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The Influence of Educational and Communication Care Models on the Anxiety Levels of Patients Pre-Operation for Minor

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ABSTRACT
Background: Minor surgical procedures in cases of curettage and gingivectomy are carried out by periodontists who collaborate with dental and oral therapists and general nurses. Minor surgical procedures are likely to causes the patient to feel anxious. Developing educational and communication care models for pre-operative minor surgery patients can be a solution to reducing anxiety and increasing patient satisfaction.
Method: Research and Development(R&D) with a quasi-experiment pretest-posttest design (non-equivalent control group). The respondents in this study were 11 patients with minor surgical procedures who were given intervention models and supporting media in the form of animated videos and leaflets, then measured using pretest and posttest questionnaires for anxiety. Data were analyzed statistically using Wilcoxon and Mann-Whitney.
Results: The expert validation test on the educational and communication care model resulted in a p-value of 0.000, which means this care model is feasible, and the results of the effectiveness test stated that its implementation was effective in reducing patient anxiety (p-value 0.003).
Conclusion: The education and communication care model for pre-operative minor surgery patients is effective reduces patient anxiety.
Keywords: Care, Minor Surgery Pre-Operative Patients, Anxiety.

I. BACKGROUND

Health is important for all of us,and living healthily requires a combination of awareness, will, and ability to maintain health. According to the World Health Organization (WHO), periodontal disease is predicted to affect approximately 19% of adults, representing more than 1 billion cases worldwide.[1] Another study published in the Dental Journal found that the reported prevalence of periodontal disease ranges between20% to 50% worldwide.[2]

Disease prevalenceof periodontalglobally has increased by 99% since 1990, with 1,087,367,744.0 cases of periodontal disease inyear2019.[3]Based on data written in the Action Plan for Oral Health in Southeast Asia 2022–2030, in 2019 there were more than 900 million cases of untreated caries, acute periodontitis, and edentulism. It is estimated that there are 307 million cases of acute periodontitis with a prevalence of 20.8% in those aged 15 years and over.[4]

Dental and oral disease is a type of disease that has a wide spread and is one of the most common non-communicable diseases. Based on the 2018 Basic Health Research (RISKESDAS), in Indonesia it was found that the prevalence of periodontitis among those aged 15 years and over reached 67.8%. This figure shows that 7 out of 10 Indonesians experience periodontitis.[5] A follow-up study in 2019 reported that the prevalence of periodontal disease in Indonesia reached 96.58%, making it the second-highest number of cases after dental caries.[6]

If treatment is not taken for chronic periodontitis and gingival swelling, it will get worse, become infected, and inflamed. Inflammatory conditions in the tissues supporting the teeth, such as the gums and jawbone, develop gradually. Curettage and gingivectomy are treatments that are procedures carried out in minor surgery. Minor surgery is a light surgical procedure that uses local anesthesia and can be done using simple equipment.[7,8]

Curettage involves cleaning periodontal pockets or spaces between the teeth and gums using special instruments to remove plaque and tartar that build up around the roots of the teeth. This procedure helps reduce inflammation and improve tissue health. Meanwhile, gingivectomy is a surgical procedure that involves removing part or all of the gum tissue that is infected or affected by periodontitis.However, gingivectomy is usually performed after other treatments such as scaling and root planning have not succeeded in treating gum problems.Both aim to control infection, stop tissue damage, and speed up healing, so that

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patients can maintain optimal tooth and gum health. This treatment can help reduce symptoms such as bleeding gums, loose teeth, and jaw bone drooping.[7,9]

Ministerial decreeHealthRepublic of Indonesia Number 284/MENKES/SK/IV/2006 explains that curettage and gingivectomy treatments are carried out in minor surgery by doctorsspecialistperiodontists who work together with dental and oral therapy, who are responsible for providing dental and oral health services. This process involves several steps, including assessment, diagnosis, planning, implementation, and evaluation. The implementation of specialist dental care services in hospitals follows procedures by the SOAPIER (subjective, objective, assessment, planning, intervention, evaluation, and reassessment) framework.[10]

The complete stages of care are as follows: 1) assessment (subjective-objective) which includes collecting subjective and objective data required by a periodontist dentist; 2) establishing a diagnosis of dental health care based on Maslow's theory of human needs[11]; 3) planning which includes implementation planning both independently and collaboratively; 4) implementation which includes assistance actions besides the doctor (chair-side assistant) and independent actions; 5) evaluation which includes assessment after implementation; and (reassessment/reviced), including reassessment of the action plan after the evaluation results are known.[12] Therefore, there is a need for a special educational and communication care model in specialist periodontist services to reduce patient anxiety.

