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Education and Intervention Program for the Maintenance of Removable Partial Dentures Made of Lucitone

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ABSTRACT

Tooth loss remains a widespread public health problem affecting mastication, aesthetics, self-confidence, and quality of life. Removable partial dentures (RPD) made of Lucitone Flexible Resin System are increasingly used for their comfort and aesthetic advantages, yet the long-term success of this rehabilitation depends heavily on patients' knowledge and daily maintenance behavior. This community service program aimed to improve the knowledge, skills, and compliance of prosthodontic patients at RSUD Kanjuruhan, Kepanjen, Malang, in caring for their Lucitone-based RPDs. The activity was carried out on 2 September 2026 at the Prosthodontics Clinic of RSUD Kanjuruhan, in collaboration with the Faculty of Dentistry, Universitas Brawijaya, under the Dosen Berkarya community service scheme. The program consisted of oral health education, distribution of an educational booklet, live demonstration of proper denture-cleaning techniques, hands-on patient mentoring, and pre- and post-test evaluation. Patients actively participated in the education and demonstration sessions and were able to practice the correct cleaning technique directly under supervision. The activity strengthened patients' understanding of denture hygiene, corrected common misconceptions about denture care, and reinforced the collaborative role of academic institutions and referral hospitals in preventive prosthodontic care, and is expected to reduce the risk of denture-related complications such as denture stomatitis.

Kewords: Removable Partial Denture, Lucitone, Denture Hygiene Education, Patient Compliance, Community Service

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1. INTRODUCTION

Tooth loss is still a significant public health problem, both globally and nationally, because it has an impact on chewing function, phonetics, aesthetics, and decreases the quality of life and confidence of individuals (Rahmawidya et al., 2026). One of the widely used rehabilitative solutions is Partially Removable Dentures (GTSL), including those made of Lucitone Flexible Resin System (FRS) because of its advantages in terms of aesthetics and comfort of use (Cahyaningrum & Retnosari, 2026).

The success of the use of GTSL is not only determined by the quality of the materials and clinical procedures, but is also greatly influenced by the patient's level of knowledge and behavior in maintaining his dentures. The study of Milward et al. (2013) shows that most users of removable dentures still have an inadequate level of denture hygiene despite having received care instructions, while Gendreau and Loewy (2011) confirm that poor denture hygiene is one of the main etiological factors of denture stomatitis. Lack of patient knowledge has an impact on

suboptimal maintenance practices, such as not removing dentures during sleep, incorrect cleaning techniques, and low adherence to routine controls to the dentist.

The Prosthodontics Clinic of Kanjuruhan Kepanjen Malang Hospital, as a type B educational hospital as well as an educational network partner of the Faculty of Dentistry (FKG) Universitas Brawijaya (UB), has a strategic role as a center for services, education, and research in the field of dentistry, especially prosthodontics. The high number of patients using GTSL made Lucitone in this clinic make it a relevant partner for the implementation of health behavioral education and intervention activities, in line with the Joint Agreement between the Government of Malang Regency and the University of Brawijaya Number 074/8/35.07.022/2021 and Number 006/UN10/KS/2021 concerning education, research, and community service.

Based on these conditions, the Faculty of Dentistry, Universitas Brawijaya through the Scheme A Lecturer Program in 2026 carried out a community service activity entitled "Education and Intervention Program for Maintenance of Partially Detached Lucitone Dentures in Prosthodontic Clinic Patients at Kanjuruhan Hospital, Kepanjen Malang". This activity aims to improve patient knowledge, skills, and compliance in maintaining GTSL made of Lucitone, so that it can reduce the risk of complications such as infection, plaque, and denture stomatitis, while strengthening the collaboration of the tridharma of higher education between educational institutions and health service facilities.

2. METHODS

This community service activity uses an educational approach and behavioral intervention carried out in scheme A of the Lecturer Program of the Faculty of Dentistry, Universitas Brawijaya, in collaboration with Kanjuruhan Kepanjen Malang Hospital as a partner. The target of the activity is patients who use Lucitone-based Partially Removable Dentures (GTSL) who are undergoing treatment at the Prosthodontics Clinic of Kanjuruhan Hospital. The activity was held on Wednesday, September 2, 2026, at 07.30–10.30 WIB, located in the Medical Committee Room, 2nd Floor Dental Clinic Building, Kanjuruhan Hospital.

