

Analysis of public knowledge about the risk of denture treatment by dental artisans

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Received 16 December 2022; 1st revision 20 June 2023; 2nd revision 5 July 2023; Accepted 18 July 2023;
Published online 31 July 2023

Keywords:

Perception; denture;
dental artisans

ABSTRACT

Background: Tooth loss can be experienced by all ages, gender, ethnicity or race, which will result in reduced masticatory, speech and aesthetic functions of a person. Problems that are often found in cases of denture installation at dental technicians are patients experiencing severe infections, swelling of the face, red and swollen gums accompanied by trismus or difficulty opening the mouth. People assume that the safety of the action, hygiene, and authority possessed by dental artisans are similar to those of dentists. To find out and describe the knowledge of the people of Semarang City regarding and the risks of dentures treatment by dental artisans.

Method: This typed of researched was quantitative with a descriptive observational researched design. The sampling technique was purposive sampling, used the lemeshow formula, obtained 67 respondents with the inclusion criteria of the Pedurungan district community aged 35-44 years.

Result:, the level of public knowledge about the risks of dentures treatment by dental artisans had good level of knowledge, namely 40 respondents (59.7%) and 26 respondents (38.8%) had sufficient knowledge

Conclusion: The leveled knowledge of the people of Pedurungan district regarding the leveled of knowledge about risks of dentures treatment by dental artisans was classified as good and sufficient.

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doi: <http://dx.doi.org/10.30659/odj.10.1.76-81>

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Odonto : Dental Journal accredited as Sinta 2 Journal (<https://sinta.kemdikbud.go.id/journals/profile/3200>)

How to Cite: Failasufa *et al.* Analysis of public knowledge about the risk of denture treatment by dental artisans. Odonto: Dental Journal, v.10, n.1, p. 76-81, July 2023.

INTRODUCTION

Tooth loss can be experienced by all ages, genders, ethnicities, or races. Tooth loss can be caused by various things, including trauma, caries, and periodontal disease. This can result in reduced ability to perform activities of mastication, and speech and can affect one's aesthetics, thus encouraging people to make artificial teeth that aim to restore tooth function to its original state.¹ The manufacture and installation of dentures is not only done by dentists but also by dental artisans. The definition of the dental artisan is explained in the Regulation of the Minister of Health of the Republic of Indonesia Number 39 of 2014 concerning Guidance, Supervision, and Licensing, Dental Work in Article 1 paragraph (1), dental artisan is anyone who has the ability to make and install removable dentures.²

The duties and authorities of dental artisans are stated in the Regulation of the Minister of Health of the Republic of Indonesia Number 39 of 2014 concerning the Guidance, Supervision and Licensing of Dental Work in Article 6 paragraph (2), the authority of dental artisans is basically only to make and install partial or full dentures made of heat curing acrylic material in accordance with health standards and provisions. There is also a prohibition in which dental artisans are not allowed to carry out dental care such as fillings, installing braces, extracting teeth, and making porcelain teeth like a dentist.^{2,3,4}

Problems that are often found in cases of placing dentures at a dentist are patients experiencing severe infections, swelling of the face, red and swollen gums accompanied by trismus or difficulty opening the mouth. Previous research stated that out of 30 respondents, 13 (65%) respondents had many problems, namely from using dentures made by dental artisans with symptoms of gums becoming swollen, bleeding

easily, and abutment teeth becoming loose, while 7 (35%) other respondents stated that he had no problems with his dentures.⁴

It can be concluded that many problems occur in people who use dentures from dental artisans (Meirina et al, 2014). This is very contrary to the Regulation of the Minister of Health of the Republic of Indonesia Number 39 of 2014 concerning Guidance, Supervision and Licensing, Dental Artisan Work which is explained in Article 6 paragraph (1) that dental artisan work may only be carried out if it does not endanger health, does not cause illness and death. (Menkes RI, 2014). Based on the description above, the researcher is interested in knowing the description of the knowledge of the people of Semarang city about the authority of dental artisans and the risks of installing dentures by dental artisans.^{3,4}

RESEARCH METHOD

This study uses a type of quantitative research with a descriptive observational research design and uses a cross-sectional research design. The population of this research is the people of Pedurungan district, Semarang City, totaling 191.698 people. The sample in this study was the majority of the Pedurungan district community aged 35-44 years, totaling 67 respondents. The sampling technique used is purposive sampling.⁵

This research has passed the ethical test from the Institute for Health Research Ethics Committee Faculty of Medicine, Universitas Muhammadiyah Semarang with No.090/EC/FK/2021. The data collection stage by giving a questionnaire about the authority of the dental artisan and the risks of installing dentures by a dental artisan which has been tested for validity and reliability. The assessment of the level of community knowledge is converted into a good

level of knowledge if the value is $\geq 76-100\%$, the level of knowledge is sufficient if the value is $60-75\%$, and the level of knowledge is poor if the value is $\leq 60\%$ ⁵.

RESULTS

Based on Table 1, shows that the respondents are dominated by men with a total of 44 respondents (65.7%). While the education level of the respondents is mostly college graduates, with as many as 36 respondents (53.7%) and the type of work of most respondents is from the private sector, namely as many as 25 respondents (37.3%). Table 2 shows that most of the respondents, as many as 28 respondents (41.8%) have good or poor knowledge about the

authority of dental artisans. While the majority of respondents, namely 40 respondents (59.7%) had a good level of knowledge about the risks of installing dentures by dental artisans.

Table 3, based on the level of education, shows that the majority of respondents who have good knowledge about the authority of dental artisans are graduates of academies or colleges as many as 16 respondents (44.4%), and 13 respondents (36.1%) who have less knowledge. While 15 respondents (48.4%) are high school/high school graduates who have a low level of knowledge regarding the authority of dental artisans, and 12 other respondents (38.7%) have good knowledge.

