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The Effectiveness of The Android-Based Mapaccing Application to Improve Knowledge of Hormonal KB (Family Planning) Acceptors

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Abstract— Fluor albus is not a disease but a sign and symptom of the female reproductive organs' disease. Fluor albus is also a side effect of using hormonal contraceptives. This research aims to analyze hormonal KB (Family Planning) acceptors' knowledge about fluorine albus using the Android-based Mapaccing application. The Mapaccing application is an educational media about fluorine albus designed in the form of an Android-based application, utilizing internet media that allows creating a learning experience for its users.The method used in this study was the Pre Experiment (one group pre and post). The sampling technique used accidental sampling. Calculation of the sample using the Slovin formula, the number of samples was 30 acceptors of hormonal KB (Family Planning). The education implementation is carried out for two weeks, with two meetings per week and a meeting session length of 60 minutes. This research was conducted in the working area of Puskesmas Tamalanrea Makassar. Statistical test results show that the Android-based Mapaccing application uses increased knowledge by 27%. There was a difference in the mean knowledge of hormonal KB (Family Planning) acceptors with a value of 0.000 <0.05 using the Android-based Mapaccing application with the Wilcoxon Signed Rank test.The Android-based Mapaccing application effectively increasesacceptor KB mothers' knowledge, favored by KB acceptors. It has material coverage that is easy to understand and an attractive appearance.

Keywords: *The Android-Based Mapaccing Application, knowledge, KB (Family Planning) acceptors.*

Introduction

Fluor albus is a fluid that comes out of the vaginal canal other than blood, both smelly and not accompanied by itching in the area around the vagina.[1] Fluor albus is not a disease but is one of the female reproductive organs' signs and symptoms.[2]

Fluor albus is one of the most frequent and disturbing complaints in the reproductive period of women.It can also occur due to reproductive tract infections).[3] Fluor albus can be both physiological and pathological. Physiological fluoride albus usually occurs during ovulation, pregnancy, sexual stimulation, and the use of contraception. Pathological fluor albus can occur due to the female reproductive tract

infection caused by pathogens such as Chlamydia trachomatis, Neisseria gonorrhea, and Trichomonas vaginalis.[4]

Physiological fluorine albus is characterized by a white or clear liquid, not sticky and watery, and has no strong odor. A color change can characterize pathological vaginal discharge, emitting a pungent odor, and there is itching, dysuria, pain, or intermenstrual or postcoital bleeding.[5]

Nearly 75% of fluor albus women in Indonesia have experienced fluorine albus once in their life, and 25% have experienced fluor albus twice or more.[6] Fluor albus occurs in women who use hormonal contraception because the hormone progesterone can change the flora and pH of the vagina so that fungi can easily reproduce.[7]

Prevention can be done to avoid infection due to fluorine albus to clean female organs using clean water, clean, dry, cotton underwear, and not tight, change underwear at least two times a day. Use sanitary napkins or pantyliners. Which is made from soft, can absorb sweat well, and does not contain ingredients that can trigger allergies, replace pantyliners for a maximum of 4 hours, avoid stress.[8]

In the prevention of pathological vaginal discharge, it can be influenced by several inhibiting factors, namely the lack of knowledge about fluorine albus and inappropriate attitudes that weaken a person's motivation to behave in a healthy life.[1] One way that can be done to increase knowledge about fluorine albus is to convey reproductive health material using media. The existing media are in the form of leaflets, books, magazines, and most of them have been produced by the BKKBN, but not everyone gets information to access these media.[9]

New programs emerged, which provided a more comprehensive reproductive health education, which proved efficient and accurate information media. One of them is the emergence of technology-based interventions. This program is centered around technology such as computers Android to increase knowledge about reproductive health problems.[10]

People also think that reproductive health information is very important, especially when accessing information using cellular or android technology.[11] Therefore, it is necessary to develop an android-based reproductive health education media as an educational effort to increase knowledge and prevent risky behavior among the community.[12]

This study aimed to analyze hormonal KB (Family Planning) acceptors' knowledge about fluorine albus using the Android-based Mapaccing application.

Method

This research was conducted in Puskesmas Tamalanrea Makassar, South Sulawesi, in August - September 2020.

The research design used a Pre Experimental (one group pre-test and post-test design). Sampling using accidental sampling technique obtained a sample of 30 hormonal KB (Family Planning) acceptors using the Slovin formula. The number of questions on the pre-test and post-test questionnaires.

