

Analysis Of Online Health Education Method Through Android On Teenages 'Knowledge And Care Related To Tuberculosis Prevention In SMP Negeri 1 Prambon, Nganjuk District

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ABSTRACT

Tuberculosis is categorized into the category of infectious diseases caused by the bacterium *Mycobacterium Tuberculosis*. Based on research data, the prevalence of tuberculosis cases in Nganjuk Regency is 35%, while the target is 0%, indicating that Nganjuk Regency has experienced an increase in the number of tuberculosis sufferers. Based on previous research, 7 out of 10 children do not know about Tuberculosis. Health promotion strategies are needed to increase knowledge and awareness of adolescents about the prevention of tuberculosis, therefore Health Education techniques are applied. The purpose of this study was to determine the differences and effects of participating in health education on knowledge and concern for tuberculosis prevention. The research design used analytic observational with a case control approach. The research was conducted at SMP Negeri 1 Prambon. The sample amounted to 166 people. Data collection was carried out by means of a questionnaire. Bivariate analysis used the Man - Whitney test. The study found that there was a difference in the mean of knowledge and concern in TB prevention between adolescents who participated and those who did not participate in the Health Education program (p-value 0,000). The effect of health education participation on knowledge is 75% p value - value = 0.000. The effect of Health Education participation on caring is 74% p value - value = 0.000. Health promotion methods using Health Education have succeeded in increasing adolescent knowledge and awareness about the prevention of Tuberculosis and influencing the knowledge and awareness of adolescents in carrying out Tuberculosis prevention.

Keywords : Tuberculosis, Health Education, Health Promotion

INTRODUCTION

Tuberculosis is categorized into the category of infectious diseases where the cause is the TB germ or in scientific language it is called *Mycobacterium Tuberculosis*. Most TB attacks the lungs, but can also attack other organs.

TB WHO Global Report (World Health Organization) in 2013 stated that the number of new pulmonary tuberculosis cases was 112 cases per 100,000 population, and the death rate was 13 cases per 100,000 population. With an estimated prevalence of 272 cases per 100,000 population (Buang et al., 2015).

Based on the research data, the prevalence of tuberculosis cases in Nganjuk Regency from 0.1 to 0.35 shows that Nganjuk Regency has experienced an increase in the number of tuberculosis sufferers by 0.25. The target of Nganjuk Regency is that the prevalence rate for Tuberculosis is 0, but in fact it has increased to 35% (Risksdas Jatim., 2018).

Based on the BPS of Nganjuk Regency, the number of tuberculosis cases in Nganjuk Regency was 53% male and 47% female as many as 22.93 people per 100,000 population. And Prambon Subdistrict was 68.75% male and 31.25% female, as many as 16 people per 70,147 population.

Based on previous research that was obtained from the results of interviews conducted

with 10 students about Tuberculosis, the results were 3 people who knew about Tuberculosis from its understanding to its transmission and 2 students who knew what Tuberculosis was but did not know its transmission and symptoms and 5 people who did not know absolutely what Tuberculosis is and how it is transmitted.

Based on these descriptions, it is important for researchers to research the effect of health education on tuberculosis on increasing knowledge and awareness of adolescents in the prevention of tuberculosis transmission in the Prambon District Region.

METHODS

The research design used analytic observational with a case control approach. The research was conducted at SMP Negeri 1 Prambon. The sample amounted to 166 people. Data collection was carried out by means of a questionnaire. Bivariate analysis used the Mann - Whitney test.

RESULTS

A. With a coalition of the influence of the Online-based Health Education method via Android with Audio Visual (Video) on adolescents about Tuberculosis at SMP Negeri 1 Prambon on adolescent knowledge and care

HEALTH_EDUCATION		N	Mean Rank	Sum Of Rank
Total_P	Not	83	42.11	3495.00
Participating	Come on	83	124.89	10366.00
Total		66		
Total_K	Not	3	42.77	3550.00
Participating	Come on	3	124.23	10311.00
Total		3		
		66		

Based on the results of statistical tests using Man - Whitney, it shows that the Mean Rank or the average ranking of each category of knowledge and concern for adolescents who follow and do not participate in Health Education. Namely, in the knowledge category of adolescents who did not participate in health education the average ranking was 42.11, lower than the average ranking of adolescents who took health education, namely 124.89.

