



## Research Article

# Satisfaction Level of Periodontitis Patients with Teeth Luxation Post Splinting Treatment at RSGM UMY

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## Abstract

Periodontal disease is one of the global oral health problems. Periodontitis is still the leading cause of tooth loss in adults worldwide. Periodontitis may cause discomfort related to tooth loss during eating. Loss of teeth, either one or several teeth, can cause functional and aesthetic disturbances that can affect a person's level of satisfaction. There are several treatments to treat tooth loss, one of which is splinting treatment. Splinting is a therapy that connects several teeth to increase the stability of the teeth due to periodontitis. This study aims to describe the level of satisfaction of patients with periodontitis with tooth luxation after splinting at the Dental Hospital of Universitas Muhammadiyah Yogyakarta (RSGM UMY). This research method is descriptive observational, with a total sample of 38 respondents. The sample inclusion criteria were all patients who had splinting done by a Co-Ass at RSGM UMY and all patients who had splinting done by a Co-Ass at RSGM UMY with a tooth luxation degree 2. The sample exclusion criteria were patients who were not willing to be respondents. The study's results showed that 26.95% of patients were very satisfied, 62.63% were satisfied, 8.74% were not satisfied, 1.47% were dissatisfied, and 0.21% were very dissatisfied. The satisfaction level of periodontitis patients with teeth luxation post splinting treatment at RSGM UMY in all five dimensions was in the 'satisfied' category with a percentage of 62.63%.

**Keywords:** patient satisfaction; periodontal splinting; RSGM UMY

## INTRODUCTION

Periodontal disease is a global oral health problem. Periodontitis is still the leading cause of tooth loss in adults worldwide. The World Health Organization recently reported that severe periodontitis accounts for 5-20% of the adult population and most children and adolescents show signs of gingivitis.<sup>1</sup> The 2001 Ministry of Health Household Survey (SKRT) report stated that the prevalence of dental and oral diseases was the highest, covering 60% of the population.

According to the 2013 Basic Health Research (RISKESDAS), periodontal

disease is a dental and oral health problem with a fairly high prevalence in a society where periodontal disease in all age groups in Indonesia is 96.58%.<sup>2</sup> Periodontal disease is generally categorized into gingival disease (Gingivitis) and periodontitis.<sup>3</sup> Besides malocclusion, crowding of teeth can be a problem for sufferers. Crowded teeth are very difficult to clean by brushing. The causes of periodontal disease consist of local factors and systemic factors. Local factors are causes in the environment around the teeth, such as plaque. Systemic factors are causes that are usually

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associated with metabolism and general health, such as hormones. Periodontitis is generally caused by plaque.<sup>3</sup> The negative impact of periodontitis is the discomfort felt by the patient. This discomfort is related to tooth loss during eating due to loose teeth.<sup>3</sup> Loss of teeth, either one or several teeth, can cause functional and aesthetic disturbances that can affect a person's level of satisfaction.<sup>4</sup> Splinting is a therapy that connects several teeth in a periodontitis patient. This therapy aims to increase the stability of loose teeth. A study revealed that stabilization of tooth mobility using periodontal splinting has a good prognosis for patients.<sup>3</sup>

The purpose of dental and oral care is to improve the appearance of the teeth, which in turn will lead to patient confidence and satisfaction.<sup>5</sup> Patient satisfaction with dental and oral health services is a comparison between perceptions of the services they received and their expectations before getting the services. The fulfilled expectations show that the quality of service provided is good and creates maximum satisfaction.<sup>6</sup> Service quality can be determined by five main dimensions: tangible, reliability, responsiveness, assurance, and empathy. The quality of health services is one of the factors that can increase patient satisfaction.<sup>7</sup>

