

The Effect of Pocket Book Promotion Media on Student Knowledge about Risk of Non-Infectious Disease (NID)

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Abstract—Non-Infectious Disease (NID) have become a major public health problem because they add to the economic and social burdens of families and communities. The use of appropriate promotional media is one of the factors in the success of achieving health promotion goals. The purpose of this study is to know the effect of Pocket Book promotion media on students' knowledge about the risks of NID and their prevention efforts. The research design used was quasi experiment. The population in this study were high school students in Banten Province, Indonesia. Samples were taken from different classes. One class was given health promotion by lecturing methods and giving leaflets (Control class) and one class was given health promotion by lecturing methods and giving pocket books (experiment class). Data were analyzed using computer devices with dependent T test in each group and independent T test in the treatment and control groups. The results showed that the average value of students' knowledge about NID in the Treatment group, the first measurement was 51.53, the second measurement 74.17 The results of statistical tests showed that there were significant differences between the mean values of student knowledge in the first measurement and second. In the first measurement control group 58.03 6. Second measurement 67.58. The results of the statistical test showed that there was a significant difference between the average value of student knowledge in the first and second measurements. The average value of students' knowledge about NID in the Treatment group 74.17 Whereas for the control group 67.58 The results of statistical tests showed that there were significant differences in the average value of knowledge of students in the treatment group with pocket books with control groups with giving leaflets.

Keyword—Pocket Book, Promotion Media, Non-infectious Disease (NID).

1 INTRODUCTION

Non-Infectious Disease (NID) has become a major public health problem in Indonesia, because it adds to the economic and social burden of families and communities. The NID number 100 sufferers, 70 people did not realize that they were suffering from NID, so they were late in getting treatment resulting in complications, disability and even death. Prevalence of NID based on the results of the research in 2013 revealed hypertension over the age of 18 years (25.8%), rheumatic (24.7%), diabetes mellitus (2.1%) and coronary heart disease aged > 15 years (1.5 %). The prevalence of the risk of NID in men aged > 18 years (19.7%) and in women (32.9%). Based on existing data that, NID tend to attack younger ages. NID occur because a person's body is exposed to various risk factors for disease in a relatively long time. These various risk factors include smoking, unhealthy diet, lack of physical activity, and consumption of alcoholic beverages (Farmer, et al. 2018). These risk factors will cause physiological changes in the human body (Gallego, et al., 2013), so it becomes a risk factor for the emergence of increased blood pressure, blood cholesterol increases so that in a relatively long time NID occur (Chu, et al., 2013).

Recognizing the increasingly complex and large number of NID in Indonesia, the government through the Indonesian Ministry of Health has made various efforts to develop policies and programs to control the rate of increase in NID and reduce the risk of NID in the community, through various health promotion activities to provide understanding and

awareness to the community to recognize, understand and make efforts to prevent NID from arising (Lee, 2012). Health promotion of NID in adolescents, especially high school students, has not received priority, even though this group is a risky group and potential groups can convey information on NID to peers, families and communities in their environment (Albini, et al., 2019).

Poltekkes Kemenkes Banten The use of appropriate promotional media is one of the factors in the success of achieving health promotion goals. Media promotion plays an important role in the health promotion process, but sometimes it is less noticed by health practitioners. The right use of promotional media can help health practitioners in delivering health promotion material. One of the media that can be used in conducting health promotion is a pocket book (Cas, et al., 2009). Pocket books have several advantages, including use and storage and easy maintenance, durability is used many times and lasts longer. The use of pocket books, in health promotion in the school environment, is expected to motivate students to learn more about the material contained in the pocket book (Rivera, et at., 2019). Pocket books as health promotion are also very effective as the results of study reveal that pocket books affect changes in a person's knowledge, attitudes and behavior.

However, the results of the preliminary assessment of information obtained have never been carried out in health promotion efforts related to NID. Based on the things that the author has described, the author is interested in studying more about health promotion efforts by using pocket book media on students' knowledge about the risk of NID. The research problem in this study was "Is there an influence on

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the Pocket Media promotion on students' knowledge about the Risk of NID and its prevention efforts in one of the Senior High Schools in Banten Province of Indonesia.

