



# Innovation of Dental and Oral Health Service Model through Psychological Approach to Odontectomy with Local Anesthesia

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## ABSTRACT:

**Background:** An odontectomy often triggers high anxiety in patients, which can affect the success and smoothness of the procedure. Oral surgeons work closely with dental and oral therapists in providing care services to manage patient anxiety. Therefore, an oral health care model that integrates psychological approaches is a solution to manage anxiety and increase patient satisfaction with the services received.

**Methods:** Research and Development (R&D) with a quasi experiment pretest-posttest design (non-randomized pre and post-test group control design). The sampling technique was purposive sampling, consisting of 12 control respondents and 12 intervention group respondents. Statistical tests, namely data normality tests using the Shapiro Wilk, Wilcoxon, and Mann-Whitney tests.

**Results:** The results of the effectiveness test of the oral health care model through a psychological approach are effective in reducing patient anxiety (p-value 0.001) and effectively increasing patient satisfaction (p-value 0.001) in the intervention group.

## Conclusion:

The oral health care model through a psychological approach for odontectomy patients with local anesthesia is effective in reducing anxiety and increasing patient satisfaction.

**KEYWORDS:** Odontectomy, Dental and Oral Health Care, Psychological Approach.

## I. INTRODUCTION

Tooth impaction is a condition where teeth cannot grow or erupt normally in the oral cavity because they are obstructed by other teeth, jawbone, or soft tissue.<sup>1</sup> Previous studies reported that the prevalence of tooth impaction reached 60.6%, with the incidence more common in women.<sup>2</sup> Tooth impaction often occurs in the rearmost molars, which can interfere with masticatory function and potentially cause complications. Therefore, immediate treatment is required to prevent further complications.<sup>3</sup> Treatment is performed on impacted teeth that no longer function optimally. The

procedure that can be performed is tooth extraction through odontectomy.<sup>2</sup>

Odontectomy is a surgical procedure to remove impacted teeth. It involves several steps, including mucoperiosteal incision, removal of the bone covering the tooth, splitting of the impacted tooth, and suturing the mucoperiosteal flap back together.<sup>4</sup> Odontectomy can be performed under local or general anesthesia, with the selection of anesthesia tailored to the anatomical condition of the teeth, the difficulty of the operation, and the estimated time of action as well as the patient's condition.<sup>5</sup> These procedures often cause anxiety in patients.

This anxiety can negatively affect the patient experience, lead to increased pain perception, and affect the success and smoothness of the procedure.<sup>5</sup> Anxiety is an unpleasant emotion that a person experiences when facing a recent or upcoming event, giving rise to feelings of fear, anxiety, worry, and nervousness.<sup>6</sup> This condition can be experienced by individuals of various age groups.

Although local anesthesia has become the standard for reducing physical pain during procedures, it does not fully address the psychological aspects of the patient experience. Therefore, managing anxiety through psychological approaches is important to increase patient comfort and improve clinical outcomes. There have been many interventions using psychological approaches including psychoeducation, psychotherapy, and therapeutic communication.<sup>7,8,9</sup> Although several studies have shown the effectiveness of psychological approaches in general health care, their implementation in oral health care, especially in odontectomy procedures, is still limited. Therefore, there is a need for an integrated dental health care service model with a psychological approach to manage patient anxiety during odontectomy under local anesthesia.

Oral health care services follow the principle of interpersonal collaboration, especially in specialized dentistry. Specialist dentists will work together with other health workers in carrying out odontectomy procedures, one of which is dental and oral therapists.<sup>10</sup> In this case, dental and oral



therapists have the authority to provide dental health care to each individual,<sup>11</sup> so that in managing patient anxiety not only doctors but also dental and oral therapists can help manage patient anxiety.

Decree of the Minister of Health of the Republic of Indonesia Number 284/MENKES/SK/IV/2006 describes the steps of oral health care including assessment, diagnosis, planning, implementation, and evaluation.<sup>12</sup> At the implementation stage, there is no organized method or technique to address the needs required by oral surgeons. So the need for an organized approach to care through approach and counseling on odontectomy.

This service model is expected to provide systematic guidance for dental professionals in designing and implementing effective psychological interventions. This will not only increase patient satisfaction but also strengthen the therapeutic relationship between dentists and patients, which in turn can improve the overall quality of dental health services. Based on this background, the researcher is

interested in conducting research related to the oral health service model through a psychological approach to odontectomy with local anesthesia.

## II. METHOD

The method used is Research and Development (R&D), with a quasiexperimental pretest-posttest design (non-randomized pre and post-test group control design). (Pretest-Posttest Control Group Design). The sampling technique was purposive sampling, consisting of 12 control group respondents with the provision of oral health care permenkes 284 of 2006 for patients and 12 intervention respondents with the provision of oral health care service models through a psychological approach. Data analysis using the SPSS 15.0 for windows program. The product/model trial stage was carried out with statistical tests, namely the data normality test using the Shapiro Wilk, Wilcoxon, and Mann-Whitney tests.