According to the Minister of Health, the Dental and Oral Educational Hospital (DOEH/ RSGM) is a hospital that provides dental and oral health services, which are also used as a means of learning, education, and research processes for the dental health profession, including *dentistry* student of the professional program (*Co-Ass*) and other health workers. It is bound through collaboration with the faculty of dentistry. RSGM Universitas Muhammadiyah Yogyakarta (UMY) is a dental and oral hospital located at Jalan HOS Cokroaminoto No. 17A, Pakuncen, Wirobrajan, Yogyakarta City. Services at RSGM UMY include primary, secondary, and tertiary dental services with excellent service standards as well as supporting services,

including laboratories, radiology, and material processing laboratories. It is completed along with the increasing need for educational and family dentist clinics facilities and clinical skills for *Co-Ass*'s improvement, for example, the use of splinting for patients with tooth luxation. Furthermore, RSGM UMY can support the effective teaching and learning process for academic activities. It is also as a symbol of quality assurance from UMY's dentist graduates as human resources who are ready to contribute in the community. This study aims to describe the level of satisfaction of patients with periodontitis with tooth luxation after splinting at Dental Hospital of Universitas Muhammadiyah Yogyakarta (RSGM UMY).<sup>8</sup>

## MATERIALS AND METHODS

This research used a descriptive observational method with a cross-sectional design and quantitative data types using questionnaires. It was conducted in January – April 2019 at RSGM UMY. Based on the preliminary survey results, the total population was 50 people. The sample in this study used the slovin formula, so 38 respondents were obtained. Respondents in this study were periodontitis patients with a degree of luxation ( $\geq 2$ ) whom a *Co-Ass* had splinted at RSGM UMY as the criteria of this research.

The sampling technique used was purposive sampling. The variable in this study was a single variable. It is the level of patient satisfaction with splinting by *Co-Ass* at RSGM UMY. The operational definition of the patient's satisfaction with the treatment resulted from the operator's care quality. The research instrument used a knowledge questionnaire, informed consent, stationery, and a computer with SPSS 15.0 software.

**RESULT**

Distribution of research subject data as many as 38 people in the age range of 26 to 65 years. The majority of research

subjects were men at 68.4% (26 people) and women 31.6% (12 people).

**Table 1.** Distribution of patient's characteristics

Characteristics	Total	Percentage
<b>Gender</b>		
Male	26	68.4%
Female	12	31.6%
<b>Age</b>		
26-45 years old	18	47.37%
46-65 years old	19	50%
>65 years old	1	2.63%
<b>Education</b>		
Elementary School Graduates	1	2.6%
Junior High School Graduates	3	7.9%
Senior High School Graduates	21	55.3%
College Graduates	13	34.2%

Based on Table 1, the respondents in this study were 50% patients with the age categories of 46-65 years, 68.4 % males, and

55.3% respondents with high school graduates.

**Table 2.** Patient's Satisfaction with Splinting Treatment Based on Tangibility Dimensions

Number	Statement Tangibility	Respondent					Total
		Very Not Satisfied	Not Satisfied	Less Satisfied	Satisfied	Very Satisfied	
1	Completeness of splinting	0	0	0	35	3	38
2	Hygiene of splinting's equipment	0	0	0	29	9	38
3	Hygiene of the examination room	0	0	0	22	16	38
4	Hygiene of dental chair	0	0	1	18	19	38
5	A Co-Ass who looks clean and tidy	0	0	1	28	9	38
	Total	0	0	2	132	56	190
	Percentage	0%	0%	1.06%	69.47%	29.47%	100%

Table 2 shows the results of the percentage of patient satisfaction on the tangibility dimension. The majority of

satisfied patients was 69.74%, and those who were very dissatisfied and dissatisfied were 0%.

**Table 3.** Patient's satisfaction with Splinting Treatment Based on Responsiveness Dimensions

Number	Statement	Respondent					Total
		Very Dissatisfied	Not Satisfied	Not Enough Satisfied	Satisfied	Very Satisfied	
6	The Co-Ass was quick to deal with the patient's complaints	0	0	1	29	8	38
7	Co-Ass does not need a long time to conduct splinting treatment	0	0	10	24	4	38
8	Co-Ass doing splinting treatment carefully	0	0	1	22	15	38
Total		0	0	12	75	27	114
Percentage		0%	0%	10.53%	65.79%	23.68%	100%

Table 3 shows the results of the percentage of patient satisfaction on the responsiveness dimension. The majority of

satisfied patients was 65.79%, and those who were very dissatisfied and dissatisfied were 0%.

