



E-Booklet Media as Anxiety Relief for Dental Extraction Patients

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ABSTRACT: Anxiety can be experienced by anyone, including patients while waiting for tooth extraction procedures. Anxiety in patients about dental care can affect the pain felt during tooth extraction. As a result of tooth extraction anxiety, tooth extraction affects the refusal of treatment which can worsen the condition of dental and oral health problems. Efforts to reduce anxiety are by providing therapeutic communication and relaxation. There needs to be an approach and communication with innovation and development, namely using the E-Booklet media relaxation model. This study aims to produce an effective and feasible E-Booklet media relaxation model in an effort to reduce anxiety in extraction patients at dental polyclinics. This research method uses the R&D method. The E-Booklet media relaxation model is effective and feasible to apply as a model in an effort to reduce anxiety in extraction patients at dental polyclinics shown with a pvalue=0.000. The E-Booklet media relaxation model can reduce anxiety in extraction patients is shown by a decrease from pre-test 56.04 to post test 21.96. The relaxation model of E-Booklet media is effective in reducing anxiety in extraction patients at dental polyclinics is shown with a value of p-value=0.000.

KEYWORDS: Relaxation Model, E-booklet Media, Anxiety, Patient Extraction.

I. INTRODUCTION

Anxiety is a part of human life at all times. Anxiety can affect self-perception, interactions with others and the body. Anxiety about dental care has also been shown to affect the amount of pain a patient feels. The more anxious and scared a patient is, the greater the pain they feel when undergoing a tooth extraction procedure. Fear has an object and can be identified and explained by the individual[1]. Anxiety is a decentralization response that does not have a specific object power, and has a relationship with feelings of helplessness and uncertainty[2].

Anxiety can be experienced by every individual in a variety of conditions and situations, including dental anxiety. Dental anxiety is a condition of individuals who experience anxiety

about treatments carried out in the field of dental health[3]. The consequences of dental anxiety have an effect on refusal of treatment which can worsen the condition of dental and oral health problems[4]. Dental anxiety can also affect the occurrence of failures or complications in dental procedures. Patients who are anxious to miss a guest appointment or delay treatment[5]. Patients who do not attend regular dental visits due to fear will cause the severity of their dental health problems that continue to increase[6].

The 2018 Basic Health Research Report (RISKESDAS) states that 57.6% of the population living in Indonesia experience dental and oral health problems. Based on this prevalence, the population receiving treatment and treatment from health workers only reached 10.2%. While the remaining 32.2% did not receive treatment or dental care measures[7], [8]. The affordability and opportunity of the public to get dental medical services only reaches 8.1%, which results in worse dental health problems[9]. If you do not receive treatment, the dental disease will become more severe and require tooth extraction or tooth extraction.

Tooth extraction is an act of removing or extracting teeth from the supporting bone of the tooth (alveolar bone). This tooth extraction procedure can be one of the causes of dental anxiety in patients[10], [11].

Anxiety can have an impact on an individual's life if the individual experiences trauma from previous actions. This results in trauma in the future. Appropriate approaches and communication need to be carried out by dental health workers, including dentists and dental and oral therapists. For this reason, it is necessary to carry out a good approach and communication by dentists to patients to reduce their anxiety so as not to cause problems in the patient's treatment process. Each individual has a sense of anxiety and a way of expressing his anxiety, so it is not possible to determine the magnitude of anxiety experienced by the individual. Measurements in anxiety need to be done in research and examined emotionally, physiologically as well as cognitively of the



patient. Measurements can be seen from emerging physiological signs such as sweating and increased pulse rate[12].

Poor dental and oral health can affect daily activities, frequency of activities, affect work concentration, and have an impact on appetite and nutritional intake. This creates a need in dental health facilities that can provide patients with a change in their view of a clinic as a place that is visited and comfortable for patients. In a relaxation model, the right thing is to make the patient feel safe and comfortable to have their teeth checked. An atmosphere that can provide comfort, to reduce anxiety during treatment actions.

II. METHOD

This research method is Research and Development/ (R&D). This study aims to develop a relaxation model of E-Booklet media to reduce anxiety in extraction patients. The R&D method is a research method to produce a new product, develop and improve an existing product, and test the effectiveness of the product. This research procedure includes 5 stages, namely collecting information sources, designing models or products, expert validation and revision, testing products or models and product or model results.

The sample was selected by determining the subjects to be taken according to the inclusion criteria that had been set. The sample in this study is patients who visit the dental poly. The sampling technique that the researcher will use is purposive sampling. The sample of information collection includes interviews and observations to the health office of dentists and dental therapists. The samples in the expert validation test are media experts, media experts, health promotion experts, and psychologists. The sample of the product trial was determined from inclusion criteria which included 1) patients aged 20-45 years; 2) have dental and oral health problems; 3) have never done an examination to the dental poly; and 4) patients who have been to a dental polyclinic but have never had a tooth extraction.