The implementation of activities consists of several stages. The preparation stage includes coordination of the service team with partners, the preparation of educational modules and booklets, the preparation of knowledge questionnaire instruments, and the procurement of materials and teaching aids for denture maintenance. The implementation stage began with remarks from the Head of the Kanjuruhan Hospital Corps Team, followed by the delivery of dental and oral health education materials and how to maintain GTSL Lucitone by drg. Fatima, Sp.Pros and drg. Sinta Candra Wardani, M.Biomed, then a demonstration of direct denture cleaning and care techniques guided by drg. Wahyu Susilaningtyas, Sp.Pros, as well as direct practical assistance to patients.

Evaluation of the success of the activity was carried out through pre-test and post-test using structured questionnaires to measure the level of knowledge and behavior of patients before and after education. Data on the implementation of activities was documented in the form of photos and videos, then analyzed in a qualitative descriptive manner to describe the implementation process, participant responses, and output achievements, as the basis for the preparation of scientific reports and publications.

3. RESULTS AND DISCUSSION

The community service activity "Education and Intervention Program for the Maintenance of Partially Loose Dentures (GTSL) Made of Lucitone" was carried out well on Wednesday, September 2, 2026, in the Medical Committee Room, 2nd Floor Dental Clinic Building, Kanjuruhan Kepanjen Malang Hospital. The activity began with remarks by the Head of the Kanjuruhan Hospital Coordination Team, dr. Fahmi Rusnanta, Sp.JP, FIHA, who welcomed the cooperation between Kanjuruhan Hospital and FKG UB and hoped that this kind of activity could

continue as a form of synergy between hospitals and educational institutions in improving services to the community. As a symbol of cooperation, representatives of FKG UB and Kanjuruhan Hospital exchanged vandel (Figure 1).

Patients who use GTSL Lucitone at the Prosthodontic Clinic of Kanjuruhan Hospital then receive direct education on how to clean dentures correctly, the selection of safe cleaning materials, the differences in the characteristics of acrylic and Lucitone dentures, as well as signs of problems that need to be watched out for so that dentures remain comfortable to use and do not cause oral health problems. The educational material was delivered by drg. Fatima, Sp.Pros and drg. Sinta Candra Wardani, M.Biomed (Figure 2). The series of activities was then continued with a demonstration of hands-on practice on how to maintain GTSL guided by drg. Wahyu Susilaningtyas, Sp.Pros, a specialist dentist at Kanjuruhan Hospital, where patients were invited to practice directly the correct denture cleaning techniques so that the material received could be immediately understood and applied at home (Figure 3). A summary of the series of activities is presented in Table 1.

The approach that combines education, media booklets, and skill demonstrations in this activity is in line with the findings of Milward et al. (2013) who reported low denture hygiene in GTSL users despite receiving verbal instructions only, so demonstration and hands-on practice assistance are important to ensure that patient skills are truly formed. This is also in line with Finlayson et al. (2026) who showed that education-based interventions and mentoring by public health workers were able to meaningfully improve participants' oral hygiene knowledge, attitudes, and behaviors at pre-post evaluation. This improvement in GTSL understanding and maintenance skills is important to prevent complications of denture stomatitis, which according to Gendreau and Loewy (2011) are closely related to poor denture hygiene and continuous use of dentures without removal. Similar programs reported by Fadriyanti et al. (2026) and Prabowo et al. (2024) also show that education and empowerment involving the collaboration of educational institutions and health care facilities are effective in improving the quality of life and public awareness of denture health.

The quantitative analysis of pre-test and post-test scores of patient knowledge and behavior is currently still in the process of further tabulation and will be reported separately in follow-up scientific publications as one of the mandatory outputs of the activity. In general, all patients who attended participated in a series of educational and demonstration activities enthusiastically until they were completed, and were able to re-practice the denture cleaning techniques that had been taught in the mentoring session. A summary of the series of community service activities is shown in Table 1 below.

Tabel 1. Summary of Community Service Activities

Stages	Activities	Implementers	Remarks
Opening	Welcoming and symbolizing cooperation (exchange vandel)	Head of the Kordik Team of Kanjuruhan Hospital & FKG UB Team	Attended by representatives of the management of Kanjuruhan Hospital and FKG UB
Education	Delivery of dental and oral health materials and maintenance of GTSL Lucitone	drg. Fatima, Sp.Pros; drg. Sinta Candra Wardani, M. Biomed	Using booklet/leaflet media
Demonstration	GTSL cleaning and maintenance techniques practice	drg. Wahyu Susilaningtyas, Sp.Pros	Guided live with props
Mentoring	Self-practice of cleaning dentures by patients	Lecturer Team Working FKG UB	The patient practices the techniques that have been taught
Evaluation	Filling out pre-test and post-test questionnaires	Lecturer Team Working FKG UB	Measure knowledge and behavior improvements

Source: Documentation of community service activities of Lecturers of Work FKG UB, 2026.