2 RESEARCH METHOD

2.1 POPULATION AND SAMPLES

Referring to the quasi-experimental method whose main characteristics are without random use and using existing groups, the researcher uses existing groups as samples (Creswell, 2017). So researchers do not take individual samples but by using class samples. All students in class Science of senior high school as the population in this study. While the sample was students of class Science 1 and class Science 2 who were present at the time of the first measurement and the second measurement (pre and posttest). The incomplete respondent follows the first knowledge measurement or the second will be excluded from the sample. Based on the criteria of the sample, the number of samples in the treatment group was 43 people (science class 1) and class 2 totaling 42 people as a control group; so that a total sample of 85 people. The sample selection is based on the average student achievement in each class. Based on the acquisition of student report scores, the average score of Science 1, therefore class Science 1 was chosen as the treatment group.

2.2 DATA COLLECTION

Data collection of this study using the pretest posttest design method. Data collection is carried out through the following stages: The researcher submits a research permit and coordinates with the school, through the student section, curriculum section and headmaster, then disseminates the research activities to each class.

- Researchers involved midwifery students as a research team (2 people) measuring student knowledge about the risk of NID and prevention efforts, using questionnaires that had been compiled by researchers.
- The researcher promoted the risk of NID and prevention efforts, to control groups and case groups.
- One week after the promotion of both the control group and the case group, the researchers measured the level of knowledge about the risk of NID and prevention efforts (posttest) in the treatment and control groups using the same questionnaire or questionnaire instrument as the pretest questionnaire.

2.3 DATA PROCESSING AND ANALYSIS

After the data is collected, the data is then processed. Then analyzed using dependent T test and Independent T test. The dependent T test was carried out to test the difference in the mean values of the dependent variables in the two groups of the same two populations, while the Independent T Test was conducted to test the difference in the mean value of the dependent variable in two groups of two different populations.

3 RESULTS

3.1 CHARACTERISTICS OF RESPONDENTS

The characteristics of respondents in Class Science 1 (Treatment group / Pocket Book) have a total of 43 students consisting of 18 men and 25 women. At the time of data collection, 7 students did not enter the class, so that 7 students were excluded from the sample, then the authors took 36 students as the study sample. While the Characteristics of Respondents in Class Science 2 (Control group) had a total of 42 students consisting of 14 men and 28 women. At the time of data collection, 9 students did not enter the class, so the students were excluded from the sample. Next the authors took a sample of 33 people.

3.2 LEVEL OF STUDENT KNOWLEDGE NID IN THE TREATMENT GROUP AND THE CONTROL GROUP

TABLE 3
DISTRIBUTION OF AVERAGE STUDENT KNOWLEDGE ABOUT NID IN THE TREATMENT GROUP AND THE CONTROL GROUP

Variable	Mean	SD	P Value	N
Knowledge of the Treatment Group				
Measurement I	51,53	7,153		
Measurement II	74,14	4,053	0,000	36
Control Group Knowledge				
Measurement I	58,03	6,116		
Measurement II	67,58	7,064	0.001	33

The average knowledge of students about NID in the Treatment group for the first measurement was 51.53 with a standard deviation of 7.153. In the second measurement, the average knowledge was 74.14 with a standard deviation of 4.053. The mean value of the difference between the first and second measurements is 22.61 with a standard deviation of 6.418. The static test results obtained p value = 0.000, it can be concluded that there are significant differences between the average knowledge of students in the first and second measurements.

Meanwhile, the average knowledge of students about NID in the Control group for the first measurement was 58.03 with a standard deviation of 6.116. In the second measurement, the average knowledge was 67.58 with a standard deviation of 7.084. The mean value of the difference between the first and second measurements is 9.55 with a standard deviation of 6.418. The static test results obtained p value = 0.000, it can be concluded that there are significant differences between the average knowledge of students in the first and second measurements.

3.3. DIFFERENCES IN STUDENTS' KNOWLEDGE ABOUT NID IN THE CONTROL GROUP AND THE TREATMENT GROUP

TABLE 4.