Data analysis uses the Intraclass Correlation Coefficients (ICC) test and the Aiken V test for the results of the expert validation test and Wilcoxon for testing product test data.

III. RESULT

A. Information Collection

The results of information collection were carried out by interview methods with the Health Office, dentists and dental therapists.

Table 1. Results of Information Collection

It	Question	Conclusion Answer
1	What is the role and policy of the government regarding dental and oral health maintenance programs?	<ul style="list-style-type: none"> Regulation of the Minister of Health of the Republic of Indonesia Number 89 of 2015 concerning Dental and Oral Health Servants is an integral part of the overall health of the body, so the maintenance of dental and oral health is important. The Regional Government is responsible for the implementation of safe Dental and Oral Health Services. Dental and Oral Health Services are carried out by prioritizing promotive and preventive approaches without neglecting curative and rehabilitative approaches.
2	Efforts to reduce anxiety in extraction patients ?	<ul style="list-style-type: none"> Dental and Oral Health Services are carried out by providing Communication, Information and Education (KIE) to patients and/or other family members in the form of: <ul style="list-style-type: none"> Counseling/counseling about dental and oral hygiene as well as the correct methods/techniques and diseases that often occur. Community involvement in efforts to overcome dental and oral problems is very important in order to shape behavior optimally healthy in the maintenance of improving dental and oral health.
3	What are the methods to reduce anxiety in extraction patients?	The methods carried out are persuasive and communicative direct approach methods, therapeutic communication, indirect communication with 2D and 3D media and provide a simple understanding so that patients can easily understand the videos presented.
4	What kind of media is suitable for	The media used are: Handheld tools, poster media, or 3D



reducing anxiety in extraction patients?

media that can be seen by patients, audio-visual containing images that are interesting to patients and simple messages that are easy to understand. Posters, images, animated videos, and simple messages so that patients can pay attention

B. Design and Build Models

The resulting data from information collection is used to create model designs. The results of information collection revealed that anxiety was felt when going to the dental clinic for the first time. so that patients are less cooperative in the process of dental care actions. So the researcher made an attractive E-Booklet Media relaxation model for patients through the design of E-Booklet and acoustic stimulation videos so that patients are comfortable when going to do Tooth Extraction.

1. Emergency Management with E-Booklet Media

E-Booklet media is in the form of a sheet of paper that contains a summary of the material. E-Booklet is a small (A5) and thin book consisting of several back-and-forth pages containing writing and illustrations.

The E-Booklet media model is a design of the E-Booklet model is a development with a jungle concept approach. Which has 3 items, namely: therapeutic communication, poster media, and acoustic video stimulation.

a. Therapeutic communication

Nurse-patient communication, also known as therapeutic communication, is a communication that occurs between nurses and patients with the aim of solving the patient's problems, with the intention of changing the patient's behavior towards healing[13].

b. Media Poster

Posters are a medium for notifying an idea, idea, or important thing to the general public. Posters are works of art resulting from graphic design that contain image text, or both that aim to provide messages or information to the community[14].

c. Acoustic Photo Stimulation

Acoustic photo stimulation is an understanding with tellshow-do techniques combined with video slides, photos and music as a relaxation, because videos can produce more effective and longer embedded learning in patients because it involves many five senses[15].

2. Activity Overview

a. Patients come to the clinic

Collection of personal data such as name, age, gender, occupation, and so on.

b. Polydental Waiting Room

- 1) Posters about dental and oral health
- 2) Acoustic stimulation videos that contain how to maintain healthy teeth and mouth.

c. Examination Room

E-Booklet Media Visualization

3. Steps to make E-Booklet media and acoustic stimulation videos

a. The E-Booklet media is as follows:

- 1) Using a graphic design app.

a) Adobe Photoshop

b) Adobe Illustrator

c) Corel Draw

- 2) Selection of material to be delivered.

Material on the meaning of anxiety, anxiety factors, how to overcome anxiety to the dentist, how to maintain dental and oral health, myths related to dental care, facts related to dental care, don't be afraid to check with the dentist, and prolonged toothache. The image is made by yourself or input from the internet is then adjusted to the material that has been prepared, then arrange the image with the material that has been prepared.

b. Acoustic Stimulation Videos

The video contains an animated image of how to maintain dental and oral health, using an animated video editing computer application.