Figure 1. Representatives of FKG UB and Kanjuruhan Hospital exchanged vandels as a symbol of cooperation in denture maintenance education activities
Source: Documentation of community service activities of Lecturers of Work FKG UB, 2026.



Figure 2. drg. Fatima, Sp.Pros dan drg. Sinta Candra Wardani, M.Biomed providing denture maintenance education to patients
Source: Documentation of community service activities of Lecturers of Work FKG UB, 2026.

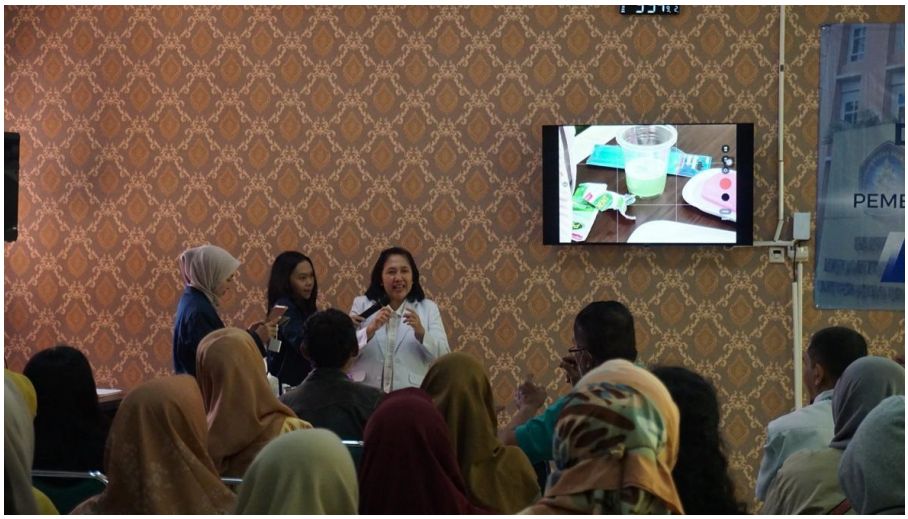


Figure 3. drg. Wahyu Susilaningtyas, Sp.Pros demonstrate correct denture cleaning techniques to patients
Source: Documentation of community service activities of Lecturers of Work FKG UB, 2026.



Figure 4. The FKG UB team and Kanjuruhan Hospital took a group photo after the denture maintenance education activity

Source: Documentation of community service activities of Lecturers of Work FKG UB, 2026.