The analysis in this study used the Wilcoxon Signed Rank Test to determine differences in maternal knowledge of hormonal KB (Family Planning) acceptors about fluor albus before and after using the Android-based Mapaccing application. This study has received ethical approval from the Health Research

Ethics Committee of the Hasanuddin University Faculty of Public Health with the protocol number: 6346 / UN4.14.10 / TP.02.02 / 2020.

Result

A. Educational history

Table 1. Educational Characteristics of Respondents

Characteristics		n	%
Education	JHS	8	26,7
	SHS	10	33,3
	Bachelor Degree	12	40
Total		30	100

Based on table 1 above, it can be seen that the majority of mothers who accept hormonal KB (Family Planning) at Puskesmas Tamalanrea have a history of S1 education as many as 12 people (40%).

B. Bivariate Analysis

Bivariate analysis was used to test the effectiveness of the development of the Mapaccing educational media with the Wilcoxon Signed Rank Test to calculate the mean difference between the pre-test and post-test scores.

Table 2. Pre and Post Test Knowledge

	Median	Minimum - Maksimun	P-Value
Pretest (n=30)	73	40 – 93	0,000
Posttest (n=30)	100	93 – 100	

Table 2 shows that the answers given regarding fluorine albus are still not correct overall, especially in preventing fluorine albus with a pre-test value of 73%. It indicates that this study's subjects, namely acceptors of hormonal KB (Family Planning), have sufficient knowledge. Whereas in the post-test, after the Mapaccing educational intervention was carried out, the value was 100%. This value can be categorized that the subjects in this study have good knowledge with a p-value of 0.000 smaller than α 0.05. Thus, it can be concluded that maternal knowledge of hormonal KB (Family Planning) acceptors has increased by 27% after the use of the Mapaccing application.

Discussion

One of the factors that influence knowledge is influenced, namely the level of education; in this study, it was found that the highest education level of the respondents was Bachelor (S1). The average respondent does not have prior knowledge about fluorine albus; this is thought to cause a low pre-test score (73%). Maternal knowledge of hormonal KB (Family Planning) acceptors about fluorine albus had a pre-test value of 73% increased to a post-test value of 100%. All respondents' value experienced increased knowledge after being given the android-based fluor albus education media by 27%. This research is in line with Fauziah's research (2017), which found an increase in knowledge of 9.24% related to the prevention of vaginal discharge that occurs after providing counseling using electronic media.[13]

Respondents' low knowledge can occur because they have never received health education, specifically discussing fluor albus. Even though the respondent had received information from health workers, the information was not as clear as the information obtained from the Mapaccing application. According to this theory, knowledge results from feeling or knowing objects through the senses. It will then become a memory of what has been previously learned.[14,15] Increased respondents' knowledge in this study occurred after receiving health education packaged in the Mapaccing android application form. This increase proves the existence of information transformation obtained from the application. It means that the Mapaccing application about leukorrhea to KB (Family Planning) acceptors can increase user knowledge.

Health education that uses technology is increasingly popular these days. The study found that learning using smartphone technology showed positive results by respondents. The first aspect to be assessed in this study is the application can improve learning understanding. The understanding referred to in this aspect is the application's ability to improve understanding of material and quizzes on adolescent reproductive health knowledge. Another related aspect is that the material described is easy to remember[16].

The development of technology and cell phone ownership has increased; this opens up great opportunities to develop and use educational media based on Android, especially in health services, including antenatal care and KB (Family Planning) services.

Indonesia is one of the countries with internet usage, reaching 85% of total internet users with the greatest access using mobile phones.[18] Android or website is one of the technology-based health education media that can be applied in Indonesia.

Research by Elliana et al., 2015 shows a difference in respondents' knowledge between before and after giving an SMS gateway about pregnancy danger signs with an asymp sign value of 0.000 ($p < 0.05$). In this study, there were an increase in KB (Family Planning) acceptors; this can be seen from the pre-test value of 70.43%, while the post-test value was 95.1%, the p-value of 0.000 was smaller than <0.05. Health education supported by technology provides flexibility for users to obtain complete information. Because it can be said that Android-based applications can provide information more quickly, easily, and can be used anywhere and can also be accessed according to the user's wishes. Therefore, Android-based applications provide information to the public, especially KB (Family Planning) activists, to increase leukorrhea knowledge.[17]

Conclusion

The Mapaccing application is effectively used as an educational medium to increase hormonal KB (Family Planning) acceptors about leukorrhea.

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