**Table 4.** Patient's Satisfaction with Splinting Treatment Based on Assurance Dimensions

Number	Statement	Respondent					Total
		Very Not Satisfied	Not Satisfied	Not Enough Satisfied	Satisfied	Very Satisfied	
9	Co-Ass is skilled when using equipment for splinting treatment	0	0	6	27	5	38
10	The splinting treatment performed by a Co-Ass is painless	0	0	1	34	3	38
11	I feel safe and confident when splinting is done by a Co-Ass	0	0	1	35	2	38
12	Co-Ass explains the procedure and what actions will be carried out before treatment	0	0	1	21	16	38
Total		0	0	9	117	26	152
Percentage		0%	0%	5.93%	76.97%	17.10%	100%

Table 4 shows the results of the percentage of patient satisfaction on the assurance dimension. The majority of

satisfied patients were 76.97%, and those who were less satisfied were 10.53%.

**Table 5.** Patient’s Satisfaction with Splinting Treatment Based on Reliability Dimensions

Number	Statement	Respondent					Total	
		Reliability	Very Not Satisfied	Not Satisfied	Not Enough Satisfied	Satisfied		Very Satisfied
13	Co-Ass is doing splinting until it is done		1	0	0	20	17	38
14	Co-Ass is doing splinting seriously		0	0	1	22	15	38
15	When chewing food, I feel pain in my splinted teeth		0	9	9	20	0	38
16	The splinting material used on my teeth looks natural		0	0	2	35	1	38
17	The pain in my teeth after splinting is gone		0	0	8	28	2	38
18	The discomfort in my teeth after splinting is gone		0	0	16	18	4	38
19	I feel comfortable with the condition of my teeth after splinting		0	0	12	16	10	38
20	I easily brush my teeth that have been splinted		0	5	10	22	1	38
Total			1	14	58	181	50	304
Percentage			0.33%	4.60%	19.08%	59.54%	16.45%	100%

Table 5 shows the results of the percentage of patient satisfaction on the reliability dimension. The majority of satisfied

patients was 59.54%, and those who were very dissatisfied were 0.33%.

**Table 6.** Patient’s Satisfaction with Splinting Treatment Based on Empathy Dimensions

Number	Statement	Respondent					Total	
		Empathy	Very Not Satisfied	Not Satisfied	Not Enough Satisfied	Satisfied		Very Satisfied
21	Co-Ass gives full attention to my complaint		1	0	0	23	14	38
22	Co-Ass understands my situation and feelings during the treatment		0	0	1	21	16	38
23	Co-Ass performs splinting regardless of my social status		0	0	1	18	19	38
24	Co-Ass is polite to me		0	0	1	18	19	38
25	Co-Ass greets and welcomes me well		0	0	0	13	25	38
Total			1	0	2	90	97	190
Percentage			0.53%	0%	1.05%	47.37%	51.05%	100%

Table 6 shows the results of the percentage of patients' satisfaction with the empathy dimension. The majority of very satisfied

patients was 51.05%, and those who were dissatisfied were 0%.

**Table 7.** Patient's Satisfaction with Splinting Treatment Based on Total Dimensions

Dimension	Very Not Satisfied	Not Satisfied	Not Enough Satisfied	Satisfied	Very Satisfied	Total
Tangibility	0	0	2	132	56	190
Responsiveness	0	0	12	75	27	114
Assurance	0	0	9	117	26	152
Reliability	1	14	58	181	50	304
Empathy	1	0	2	90	97	190
Total	2	14	83	595	256	950
Percentage	0.21%	1.47%	8.74%	62.63%	26.95%	100%

Table 7 shows patients' satisfaction with splinting services based on all dimensions. The highest percentage was satisfied patients which was 62.63%, and very dissatisfied patients who were 0.21%.