	Total_P	Total_K
Mann - Whitney U	9,000	64,000
Wilcoxon W.	3495,000	3550,000
Z	-11,411	-
Asymp. Sig (2-tailed)	0,000	11,056

Based on the statistical test output, it is known that the Asymp.Sig. (2 tailed) of the knowledge variable of 0.000 and of the variable of concern of 0.000. It can be concluded that

0.000 < 0.05, then "Accepted Hypothesis".

Thus it can be said that there are differences in the knowledge and concerns of adolescents who do and do not participate in health education. Due to the significant difference, it can be concluded that there is an effect of using health education methods on adolescent knowledge and concerns about tuberculosis.

DISCUSSION

A. Differences in knowledge and care of adolescents who follow and do not participate in health promotion programs using the Online-based Health Education method with Audio Visual (Video) via Android about Tuberculosis at SMP Negeri 1 Prambon

Based on the results of the analysis using Man - Whitney, it can be seen that the average knowledge value of adolescents who do not participate in and who participate in health promotion programs using the Health Education method has increased, namely the average knowledge value of adolescents who do not participate in Health Education is 42.11 while the value The average adolescent who attended Health Education was 124.89 with a p value of $0.000 < \alpha (0.05)$.

This means that the value of knowledge about Tuberculosis for adolescents who take part in the Health Education program is better than for adolescents who do not participate in the Health Education program. This is in accordance with the results of research conducted by (Ummami, 2016) which states that there is an increase in knowledge from respondents who previously had low knowledge about Tuberculosis after being given Health Education then had moderate and / or high knowledge. According to Notoatmodjo, 2010 in Putri Handiani Sari's research, 2020 states that counseling is essentially an activity or an individual. With the aim that with the message from the content of the counseling, the community, groups and individuals can get better knowledge.

The average value of adolescent care about tuberculosis has increased in the category of concern, adolescents who do not participate in health education have an average ranking of 42.77, lower than adolescents who take health education, namely 124.23. with a p value of $0.000 < \alpha (0.05)$.

The results of this study indicate that there is an increase in the average score of adolescent care about Tuberculosis who follows the Health Education program. There are far different differences.

Overall, there are differences in the care for respondents who were given health education strategies. In addition, there is also an interaction effect between extension strategies and education level on health care for respondents. (Pratomo, nd)

B. Analyzing the effect of health promotion programs using the Online-based Health Education method with Audio Visual (Video) via Android on adolescents with knowledge of Tuberculosis at SMP Negeri 1 Prambon.

Based on the output of the Man Whitney statistical test, it shows that the Mean Rank or the average ranking in the knowledge category, namely in the group of adolescents who did not participate in health education, the average ranking was 42.11 lower than the average rank of adolescents who took health education, namely, 124.89. Asymp.Sig. (2 tailed) of 0.000. It can be concluded that $0.000 < 0.05$.

One of the factors that influence knowledge is age. Based on the results of the cross tabulation statistical test between age and knowledge, it was found that the level of knowledge of respondents who did not participate in Health Education was mostly in the "Less" category, namely at the age of 14 years as many as 36 students (43%). While the results of cross tabulation between age and knowledge found that the level of knowledge of respondents who took part in Health Education was the most in the "Good" category, namely at the age of 14

years as many as 38 students (45%).