DISTRIBUTION OF AVERAGE STUDENT KNOWLEDGE ABOUT NID

Knowledge	Mean	SD	P Value	N
Treatment	74,17	4,053	0.000	36
Control	67,58	7,084		33

The average student's knowledge of NID in the Treatment group was 74.17 with a standard deviation of 04.053. While for the control group, the average knowledge was 67.58 with a standard deviation of 7.084. In the treatment group, the average value of knowledge was higher than the control group with a difference in value of 6.59. The static test results obtained a value of $p = 0.00$, meaning that at alpha 5% there is a significant difference in the average between students' knowledge in the treatment group or giving of pocket book media and the control group.

4 DISCUSSION

4.1 STUDENTS' KNOWLEDGE ABOUT NID OF TREATMENT GROUP

The success or failure of students' knowledge depends a lot on how the learning process is experienced by students as students, because in the whole process of education in schools learning activities are the most basic activities. The explains learning is a process that is characterized by changes in one's self that can be reviewed in the form of changes in knowledge, understanding, attitudes and behavior. The results showed that the average knowledge of students about NID in the Treatment group (pocket book) for the first measurement was 51.53 with a standard deviation of 7.153 and a second measurement of 74.17 with a standard deviation of 4.053, with a value of $p = 0.000$, it can be concluded that there are statistically significant differences between the average knowledge of students in the first and second measurements. The average difference in the value of student knowledge in the treatment group in the first and second measurements shows that the provision of information about NID with pocket book media can increase students' knowledge about NID. The average difference in students' knowledge about NID can be understood, because with the provision of information, students obtain additional new knowledge about NID compared to the knowledge that has been previously understood. In addition to the method of providing information about NID, the media used when providing information can also influence students' understanding of NID. The researcher provided information on NID in this group of students with the lecture method followed by the provision of a pocket book on NID that had been prepared by researchers. Students who receive NID disease counseling and receive NID pocket books, can still read and study counseling material about NID after counseling is complete, so that students' understanding of NID is getting better. This supports the increase in the average value of students'

knowledge of NID after counseling with the lecture method with pocket book media. The increase in the average value of knowledge after being given counseling, in this treatment group, in line with the results of research conducted (Dieleman, et al., 2017) which explains the use of pocket book media on students can increase students' knowledge of spice and spice classifications in class.

4.2 STUDENTS' KNOWLEDGE OF NID IN THE CONTROL GROUP

Based on the results of the study obtained an average value of knowledge of the control group students on the first measurement 58.03 and at the second measurement 67.58 with a value of $p = 0,000$. These results indicate that statistically there is a significant difference between the average knowledge of students in the first and second measurements. The difference in the average knowledge of students in the control group on the first and second measurements shows that giving information about NID with the lecture method can increase students' knowledge about NID. The average difference in students' knowledge about NID can be understood, because with the provision of information, students obtain additional new knowledge about NID compared to the knowledge that has been previously understood. Extension workers who provide information about NID in this group are lecturers who are professionally accustomed to providing material to students. The ability and experience of the instructor certainly contributes greatly to the students' understanding of NID, because as educators, the instructor must have prepared material and strategies in an effort to facilitate students to understand the material presented.

Based on various existing theories, explaining that many factors influence one's knowledge, and the provision of information will clearly add to one's knowledge, as the cycles of developing one's intelligence gathered from a collection of information obtained, then form knowledge - new knowledge for someone. Furthermore knowledge - new knowledge is collected, processed and analyzed to finally form a person's intelligence. Therefore we understand very well that there is an increase in the average knowledge of students about NID before being given counseling after being given counseling. The increase in the average knowledge in this group of students is indeed not too high, but if we look at the value of each student, it seems that almost all grades of students have increased. The average increase in knowledge, many factors can influence it, including the ability of students' intelligence, seriousness in following the material during counseling as well as the methods applied. Edgar Dale (1996) explains the media in conducting counseling provides different stimulation, thus giving a different influence on increasing one's knowledge.

4.3 DIFFERENCES IN STUDENTS' KNOWLEDGE ABOUT NID IN CONTROL GROUP AND THE TREATMENT GROUP

The approach of peer counseling methods in the provision of health information including information on NID, is very meaningful collectively through Communication, Information

and Education (IEC) which aims to develop knowledge, attitudes and actions of a person or group of people. The results of the analysis in this study indicate that the average value of students' knowledge of NID in the treatment group (pocket book) was 74.17 while in the control group it was 67.58, with a value of $p = 0.000$. These results indicate that statistically at alpha 5%, there is a significant difference between the mean values of students' knowledge about NID in the treatment and control groups.