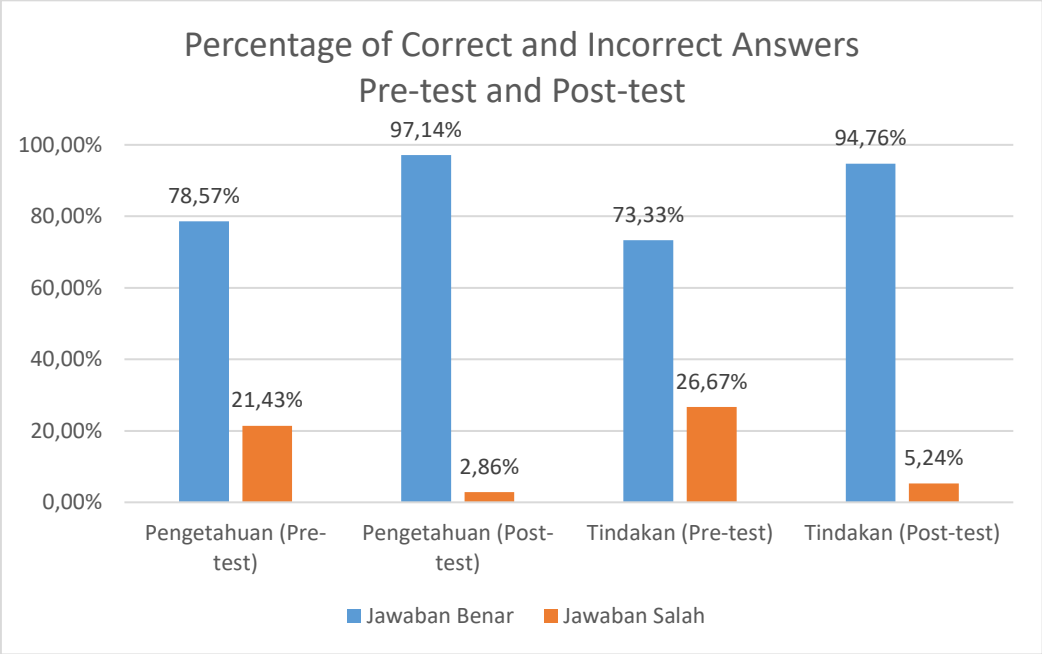


Figure 5. Percentage of Correct and False Answers in Pre-test and Post-test

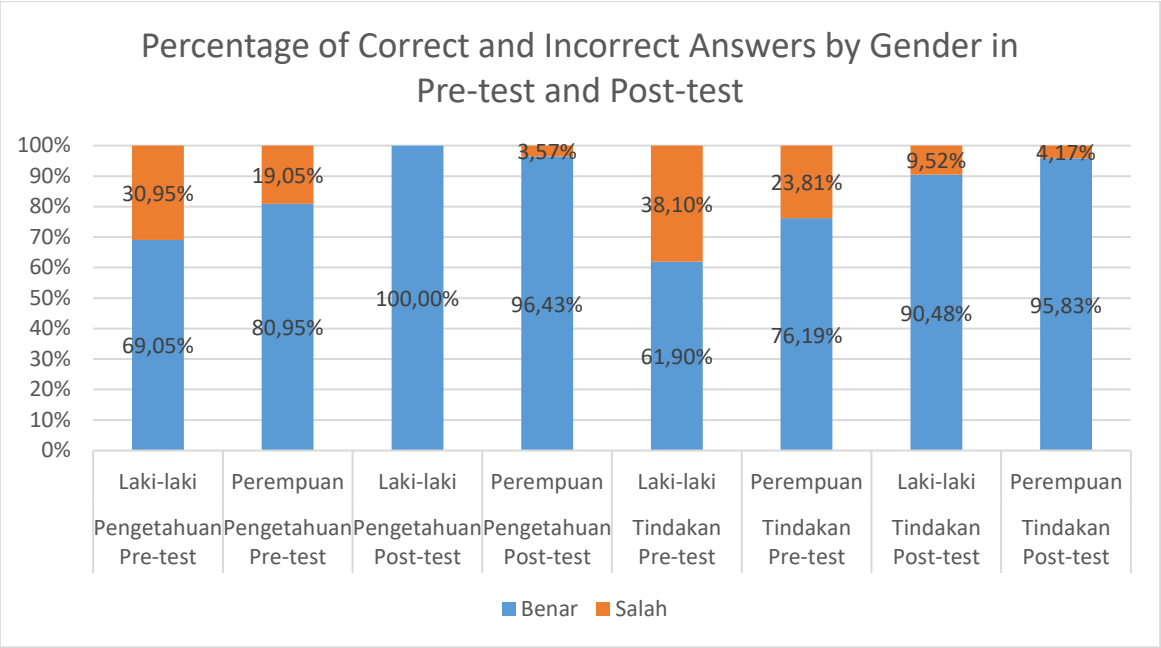


Figure 6. Percentage of Correct and False Answers by Gender in Pre-test and Post-test

4. CONCLUSION

The community service activities of the Scheme A Work Lecturer Program carried out by the Faculty of Dentistry, Universitas Brawijaya together with Kanjuruhan Kepanjen Malang Hospital succeeded in improving the understanding and skills of Prosthodontic Clinic patients in maintaining Lucitone-based Partially Removable Dentures (GTSL) through a series of education, demonstrations, and direct practice assistance. Patients showed enthusiasm and active participation during the activity and were able to re-practice the correct denture cleaning techniques. This activity is a tangible manifestation of the implementation of the tridharma of higher education as well as strengthening sustainable collaboration between educational institutions and health service facilities in preventive efforts against complications of denture use such as denture stomatitis. Quantitative evaluation of pre-test and post-test results as well as monitoring patient compliance over a longer period of time is recommended to be carried out in follow-up activities to measure the impact of interventions more comprehensively.

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