

## Awareness, Knowledge and Perception Towards Denture Marking in Kheda District

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<p><b>Article History</b></p> <p>Received: 06 Aug 2023 Revised: 05 September 2023 Accepted: 11 November 2023</p>	<p><b>Abstract</b></p> <p><b>Background:</b> Even though labeled dentures are a relatively new idea and a developing practice in urban areas, few individuals in Kheda's rural areas are aware of them. Thus, the purpose of the study was to evaluate the sample of rural Kheda population's awareness and perception of denture marking.</p> <p><b>Materials &amp; Methods:</b> Between 2022 and 2023, the study was conducted at Faculty of Dental Science, Nadiad. Four pictures of denture markers were displayed to the hundred edentulous patients at Faculty of Dental Science who visited for treatment. The patient's portrait, a paper strip, a steel band, and a bar code were all included. To gather information regarding their attitude and awareness, we requested them to complete the questionnaires.</p> <p><b>Result:</b> It was not the case for almost two thirds of the patients to have their dentures marked. Of the 150 patients who consented to have their dentures tagged, 105 chose to have a picture taken, 30 chose the paper strip approach,</p>
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<p>CC License CC-BY-NC-SA 4.0</p>	<p>and 5 chose bar coding.</p> <p><b>Conclusion:</b> Despite being informed of the many benefits of denture marking, over two thirds of the subjects in the study still refused to have their dentures marked, leading the researchers to conclude that patients need to be made aware of this procedure.</p> <p><b>Keywords:</b> Complete Denture, Denture Identification, Denture Markers</p>
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**Introduction:** Identification of the victim is a laborious process in forensic medicine, including a multidisciplinary team that relies on positive identification procedures.<sup>1</sup>

Labeled dentures are one identifying technique used in forensic odontology.<sup>2</sup> Although not widely used, marking dentures with some sort of identification is a well-documented technique.<sup>3</sup> These primarily serve as a means of identifying the wearer or, on the other hand, the dentures themselves.<sup>4</sup> Denture marking is thought to be helpful in identifying denture users in both post-mortem forensic contexts and institutional settings. Over the past 20 years, various markers have been created; their benefits and drawbacks are examined.<sup>5</sup>

Dental prostheses have been used to identify victims of large-scale natural disasters since ancient times.<sup>6</sup> Modern techniques include RFID tags, paper strips, bar codes, and laser etching.<sup>7</sup> Every technique has certain benefits and drawbacks. But the patients themselves are the real stakeholders. Patients are the backbone of any study, and their success is crucial to the adoption of innovative ideas. In order to find out how patients feel about denture marking in general and which marking systems they prefer; pilot research was designed.

**Materials and Method:** A total of one hundred adult edentulous subjects who were attending our Western India based institution's Department of Prosthodontics made up the sample. First contacted at random, about 580 patients gave their consent to participate in the trial, of which 500 accepted. The participants' ages varied from 40 to 85 years. It was intentional to include patients who particularly visited this department because our goal was to find out how people felt about mouth marking. A questionnaire, available in either Gujarati or English, was given to the subjects. Along with the questions about the denture markers, the questionnaire also asked

general demographic questions. Closed-ended and open-ended questions were both included in the survey. Four pictures of the denture markers used in the study were presented to each subject.<sup>8</sup> Every image with a marker was assessed using the survey. Paper strip, metal band, patient photo, and bar code were the markers that were evaluated. The frequency distribution of the different "Yes/No" replies was the main criterion used to evaluate the patient responses.

**Statistical Analysis:** The software used in the analysis was SPSS 23.0 version, and  $p < 0.05$  is regarded to be the threshold of significance. Descriptive and inferential statistics were utilized, with the z-test for a single percentage. z is deemed important if it is greater than 1.96.