These results illustrate that counseling interventions with lecture and pocket book methods and through lecture methods and leaflet administration provide significant differences in the mean scores of students' knowledge about NID. If we analyze more deeply that the average value of students' knowledge about NID in the treatment group is higher than the control group in the first and second measurements, therefore the method of lecturing and giving pocket books in providing health education for students can be a choice.

In this study, it was known that the sample in the treatment group had a lower knowledge ability characteristic than the control group. This was also seen in the results of measurements of knowledge about NID in the first measurement of the average knowledge that was lower than the control group, but in the second measurement (Thorne, et al., 2016) the mean knowledge was higher than the control group. The increase in the average value of knowledge in the second measurement also shows the difference between the treatment group and the control group. In the treatment group the average value of knowledge increased by 22.64 (31%), while in the control group the average value of knowledge increased by 9.55 (15%). The results of this study are in line with that obtained, who explained that the use of pocket books can increase students' knowledge about Sexually Transmitted Diseases. The same result was also revealed which explained that learning using pocket book media can increase student learning motivation (Rice, et al., 2018). Another researcher explained that the development of media images for junior high school pocket books on the subject of temperature and heat, can increase the average value of student knowledge. The results of this study were also reinforced conducted on adolescents, showing that pocket books are very effective in increasing students' knowledge about sexually transmitted diseases. A similar study conducted revealed that pocket books have an effect on increasing knowledge, attitudes and behavior. Another researcher (Dixey, 2013) explained that the use of pocket book media can improve the behavior of female sex workers. There are many factors that influence a person's knowledge, such as education, mass media, social culture, economy, environment and experience. In the education process as an effort to increase one's knowledge, many things have an influence in increasing one's knowledge that is taking part in such education such as educators, students, infrastructure including methods in providing material. Therefore the level of one's knowledge does not only depend on the methods carried out by the material giver, but there are still other factors that can increase one's knowledge. Based on these facts, it needs to be realized by the instructors to always pay

attention to the various factors that must be considered in providing counseling, so that the material presented can be easily understood by the participants, so that the level of knowledge of participants can be improved after extension materials are given.

5 CONCLUSION

Based on the results of the research that the author has described in the previous section, the author can conclude is the average knowledge of students about NID in the Treatment group for the first measurement was 51.53 with a standard deviation of 7.153. In the second measurement, the average knowledge was 74.17 with a standard deviation of 4.053. The difference in the mean value between the first and second measurements is 22.64 with a standard deviation of 7.415. The results of the statistical test obtained a value of $p = 0.000$, it can be concluded that there are significant differences between the mean values of student knowledge in the first and second measurements.

The average knowledge of students about NID in the Control group for the first measurement was 58.03 with a standard deviation of 6.116. In the second measurement, the average knowledge was 67.58 with a standard deviation of 7.084. The difference in mean value between the first and second measurements is 9.55 with a standard deviation of 6.418. The results of the statistical test obtained a value of $p = 0.000$, it can be concluded that there is a significant difference between the average value of student knowledge in the first and second measurements.

The average knowledge of students about NID in the Treatment group was 74.17 with a standard deviation of 4.053. While for the control group, the average knowledge was 67.58 with a standard deviation of 7.084. The statistical test results obtained p value = 0.000, meaning that at alpha 5% there was a significant difference in the average value of knowledge of students in the treatment group / pocket book with the control group giving leaflets.

The Suggestion of this study is control of senior high school educators need to develop lecture learning methods followed by giving pocket books so students can understand in detail the material that has not been delivered to the lecture learning method. In addition, the existence of a pocket book as a support for learning can help students learn because it is more practical and easier to carry around and can be read in various situations because of its smaller form and more information delivered. Moreover, health at the health center is expected when giving health education to schools can use this PTM pocket book media as a method of delivering accompanying information after counseling is given in the hope that more information will be obtained by students.

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