II. METHOD

The methodusedthat isResearchand Development (R&D).Research development includes 5 (five) main steps, namely information gathering, product/model design, expert validation and revision, testing, and product/model results. The method used in product testing is a quasi-experimental pretest and posttest design (Non-equivalent control group).

Sample for trialthat is11 patients with minor surgical procedures were given intervention models and supporting media in the form of animated videos and leaflets, then measured using pretest and posttest questionnaires for patient anxiety before minor surgical operations.

III. RESULTS AND DISCUSSION

a. Normality test

Table 1 Normality Test of Pre-Operative Data for Minor Surgery Patients

Variable	P-value	
	Intervention	Control
Pre-test anxiety	0.009	0.018
Post-test anxiety	0.018	0.019

*Shapiro-Wilk

The table above shows that the results of the data normality test have a p-value <0.05 so that the data is not normally distributed, so the test that will be carried out is non-parametric test, namely using the Wilcoxon test for paired tests and the Mann-Whthey test for unpaired tests.

b. Effectiveness Test

Table 2 Effectiveness Test Data for Patients with Minor Surgery

Variable	Group	Mean±SD Pretest	Mean±SD Posttest	Delta±SD (Δ)	p-value
Worry	Intervention	36.27 ± 0.786	19.36 ± 1.502	16.91 ± 1.64	0.003*
	Control	37.82 ± 0.751	35.18±1.537	2.64 ± 1.43	0.005*
	p=0,000**				

*Wilcoxon **Mann-Whitney

The table above shows that the results of the paired data effectiveness test p-value for the intervention group are 0.003 (p<0.05), meaning the care resulting from the development is effective in reducing patient anxiety. The p-value of the control group was 0.005 (p<0.05), meaning that the health care model of Minister of Health Decree No. 284 of 2006 was also effective in reducing patient anxiety.

The results of the effectiveness test of unpaired data change value (Δ) pre-post-test with a p-value of 0.000 (p<0.05) which means there was a

significant change in reducing patient anxiety in the intervention and control groups with a difference value (Δ) in the intervention group was 16.91 and in the control group was 2.64.

IV. DISCUSSION

The educational and communication care model for pre-operative patients with minor periodontal surgery is a development model to reducing the patient's anxiety level during treatment.

This modelwas developedfrom by dental and oral health care service modelminister of healthHK.01.07/MENKES/1513/2022and also supported by dental and oral health journals for patients with minor surgical procedures specialist periodontists. In the implementation of dental and oral health care so far it has referred to Minister of Health Decree no. 284 of 2006 is used for all dental poly services not focused on minor surgical patients specialist periodontists.

This care development will be implemented by dental and oral therapists as a form of collaboration with other health workers, such as periodontist specialists, general nurses, radiographers, and other health workers to provide dental health care services to patients/clients as centered goals by the international strategy. Professional collaboration (IPC), namely collaboration between health professionals with different educational backgrounds into one team.[13]

The educational and communication care model for pre-operative minor surgery patients at a periodontist specialist is effective in reducing anxiety levels. The results of the validity test of paired variable data on the anxiety level of pediatric patients showed that the p-value of the intervention group was 0.003 (p-value <0.05), meaning that the dental and oral health care model for patients was effective. Research conducted by Sutrisno (2020), shows that the quality of nursing services with preoperative patient anxiety is significant at 0.000 (p-value <0.05), which means it is effective in reducing patient anxiety. [14]

V. CONCLUSION

Develop educational and communication care models for patients-operative minor surgery at a specialist periodontisteffective in reducing patient anxiety,

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