**Results:** Of the patients, 75 percent were new, and 25 percent had worn dentures previously (Q1) (table 1). Merely 30% of patients were aware of denture labeling, and 70% had never heard of them (Q2 & Q3). According to 77%, prosthetic coding would require particular attention (Q4). Denture marking is vital, although 78% of patients were unaware of its significance (Q5), and 22% of the general thought it was unimportant. The old denture wearer had no markings on any of his dentures (Q6). Of the patients, 70% were opposed to having their dentures tagged, and only 30% were interested in having them marked (Q7). 76.6% of the 30% of people who expressed interest in having their dentures marked said they would like to use a photograph for marking. Paper strip coding was chosen by 20% of respondents. Barcode technique was chosen by 3%.

**Table:1 CLOSE ENDED QUESTIONS**

QUESTIONS	YES	NO	z-value
Do you wear dentures	25	75	5.77
Do you know what denture marking is?	30	70	6.54
Do you realize that dentures might have markings on them?	35	65	7.33
Do you think that hygiene and care should be taken when coding a prosthesis?	23	77	5.46
Do you understand the significance of denture markings?	22	78	5.31
Do your dentures have labels?	0	100	-
Would you like your dentures to be marked?	30	70	6.54

**Discussion:** Only 30% of patients were found to be aware of denture marking in the survey designed to assess patients' perceptions and awareness of being edentulous.

Only 15% of people knew about the different denture marks. Although 20% of the patients were aware of it, it was discovered after more investigation that they had no markings on

their own. However, based on information given to them regarding different marking systems, they claimed to have seen some similar markings on dentures belonging to some of their known individuals.

Seventy percent of patients declined to have their dentures marked. Despite being informed of the numerous denture marking methodologies and their associated advantages, the patients were not prepared to have their dentures marked. Cunningham and Reddick's study<sup>9</sup>, in contrast, found that 85.5% of patients were agreeable to have their dentures tagged. The study conducted by Richmond and Pretty yielded similar findings, with 99% of patients favoring the marking of their dentures.<sup>8</sup>. When it came to denture markers, 65% of patients said they preferred photos because they thought the photos were fascinating to have on their dentures. This is not the case with the study conducted by Ashith Acharya et al.,<sup>10</sup> where the patients preferred the photograph approach second. The patients' ability to quickly recognize themselves at a look was another factor in their decision to use photographs in our study.

Since most of the patients were illiterate, literacy was a major factor in choosing the preferred course of action. As a result, they selected a system like the photograph that made identity obvious. The bar code system was the least popular approach. Despite having the ability to keep more patient data, the patients in our study did not favor this strategy.

The outcomes of our study's open-ended question (Q11) were also noteworthy. Because everyone in the region knows them, several patients have stated that they didn't think they needed to be marked for identification. They also won't encounter a circumstance like this during their lives or even after they pass away. They refused even after being told about identity crises such as those that arise during earthquakes or floods, as well as the importance of death certificates in property disputes. Some patients claimed that since they are the only ones wearing dentures at home, there are no opportunities for trade when informed about the avoidance of exchange, which is an advantage of marker. Exchange of dentures may not be as important as it would be in European countries because there are fewer elderly homes in India.

**Conclusion:** According to the study's findings, most patients oppose denture indicators. This may be explained by the possibility that denture markers are population specific. Education and other demographic characteristics are key in highlighting the significance of denture indicators. The photographic approach was the most favored one in terms of preference. It is important to

take denture marker creation and awareness-raising seriously and incorporate them into regular denture construction processes.

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ANNEXURE: Questionnaire for denture marker

Closed-ended questions.

1. Do you wear dentures?

2. Do you know what denture marking is?
3. Do you realize that dentures might have markings on them?
4. Do you think that hygiene and care should be taken when coding a prosthesis?
5. Do you understand the significance of denture markings?
6. Do your dentures have labels? Yes/No.
7. Would you like your dentures to be marked? Yes/No
8. Please explain which denture marking you find most and least desirable.

most favored

Motive: The following: \_\_\_\_\_

least favored

For what reason? \_\_\_\_\_

Open-ended questions

9. Where do you get your information regarding prosthetic coding from?
10. How will denture markers benefit you, in your opinion?
11. What is the main obstacle keeping you from selecting a denture marking?