%) was for a rating of 8, with 11 participants (24.44%) choosing 7 and 9 participants (20.00%) selecting 6. A smaller percentage rated their satisfaction as 5 (11.11%), 9 (6.67%), and 4 (4.44%). No member of this group rated their satisfaction at 1.

The chi-square test resulted in a value of 5.458 and a p-value of 0.487, indicating no significant difference in satisfaction levels between the two groups. However, descriptive statistics reinforce the similarity between the groups:

Group 1 recorded a mean satisfaction score of 6.77 (SD = 1.42) and a median of 7 (range: 1–9).

Group 2 reported a mean of 6.91 (SD = 1.29) with a median of 7 (range: 4–9). Both groups indicate relatively high satisfaction levels, with Group 2 showing slightly tighter clustering around the higher ratings. Nevertheless, the verbal and handwritten instruction formats seem to produce comparable satisfaction in patients with dentures.

Table 3: Comparison Of Distribution of Patients According to What Way of Follow-Up Instruction They Would Prefer Among Both Groups

	Group 1: verbal format (n=45)		Group 2: Handwritten form (n=45)	
	n	%	n	%
Handwritten form	12	26.67	31	68.89
Verbal form	21	46.67	3	6.67

Both handwritten and verbal	9	20.00	8	17.78
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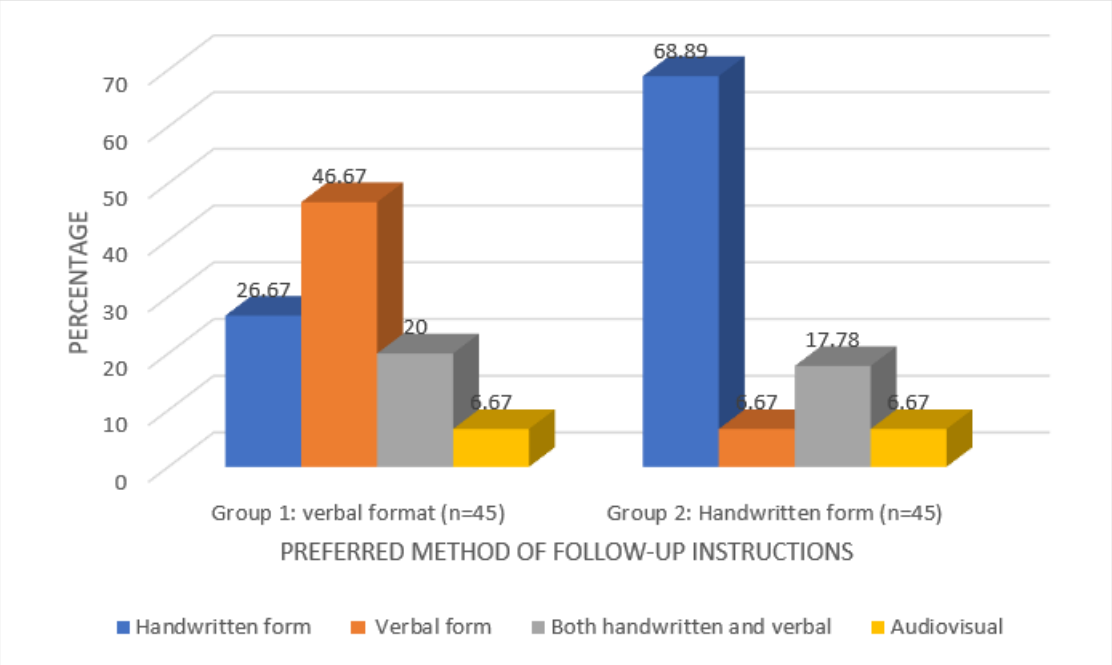
Chi-square test, level of significance set at p < 0.05
Ns: non significant, significant



Graph 3: Comparison of Patients According to Preferred Method for Receiving Follow-Up Instructions

This table provides valuable insights into patient preferences regarding future communication methods. A notable difference was observed between the two groups:

In Group 1 (verbal format), 21 participants (46.67%) favored verbal instructions, 12 (26.67%) preferred handwritten ones, 9 (20.00%) liked both verbal and handwritten formats, while 3 (6.67%) chose audiovisual methods.

In Group 2 (handwritten format), a clear majority (31 participants, or 68.89%) preferred handwritten instructions. Only a small number—just 3 participants (6.67%)—preferred verbal instructions, while 8 (17.78%) opted for both formats, and 3 (6.67%) selected audiovisual.

The chi-square test indicated a statistically significant difference between the two groups (chi-square = 23.206, p = 0.001*), suggesting that the method of instruction significantly influenced patient preferences. Participants exposed to a specific mode of instruction were more inclined to favor that format. Group 1 showed a preference for verbal communication, whereas Group 2 exhibited a strong preference for written materials.

Table 4: Do they think the format of follow-up instructions have aided you to keep your denture clean or helped you to use your denture in a more efficient way, and why

Theme	Group 1: verbal format (n=45)		Group 2: Handwritten form (n=45)	
	N	%	n	%
Helpful due to regular revision	0	0.00	15	33.33
Helped by caregiver/family	4	8.89	8	17.78
Easy to understand/remember	6	13.33	4	8.89
The pamphlet/brochure was misplaced	0	0.00	12	26.67

Illiteracy or memory issues	6	13.33	3	6.67
Preferred written format	10	22.22	5	11.11
Verbal delivery too fast/unclear	8	17.78	0	0.00
Forgot instructions quickly	14	31.11	0	0.00
Suggested both formats	7	15.56	6	13.33

DISCUSSION:

The findings of this study indicate that both verbal and handwritten postoperative instructions promote patient compliance with denture hygiene and overall satisfaction. Importantly, **handwritten instructions were associated with better information retention and stronger patient preferences** compared to verbal-only instruction.

These findings corroborate earlier reports that patients often forget up to 40–80% of verbally communicated medical instructions, with nearly half of what is remembered being incorrect (6). Among elderly patients, who form the majority of complete denture wearers, limited recall of oral instructions is a common obstacle to proper adaptation (7,8). This explains why the written group in our study demonstrated better recall and fewer daily routine disturbances.

Consistency with the literature is also notable regarding satisfaction outcomes. Several studies have shown that patient satisfaction with complete dentures depends more on **adaptability, expectations, and effective communication**, rather than technical parameters alone (9–11). Our results align with Fenlon and Sherriff (3), who highlighted that post-insertion adaptation and the ability to recall coping strategies significantly influence long-term denture acceptance.

The reported patient preference for written instructions in this study mirrors findings by Attitude and Practice surveys among dental students and trainees, which suggest that written communication is often undervalued despite being more effective in enhancing compliance (12).

Nevertheless, limitations exist. Some patients in the handwritten instruction group reported difficulties due to misplacing pamphlets or literacy issues. This echoes the concerns raised by Carlsson and Omar (4), emphasizing that no single method is universally effective. Therefore, a **multimodal approach**—combining verbal reinforcement with written material and possibly visual or digital media—may ensure broader understanding and accommodate diverse patient needs (13,14).

Future research should focus on integrating **digital modes of education** such as audio-visual tutorials or mobile-based reminders. Evidence from recent systematic reviews suggests that incorporating visual aids enhances recall and comprehension, especially among patients with lower health literacy (15).

CONCLUSION:

Both verbal and handwritten instruction formats support compliance and satisfaction in denture care. However, handwritten instructions provide superior retention and are preferred by patients for future use. Given the limitations of both approaches, a combined multimodal communication strategy may be the most effective way to improve adaptation and satisfaction among edentulous patients.

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