The material presented in the acoustic stimulation video is as follows:

- 1) Brushing your teeth at least 2 times a day in the morning after breakfast and at night before bed.
- 2) Reduce sweet and sticky foods.
- 3) Consuming nutritious foods such as fruits and vegetables
- 4) Check your dentist's teeth regularly at least once every 6 months.
4. Manufacturing Output

The E-booklet contains information about the meaning of anxiety, anxiety factors, how to overcome anxiety to the dentist, how to maintain dental and oral health, myths related to dental care,



facts related to dental care, material about not to be afraid to check the dentist and prolonged toothache. This e-booklet has a combination of 3 items, namely: therapeutic communication, poster media and acoustic video simulation. Video can result in more effective and longer-lasting learning in patients because it engages many five senses

C. Expert Validation

Expert validation is carried out on media experts, media experts, health promotion experts, and psychologists. The Validation Test was carried out by the ICC test and the Aiken V test.

Table 2. Expert Validation Results with ICC Test

It	Expert	Score	P-value	Category
1	Health Promotion Expert	83	0.000	Very worthy
2	Media Members	75		
3	Psychologist	85		

Based on the results of the assessment from expert validators using the Intraclass Correlation Coefficients test, it is known that the feasibility score value is 0.097 with the category of very feasible because the value is >0.91. The p-

value is 0.000. Thus, there is an expert agreement that the E-Booklet media relaxation model is feasible to reduce anxiety in extraction patients, so that product trials can be carried out.

Table 3. Expert Validation Results with Aiken V Test

It	Test Results	Interpretation	Follow-up
1	0,50	Medium validity	Accepted/used
2	0,56	Medium validity	Accepted/used
3	0,50	Medium validity	Accepted/used
4	0,56	Medium validity	Accepted/used
5	0,56	Medium validity	Accepted/used
6	0,56	Medium validity	Accepted/used
7	0,56	Medium validity	Accepted/used
8	0,50	Medium validity	Accepted/used
9	0,56	Medium validity	Accepted/used
10	0,63	High validity	Accepted/used
11	0,69	High validity	Accepted/used
12	0,69	High validity	Accepted/used

In the table above, it can be seen that of the 12 question items, 9 questions in the state of V hit >= 0.6 are declared to be of moderate validity and 3 questions of V hit >= 0.5 are declared to be of moderate validity.

D. Product Trial

Product trials were carried out using the quasi-experimental method with Pre experiment, one group pre-test, post-test. The test used is the Wilcoxon test.



Table 4. Test Results Before and After the E-Booklet Relaxation Intervention

Variable	Statistics		p-value	Difference
	Before	After		
Relaxation of e-booklet media			0,00	
Mean	56,04	21,96		34,08
Standard Deviation	4,087	2,318		1,769

In the table above, the results of the wilcoxon test above show that $p \text{ value} = 0.000 < \alpha = 0.05$, this means that there is an effect of relaxation of E-Booklet media on anxiety in extraction patients.

E. Product

The Anxiety e-booklet contains material about the meaning of anxiety, anxiety factors, how to overcome anxiety to the dentist, how to maintain dental and oral health, myths related to dental care, facts related to dental care, don't be afraid to check with the dentist, and prolonged toothache. The E-Booklet media relaxation model is an E-Booklet model design that has a combination of 3 items, namely: therapeutic communication, poster media, and acoustic video stimulation

IV. DISCUSSION

A. Relaxation of E-Booklet Media as an Alternative Method for Anxiety in Extraction Patients

The results of information collection were concluded that to reduce the anxiety of ecstasy patients, special efforts are needed in the form of Communication, Information and Education (KIE) in the form of counseling and community involvement, in addition to the need for media that can be held, poster media, or 3D media that can be seen by patients, audio visuals containing animated videos, puppet plays, so that patients can be distracted[16].

Anxiety can be experienced by every individual in a variety of conditions and situations, including dental anxiety. Dental anxiety is a condition of individuals who experience anxiety about treatments carried out in the field of dental health[12]. The consequences of dental anxiety have an effect on refusal of treatment which can worsen the condition of dental and oral health problems. 4 Therefore, a model is needed to deal with anxiety in patients

The results of information collection revealed that anxiety was felt when going to the dental clinic for the first time. resulting in patients being less cooperative in the process of dental care actions. Therefore, the researcher created an attractive E-Booklet media relaxation model for patients through the design of the E-Booklet and

acoustic stimulation videos so that patients are comfortable when going to perform tooth extraction.

Relaxation is a technique and procedure that has the goal of reducing tension and anxiety by doing deliberate exercises so that the body muscles can relax and the mind as desired[17]. Considerations in the creation of interactive multimedia that are not based on personal pleasure need to be developed in the E-Booklet media model.

The development of the E-Booklet media relaxation model, namely E-Booklet media as an alternative to managing anxiety of extraction patients, has gone through a preliminary study process to analyze the needs of the target and has gone through several stages of feasibility tests or validations such as validation by health promotion experts, psychologists, media experts and also patients in external tests as material for model improvement.