## DISCUSSION

The result of this study showed 5 dimensions, namely, tangibility, responsiveness, assurance, reliability, and empathy. The tangibility dimension showed that satisfied patients were 69.74%. Several aspects related to the respondent's satisfaction with the tangibility dimension are the completeness and hygiene of the equipment used to perform the splinting procedure, the hygiene of the examination room and dental chair, and the clean, tidy appearance of Co-Ass. Evidence related to respondent satisfaction with the tangibility dimension is according to research conducted by Hastuti et al. stating that patient trust in health services affects the completeness of their equipment.<sup>9</sup> Other evidence is also in accordance with research conducted by Putranti, revealing that facility factors such as tidiness, comfort, and cleanliness of the dentist's practice or clinic greatly affect patient satisfaction.<sup>10</sup> It occurred since patients were satisfied with the service facilities at RSGM UMY, so they felt comfortable receiving splinting treatment at that place.

In the dimension of responsiveness, the result showed that most patients were satisfied, at 65.79%. Several aspects related

to the respondent's satisfaction with the responsiveness dimension were the speed of Co-Ass in dealing with patient complaints, the brief time dentists needed in splinting treatment, and dentists performing splinting actions carefully. The responsiveness dimension is related to health workers providing a service that does not require a long time and does not pose a greater risk to patients.<sup>11</sup> The long waiting time is associated with a decrease in patient satisfaction in health services because time spent with doctors is the strongest predictor of patient satisfaction.<sup>12</sup> Research from Saputra and Andesma also revealed the same result, showing that waiting time data indicates organizational performance in providing health services.<sup>13</sup> Furthermore, in the assurance dimension, the results showed that the most satisfied patients were 76.97%.

The assurance dimension emphasizes on the ability of the service provider to inspire trust and consumer self-confidence that party service providers, especially employees able to meet needs consumers, and provide services with certainty and free from hesitation. Let consumers wait in the absence an obvious reason negative perception in quality service.<sup>14</sup> The patient assessment of health workers such as doctors and nurses, patients will consider the health workers are capable if they provide guarantees such as having skills and being agile in using tools, being thorough in providing care, and being able

to explain medical actions to be taken.<sup>15</sup> In this study, the patient was satisfied with the performance of the young doctor when performing splinting, where the patient did not feel pain at all, thus making the patient feel safe and comfortable. The patient was satisfied with the young doctor due to the explanation of the splinting procedure before the treatment so that the patient knew in advance all the procedures. In the reliability dimension, the results showed that the satisfied patients were 59.54%. Willingness and the ability of healthcare workers to assist patients and respond their request, as well as inform when the service will be carried out as long as it relates to the dimension of reliability.<sup>16</sup>

Several aspects related to respondents' satisfaction with the reliability dimension were Co-Ass' complete performance when conducting splinting, Co-Ass' seriousness when taking splinting, patients feeling pain when chewing food on the splinted teeth, and the good natural look of the splinting material. Furthermore, it also included the pain in the splinted tooth disappeared, the discomfort in the splinted tooth disappeared, the patient felt comfortable in the splinted tooth, and the splinted tooth was easy to clean. The reliability dimension is the responsive attitude of Co-Ass (professional students) and Co-Ass' efforts to serve patients accurately.<sup>17</sup> The reliability of health workers is the ability of dentists and nurses to take action to meet patient needs.<sup>15</sup> In the dimension of empathy, the result showed that the very satisfied patients were 51.05%. Several aspects related to respondents' satisfaction with the empathy dimension are the full attention that Co-Ass gives to patients, Co-Ass's understanding of the patient's condition and feelings when performing splinting, Co-Ass' performance in splinting regardless of the patient's social status, Co-Ass' politeness to patients, and Co-Ass' greeting and welcome to patients in a friendly manner. Patients will feel comfortable and valued due to the caring attitude of the service provider.<sup>18</sup> It is in

line with the research of Vera et al. that the attention given by health workers has a relationship with the satisfaction felt by patients.<sup>19</sup> Patient satisfaction can be measured from patient's interpretation of the services received according to their expectations completeness of facilities and infrastructure, hospitality and courtesy of officers in providing services and skills officers in providing services.<sup>20</sup>

## CONCLUSION

Based on the data above, it can be concluded that the description of the level of patient satisfaction with splinting at RSGM UMY in terms of all five dimensions was that they were mostly satisfied, with a percentage of 62.63%. The dimension with the highest satisfaction level was the assurance dimension, with a percentage of 76.97%.

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