

Doodle Art 3D Model as an Effort to Reduce Patient Anxiety in Health Care Facilities

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Abstract

Background: Every individual who has a health problem, will try his best to overcome the problem of illness by seeking treatment at a health service facility or Fasilitas Pelayanan Kesehatan (fasyankes), but not all individuals dare to seek treatment at a health facility. This is caused by feelings of fear or anxiety of patients. One of the efforts made to reduce patient anxiety is to design health care facilities to be more attractive and not seem scary. An attractive environmental design in a health care facility is to provide three-dimensional picture messages on the walls of the patient's waiting room and/or examination room named "Doodle Art" as health promotion that also reduces patient anxiety. **Purpose:** Producing 3D Doodle Art models to reduce patient anxiety in health care facilities. **Methods:** The method used in this research is Research and Development (R&D) with stages: information gathering, model design, expert validation and revision as well as model testing (using the Quasi-Experimental Control Group Pre-test and Post-test Design method). **Result:** Doodle Art 3D is feasible as an effort to reduce patient anxiety in health service facility. Doodle ART 3d is effective toward reducing the level of patient anxiety in health care. **Conclusion:** Doodle Art 3D is effective in reducing the level of patient's anxiety viewed from the average difference of 0.50 compared to the control group. Doodle Art 3D.

Keywords: Doodle Art 3D, patient's anxiety

I. Introduction

Individuals who experience health problems will make maximum efforts to overcome the problem of illness by going to a health service facility (fasyankes), but not all individuals dare to go to a health facility. This is due to several problems, such as: 1) pre-treatment/medication measures; 2) treatment/medication measures; 3) post-treatment/medication measures.¹

One of the factors that become obstacles in the action of treatment/medication measures is the problem of pre-treatment/medication measures which is the feeling of fear or anxiety of patients towards the action before treatment/medication. Patients who have never been treated by health care facilities and have never seen the course of treatment/medication measures, who only get knowledge from other people's stories and read books, will be afraid of hearing words like "injected" and other treatment/medication measures.²

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Efforts that can be made to reduce patient's anxiety is to design health care facilities to be more attractive and not looks scary, because health care facilities are health service implementing units that provide comprehensive health services with professional doctors and dentists, nurses, midwives and dental therapists.³

An attractive environmental design in a health care facility is to provide three-dimensional picture messages on the walls of the patient's waiting room and/or examination room named "Doodle Art" as a means of health promotion that also reduces patient's anxiety.

II. Research Method

The method used in this research is Research and Development (R&D) with stages: information gathering, model design, expert validation and revision as well as model testing (using the Quasi-Experimental Control Group Pre-test and Post-test Design method). Research and development procedures includes 5 main steps, as follows: 1) information gathering, 2) product/model design, 3) expert validation and revision, 4) product/model trial, and 5) product/model results.

Statistical tests to analyse the paired variable data in the intervention group and the control group, if normal data use paired t-test while not normal data use Wilcoxon test. Statistical tests is to analyse the comparison between the intervention group and the control group, if normal data use the independent t-test, while the not normal use the Mann Whitney test.

III. Research Result

3.1 Information Gathering

The results of the information gathering concluded that to reduce the anxiety of paediatric patients in health care facilities requires special efforts to use an attractive environmental design.

3.2 Product/Model Design

The researcher with the enumerator made the media and modules that will be used as a tool to reduce anxiety in children who check in health services.

3.3 Expert Validation

Table 1. Expert Validity Statistical Test Table

Expert Validation		
n	f (%)	p-value

Relevant	14	100	0,032
Not relevant	0	0	

**intraclass correlation coefficient*

The result of expert validity shows that the p-value = 0.032, which means that the Doodle ART 3 D model is feasible as an Effort to Reduce Patient’s Anxiety in Health Care Facilities

3.4 Produc/model Trial

Table 2. Intervention Group Data Normality Test table

	Shapiro-Wilk		
	Statistic	n	p-value
Pre_Sawit	,967	42	,268
Post_Sawit	,922	42	,007

**shapiro-wilk*

Based on the table above shows that the p-value > 0.05, so it can be concluded that the data are normally distributed then the parametric test continued

Table 3. Data in Pairs of Intervention groups Test Table

	Mean	Std. Deviation	Std. Error Mean	p-value
Pair 1 Pre_Sawit - Post_Sawit	18,976	4,039	,623	,000

**paired t-test*

Based on the table above shows that the p-value of the intervention group is 0.000 (<0.05) meaning that 3D doodle art is effective towards reducing the level of patient’s anxiety in health care.

Table 4. Normality Test of the control group data

	Shapiro-Wilk		
	Statistic	N	p-value
Pre_Gunungpati	,946	42	,046
Post_Gunungpati	,920	42	,006

**shapiro-wilk*

Based on the table above shows that the p-value <0.05, so it can be concluded that the data are not normally distributed then continued with nonparametric test.

Table 5. Paired data test for the control group

	N	Mean Rank	Sum of Ranks	Z	p-value
Negative Ranks	42a	21,50	903,00	-5,647b	,000
Positive Ranks	0b	,00	,00		

**wilcoxon*

Based on the table above shows that the p-value of the intervention group is 0.000 (<0.05) meaning that the health poster is effective towards reducing the level of patient's anxiety in health care.

Table 6. The unpaired data test of the intervention group and the control group

	Kelompok	n	Mean	Std. Deviation	Std. Error	Levene's Test	p-value
					Mean	Sig.	
Difference	Sawit	42	18,98	4,039	,623	,000	,727
	Gunugpati	42	18,48	8,291	1,279		

**independen sampel test*

Based on the table above shows that the p-value is 0.727 (> 0.05) meaning that doodle art and health posters are effective in reducing anxiety levels of patients in health care, but the highest average is the intervention group 18.98 compared to the control group 18.48, which the average difference is 0.50.

3.5 Product Result

Doodle Art 3d in health care facilities as an effort to reduce anxiety levels in paediatric patients

IV. Discussion

The effort made to reduce patient anxiety is to design health service facilities to be more attractive and not looks scary, because health care facilities are health service implementing units that provide comprehensive

health services with professionals.³ The expert validation process is important in developing a product/model in order to produce a useful product/model.⁴

The p-value of the intervention group was 0.000 (<0.05) meaning that 3D doodle art was effective in reducing the level of patient's anxiety in health care. The p-value is 0.727 (> 0.05) meaning that doodle art and health posters are effective in reducing the level of anxiety of patients in health care, but the highest average is the intervention group 18.98 compared to the control group 18.48, which the mean difference is 0,50

Doodle art is the art of drawing out of focus or unconsciously created when someone's attention is not occupied. As a product, doodles are not just mere numbers, but they contain important mechanisms of the mind. Doodles have a role in interior design, structuring, understanding, extending and articulating the experience of individual doodles expressing from certain individual creatures. Doodles can reflect the expression and perception of certain things individually. They really functioning as (results of thought) and can be applied in health care facilities.⁵

According to Shiva (2014), expressive artwork can reduce individual anxiety significantly. Doodle art 3D model, implemented through health promotion, to reduce the degree of anxiety of patients at the health centre. Health promotion is a process of learning to gain knowledge, and instilling the value of a positive attitude about how to take care of yourself to stay healthy.⁶

V. Conclusion

From the results of the research, it could be summarized that Doodle ART 3d is effective towards reducing the level of anxiety of patients in health services.

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