The results of the assessment from the expert validator are known to have a feasibility score of 0.000 with a very feasible category, so "relaxation with E-Booklet" is relevant in the application of the relaxation model as an alternative to patient anxiety management. This feasibility test is carried out by experts/experts or supervisors, who have extensive experience and insight in their fields. The expert validation process is very important in the development of the model so that it can produce a model that is useful in reducing the anxiety of extraction patients.

Past research stated that good health promotion media is if the media can provide information in accordance with the goals to be achieved, so that the message to be conveyed can be accepted by the target so that they are able to change their behavior. The media can be adjusted by how many targets and vulnerable target groups are[18].

B. Effect of Relaxation on Anxiety in Tooth Extraction Patients

The results of the product trial using the wilcoxon test showed that $p \text{ value} = 0.000 < \alpha = 0.05$, this means that H_1 is accepted and H_0 is rejected, that is, there is a relaxation of E-Booklet media for anxiety in extraction patients. Tooth



extraction is the most common action in the field of dental waxing other than fillings. Tooth extraction is carried out on teeth that can no longer be treated. The tooth extraction performed can cause anxiety in patients which can be affected by various factors.

According to the past research, the subjects who felt anxious about tooth extraction were mainly female with a percentage of 52.94%[3]. The level of anxiety about tooth extraction in children is most found in the mild anxiety category, which is 30 children (44.12%) and severe anxiety is 6 children (8.82%). Anxiety arises due to the lack of information provided by health workers regarding dental care.

Research reports that young adult-age patients and patients who have never undergone a tooth extraction procedure have higher levels of anxiety. In addition, the anxiety level of adult patients before tooth extraction and pre-anesthesia was low while after anesthesia was relatively high. Anxiety is something that is always felt by everyone who is going to have a tooth extraction. Anxiety is very common during a visit to the dentist. Tooth extraction includes actions that trigger anxiety. To achieve the patient's condition so that he does not feel anxious, a technique is needed to reduce anxiety during tooth extraction[19].

The result of this product is an E-Booklet media relaxation model which contains material on the meaning of anxiety, anxiety factors, how to overcome anxiety to the dentist, how to maintain dental and oral health, myths related to dental care,

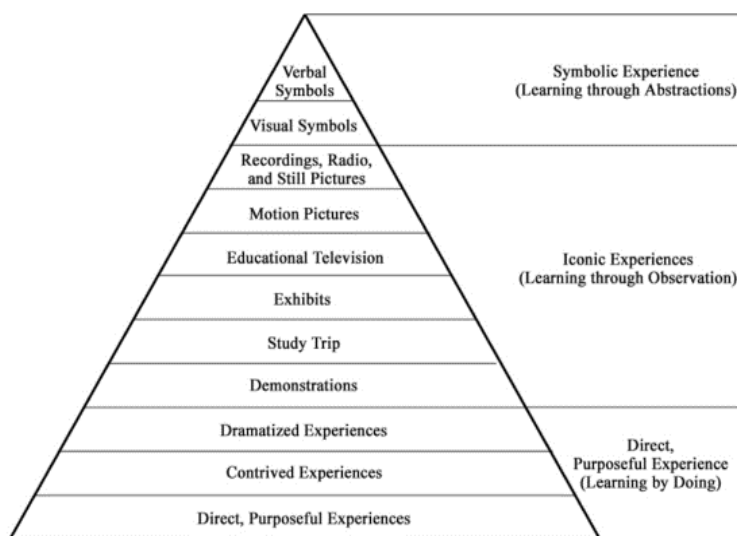
facts related to dental care, don't be afraid to check with the dentist, and prolonged toothache.

The E-Booklet media relaxation model is an E-Booklet model design that has a combination of 3 items, namely: therapeutic communication, poster media, and acoustic video stimulation. Therapeutic communication in the form of nurse-patient communication aims to solve the patient's problems, with the intention of changing the patient's behavior towards recovery. Poster is a wall coating material made of paper or plastic as the end of the finishing. Acoustic photo stimulation is an understanding with tellshow-do techniques combined with video slides, photos and music as a relaxation, because videos can produce more effective and longer embedded learning in patients because it involves many five senses.

According to Edgar Dale described through the 'Cone of Dale's Experience,' the educational process involving more senses will be more receptive and memorable to the targets. The provision of health education will also be more effective and the results will be optimal when using the right methods and media of health education and engaging more senses[20].

The cone system, according to Edgar Dale, states that a person's learning results are obtained through concrete (direct) experience through the circumstances in the life environment, then through artificial objects to verbal (abstract). The learning and interaction process begins with the type of experience that suits the needs and abilities of the group that considers the learning situation.

Figure 1. Edgar Dale Cone





V. CONCLUSION

The E-Booklet media relaxation model is feasible to use in an effort to reduce anxiety in extraction patients at dental polyclinics. This is evidenced by the feasibility test of models with a very feasible category. Research during the period can develop various dental and oral health promotions that are carried out based on websites and sensors.

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