Most of the nonproductive age more than 50 years have a relatively low level of knowledge or less than the productive age because there is a decline in cognitive and psychomotor functions. According to some researchers, this can happen because a group of productive age has a fast and better ability to understand and remember compared to those who are elderly or underage so it is easy to receive information about TB disease.(Sandha & Sari, 2017)

Apart from age, another factor that affects knowledge is gender. Based on the results of the cross tabulation statistical test between the sexes and the knowledge of adolescents who did not participate in Health, most of them were in the "Less" category, namely 33 students (40%) of the female gender. The level of knowledge of respondents who took the Health Education treatment was mostly in the "Good" category, namely the female gender as many as 38 students (45%). Based on the results it was found the "Good" category, namely 58 students (35%) and the "Less" category, namely 54 students (33%).

C. Analyzing the effect of health promotion programs using the Online-based Health Education method with Audio Visual (Video) via Android on adolescents with concerns about Tuberculosis at SMP Negeri 1 Prambon

Based on the results of the Man-Whitney statistical test, it shows that the Mean Rank or the average ranking in the care category, namely the group of adolescents who did not participate in health education, the average ranking was 42.77, lower than the average rank of adolescents who took health education, namely, 124.23. It is known that the value of Asymp.Sig. (2 tailed) of 0.000. It can be concluded that $0.000 < 0.05$.

Based on the results of the tabulation test between age and concern for adolescents who did not participate in Health Education, it was found that the level of concern for respondents who did not participate in the Health Education treatment was mostly in the "Enough" category, namely at the age of 14 years as many as 37 students (44%). There is a cross between age and care for adolescents who take part in Health Education, it is found that the level of concern of respondents who take the Health Education treatment is mostly in the "Good" category, namely at the age of 14 years as many as 55 students (66%)

Based on the results of the tabulation test between sexes and adolescents' care who did not participate in Health Education, it was found that the level of concern of respondents who did not participate in the Health Education treatment was most often found in the "Enough" category, namely 39 students (38%). Between gender and adolescents' concern who attended Health Education, it was found that the level of concern of respondents who received Health Education treatment was mostly in the "Good" category, namely the female gender as many as 55 students (66%).

The results obtained can be explained that female students have a higher concern than male students. (Suhardin, 2016)

Based on the results of the cross tabulation test between care and participation in Health Education, it was found that the level of concern of respondents who took the Health Education treatment was mostly in the "Good" category, which was 83 students (49%).

According to Lane and Sears in Swan (JA, Swan; 1973: 95) states that care is determined based on the amount of experience and emotional originating from a formal, informal or informal learning process. Attention or concern can be described in terms of an acquisition through results which can be measured by interest.(Pratomo, nd)

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Based on the results of statistical tests using Man - Whitney, it shows that the Mean Rank or the average ranking of each category of knowledge and concern for adolescents who follow

and do not participate in Health Education. Namely, in the knowledge category of adolescents who did not participate in health education the average ranking was 42.11, lower than the average ranking of adolescents who took health education, namely 124.89.

And in the caring category, adolescents who did not participate in health education had an average ranking of 42.77, lower than adolescents who took health education, namely 124.23. Based on the statistical test output, it is known that the Asymp.Sig. (2 tailed) of the knowledge variable of 0.000 and of the variable of concern of 0.000. It can be concluded that $0.000 < 0.05$.

According to Tresnayanti, 2015 stated that the higher a person's education level, the more his knowledge and attitude will be affected. Likewise knowledge and attitudes regarding the prevention and transmission of tuberculosis.(Ummami, 2016)

Thus it can be said that there are differences in the knowledge and concerns of adolescents who do and do not participate in health education. Due to the significant difference, it can be concluded that there is an effect of using health education methods on adolescent knowledge and concerns about tuberculosis.

CONCLUSION

1. There is an effect of using health education methods on adolescent knowledge and concerns about tuberculosis.
2. There are 2 components that influence, namely knowledge and care, each of which has $p\text{value} < \alpha$ (0.05). Knowledge has a big role in changing health behavior, including preventing Tuberculosis.
3. The recommendations for efforts to reduce the incidence of tuberculosis is by increasing knowledge and awareness about tuberculosis prevention

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