Table 1. Distribution of Respondents Characteristics

No.	Characteristics	Frequency	Percentage (%)	
1.	Gender	Male	44	65.7%
		Female	23	34.3%
2.	Education Level	High School Institution	31	46.3%
			36	53.7%
3.	Occupation	Private	25	37.3%
		Government Police	18	26.9%
		Entrepreneur	8	11.9%
		Driver	1	1.5%
		Civil Servant - PNS	4	6%
		Civil Servant - ASN	3	4.5%
		House Wife	6	9%
		Teacher - Non PNS	1	1.5%
Ministry of State Owned Enterprises	1	1.5%		

Tabel 2. Knowledge Frequency Distribution the Authorities of Dentists and the Risks of Denture Placement by dental artisans.

No	Level of Knowledge	Community Knowledge			
		Knowledge of Authority		Knowledge of Risk	
		Frequency	Percentage	Frequency	Percentage
1	Good	28	41.8	40	59.7
2	Enough	11	16.4	26	38.8
3	Poor	28	41.8	1	1.5
	Total	67	100	67	100

Tabel 3. Frequency Distribution of Community Knowledge in Semarang City about the Risks of Denture Insertion by Dentists Based on Education Level

Education level	Risk			Total
	Good	Enough	Poor	
High School	13 41.9%	17 54.8%	1 3.2%	31 100.0%
Institution	27 75.0%	9 25.0%	0 0.0%	36 100.0%
Total	40 59.7%	26 38.8%	1 1.5%	67 100.0%

DISCUSSION

Table 2 explains that the level of knowledge of respondents regarding the risks of installing dentures by dental artisans is in a good category, namely 40 people (59.7%) out of 67 respondents. This shows that the majority of the people of Semarang city know the risks that will occur when wearing or fitting their dentures into a less competent dentist. The results of the table show that many respondents answered with the right answer. They know that improper and careless installation of dentures will affect the health condition of the teeth and the patient's oral cavity, including causing infection of the tissues around the teeth, swelling of the gums, festering, bleeding easily, causing canker sores, causing disturbances in the jaw joints. and poses a risk of ingestion.^{6,7}

The results of this study are in line with research by Gumayesty (2017), showing that out of 96 respondents, the majority of respondents had good knowledge about the risks of wearing dentures, namely 86 respondents (90%), poor knowledge, namely 10 respondents (10.4%). This shows that the majority of people are aware of the consequences that can occur from wearing dentures, including increased accumulation of plaque, increased frequency of caries, worsening of oral hygiene, inflammation of the gingiva and loose teeth.^{8,9}

Factors that influence the occurrence of risks of installing dentures can be due to both the consumer's and the dentist's point of view. Factors that influence the consumer aspect can be due to the low level of public knowledge. Someone with

extensive knowledge, then they will have a high level of awareness and concern about dental and oral health problems. Vice versa if they have a low level of knowledge, then their awareness and concern for dental and oral health are lower. It could also be because people pay more attention to terms of cheap and affordable costs, as well as fast processing time. They don't care about the impact that will occur in the future if they attach their dentures to someone who is less competent. They only focus on appearance, not on health.^{10,11}

The lack of public knowledge or information will affect their decision in choosing the right operator. Some consumers of dental artisans think that these dental artisans already have sufficient knowledge so that they fully entrust their dental health. Even though these individuals did not meet the scientific, procedural, and hygienic standards required in carrying out their practice.¹²

Knowledge is one of the factors that play a role in the process of development and behavior of a person. The higher a person's level of knowledge, the higher the individual's ability to evaluate a material or object. Conversely, the lower the level of one's knowledge, the lower the ability to assess a material or object. This assessment will be the basis for a person to act. Judging from the aspect of dental artisans, it can be due to their lack of responsibility and concern for the health of consumers. Some dental artisans in carrying out their treatment only based on limited knowledge. They think that the most important thing is the satisfaction of consumers without thinking about the impact that will be experienced by their service users in the future.¹⁴

In the case of making dentures, some dental artisans do not pay much attention to the health of the surrounding denture tissue and in making them not in accordance with existing procedures. It is often found that there are residual roots that are not

extracted during the installation of the denture, causing inflamed, swollen gum tissue, poor oral hygiene, denture stomatitis because the denture is not well adapted. This condition is caused by the work in a relatively short time and only based on their experience. If the dental technician in carrying out his business can cause harm to the consumer, the dental artisan is obliged to provide compensation and compensation to the consumer. This is in accordance with the provisions of Law No. 8 of 1999 concerning Consumer Protection Article 19 Paragraph (1), its.^{15,16}

"Business actors are responsible for providing compensation for damage, pollution, and/or consumer losses due to consumer goods and/or services produced or traded." The compensation can be in the form of refunds or replacement of goods/services of the same type or equivalent in value, or health care in accordance with Article 19 Paragraph (2). The compensation is given within a grace period of 7 days after the transaction date. Even though the dental technician has provided compensation, this provision does not eliminate the possibility of criminal prosecution based on further evidence regarding the existence of an element of error. However, this provision does not apply if the business actor can prove that the error is the fault of the consumer.^{15,16}

CONCLUSION

The results of the distribution of the characteristics of the respondents in the Pedurungan sub-district, it was shown that men dominated more than women, namely 44 respondents (65.7%), most of the respondents were academy or university graduates with 36 respondents (53.7%). Based on the type of work, the majority of respondents worked in the private sector, namely 25 people (37.3%). In general, the knowledge of the Pedurungan district community is good regarding

the risks of installing dentures performed by dental artisans, namely 40 respondents (59.7%). In addition, there were also several other respondents who had sufficient knowledge of 26 respondents (38.8%).

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