## III. RESULTS AND DISCUSSION

Table 1 Data Normality Test

Variable	P-Value	
	Control	Intervention
Patient anxiety pre-test	0.000	0.253
Patient anxiety post-test	0.000	0.000
Patient satisfaction pre-test	0.637	0.000
Patient satisfaction post-test	0.001	0.092

The normality test results show a p-value <0.05, which means the data is not normally distributed and >0.05, which means normal

distribution, so non-parametric tests will be used, namely the Wilcoxon Test for paired data and the Mann-Whitney Test for unpaired data.

Table 2 Patient Anxiety Effectiveness Test

Statistics						
Variable	Group	Mean±SDPretest	Mean±SDPosttest	Delta±SD(Δ)	p-value	Asymp.Sig.(2-tailed)
Anxiety	Control	6.66 ± 1.154	8.66 ± 1.527	2 ± 1.00	0,000*	0,001**
	Intervention	7.66 ± 3.214	10 ± 0.00	2.34 ± 3.214	0,009*	

\*Wilcoxon \*\*Mann-Whitney

The results of the paired data effectiveness test of patient anxiety variables in the control and intervention groups both obtained a p-value <0.05, namely 0.000 and 0.009, meaning that the dental health care service model through a psychological approach for odontectomy patients with local

anesthesia effectively reduces patient anxiety. The results of the unpaired data effectiveness test show that there is a significant difference in reducing patient anxiety in the control group and intervention group with an Asymp. Sig. (2-tailed) 0.001 (p<0.05).



**Table 3 Patient Satisfaction Effectiveness Test**

Statistics						
Variable	Group	Mean±SDPretest	Mean±SDPosttest	Delta±SD(Δ)	p-value	Asymp.Sig.(2-tailed)
Satisfaction	Control	9.33 + 0.577	10 + 0.00	0.66 ± 0.577	0.015*	0,001**
	Intervention	8.33 + 1.527	10 + 0.00	1.66 ± 1.527	0.002*	

\*Wilcoxon \*\*Mann-Whitney

The results of the paired data effectiveness test of patient satisfaction variables in the control and intervention groups both obtained a p-value <0.05, namely 0.015 and 0.002, meaning that the dental health care service model through a psychological approach for odontectomy patients with local anesthesia is effective in increasing patient satisfaction. The results of the unpaired data effectiveness test show that there is a significant difference in increasing patient satisfaction in the control group and intervention group with an Asymp. Sig. (2- tailed) 0.001 (p<0.05).

#### IV. DISCUSSION

Oral health care services include ongoing planning in the areas of promotive, preventive, and simple curative to improve oral health in individuals, groups, and communities. Therefore, the development and implementation of this service model is needed on an ongoing basis. The development of an oral health care service model is an urgent need in an effort to improve the performance of dental and oral therapists. With a structured and directed model, care services can be provided more effectively and efficiently. This model not only aims to ensure that each step is carried out in accordance with established standards but also to provide better oral care. By integrating various aspects of service into a comprehensive model, oral therapists can work more optimally, so that the results achieved will be maximized.

Specialized dental care service standards in hospitals are implemented by Professional Providers (PPA) in accordance with SOAPIE (Subjective, Objective, Assessment, Planning, Intervention and Evaluation), with stages: 1) assessment (subjective-objective), including the collection of subjective and objective data about what the patient feels; 2) diagnosis of dental health care (assessment), including the determination of diagnoses based on the results of the assessment; 3) planning (planning), including implementation planning both independently and collaboratively; 4) implementation (intervention), including chair side assistant and independent actions; 5) evaluation

(evaluation), including evaluation actions after implementation.<sup>13</sup>

A model of dental health care services through a psychological approach for odontectomy patients under local anesthesia was developed to help deal with patients who experience anxiety severe enough to hinder the performance of dentists. The psychological approach emphasizes the influence of a person's psychological factors in determining behavior. This psychological approach develops psychological concepts, especially the concepts of attitude and socialization in explaining a person's behavior. This psychological approach emphasizes the psychological variable factor as its main study, namely, the emotional bond to an action.

The results of the anxiety effectiveness test showed a p-value of 0.001 (p <0.05), meaning that the dental health care service model through a mentoring and counseling approach for odontectomy patients with local anesthesia is more effective in reducing patient anxiety compared to the control group. This is in line with previous research which states that interaction between health workers and patients is an opportunity to share knowledge. Through this interaction, patients can better understand and accept treatment actions, which in turn helps reduce the anxiety they feel.<sup>9</sup>Psychologically, nurses have the ability to provide healing effects for patients through closeness and interaction during care, creating positive relationships, and assisting in the physical and mental healing process, so that patients feel more comfortable and calm.<sup>14</sup>

The results of the satisfaction effectiveness test show that the p-value is 0.001 (p <0.05), meaning that the dental health care service model through a mentoring and counseling approach for odontectomy patients with local anesthesia is more effective in increasing patient satisfaction compared to the control group. In line with research by Ramadhan (2018) that quality health services will increase patient satisfaction.<sup>15</sup>Therefore, the level of patient satisfaction reflects the extent of the quality of health services they receive.<sup>16</sup>



## V. CONCLUSION

1. The dental health care service model through a psychological approach for odontectomy patients with local anesthesia is effective in reducing patient anxiety.
2. The dental health care service model through a psychological approach for odontectomy patients with local anesthesia is effective in increasing patient satisfaction.

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