**THE EFFECT OF FAMILY-BASED EDUCATION ON IMPROVING FAMILY HEALTH TASKS IN PREVENTING THE TRANSMISSION OF COVID 19**

During the 2020 pandemic, West Java established 4 red zones (the transmission of Covid-19 was considered high) one of the cities was Cimahi. Based on data, the addition of cases was dominated by family clusters, so the government issued policies that protect family members from Covid-19 transmission, namely changing behaviour to carry out activities by implementing health protocols. Consistency in implementing health protocols is an effort to prevent the transmission of Covid-19. Family-based education has a very important role to socialize and teach family members about health protocols that must be carried out during the Covid-19 pandemic. The existence of family-based education is likely to improve the implementation of health tasks in the family. This study aims to determine the effect of family-based education on improving family health tasks in preventing the transmission of Covid-19. The research design used a quasi-experimental approach with a pre and post-test control group design approach. The research respondents were 31 families for the intervention group and 31 families for the control group. The sampling technique is proportional random sampling. The intervention was given in 3 meetings. Data analysis using Wilcoxon and Mann-Whitney. The results showed that there was an effect of family-based education on increasing family health tasks in preventing the transmission of Covid-19 because the p-value was 0.000. Therefore, it is recommended that the person in charge of the Public Health and Disease Control program implement family-based education to prevent the transmission of Covid 19 in the family and community.

Keywords: covid 19, education, family-based, family health tasks.

Background

Coronavirus or severe acute respiratory syndrome coronavirus 2 SARSCoV2) is a virus that attacks the respiratory system. This disease is called COVID-19 or coronavirus disease 2019 (Ministry of Health, 2020; PROKAMI, 2020; Singhal, 2020). and caused the death of 318,789 people worldwide (WHO, 2020). This disease is spread in 166 countries, including Indonesia. On March 11, 2020, WHO has declared COVID-19 as a pandemic. Then Indonesia declared COVID-19 a national disaster on March 14, 2020. Based on the Information Center and Coordination of Covid 19 West Java Province on September 18, 2020, the number of positive confirmed cases of Covid was 232,628 people in Indonesia and 15,584 people in West Java with a death toll of 9222. in Indonesia and 309 people in West Java. On September 14, 2020, the Governor of West Java determined that there were 4 red zones (the transmission of Covid-19 was considered high) in regencies or cities in West Java, namely Bekasi Regency, Bogor City, Depok City, and Cimahi City. As for the data on positive confirmed cases of Covid-19 in Cimahi City on September 14, 2020, there were 262 people. Based on data from the Cimahi City Health Office, the addition of cases is dominated by family clusters (Pradana, 2020).

Based on the BPS of Cimahi City, Central Cimahi District is the sub-district with the densest population so the risk of Covid-19 transmission is quite high. The number of Covid-19 cases is increasing and the number of deaths continues to increase, triggering concerns from all parties about the enormity of the transmission of Covid-19. This disease is also detrimental to various sectors. This is what underlies the government to issue policies that protect family members from Covid-19 transmission, namely changing behaviour to carry out activities by implementing health protocols.

Consistency in implementing health protocols is an effort to prevent the transmission of Covid-19. To break the chain of the spread of Covid-19, public awareness is needed in carrying out health protocols. However, there are still many people who ignore this recommendation. The family as the smallest social institution in society has a very important role in providing education.

The family is the first and foremost institution in educating and protecting family members. The results of the study are in line with the significant effect (p-value 0.000) after being given family-based education on the behaviour of caring for families with diabetes (Sari, et al, 2016) and also the intention of pregnant women to optimize nutrition in the first 1000 days of life (Naim et al, 2016). 2017). Another study showed that family-based education had a significant effect (p-value 0.044) on the hypertension diet pattern. Based on this, family-based education has a very important role to socialize and teach family members about health protocols that must be carried out during the Covid-19 pandemic. So family-based education is likely to be able to improve the implementation of health tasks in the family. Families who can carry out their health duties will recognize the problem of Covid-19, make the right decisions in dealing with Covid, implement efforts to prevent and overcome Covid-19, utilize health facilities appropriately, and create a home environment that can prevent Covid-19. If the family can carry out their health duties, family members will obey the health protocol. In this condition, the role of the family is very important to always remind family members to obey the rules that have been set by the government. Families have a very important role to always remind their family members to comply with the rules set by the government to implement health protocols during the Covid-19 pandemic. The family is the first and foremost institution in educating and protecting family members through the implementation of family health tasks. The purpose of the study was to determine the effect of family-based education on improving family health tasks in preventing the transmission of Covid-19.

METHOD

The research design used in this study was a Quasy Experimental study, pretest-posttest control group design. This research was conducted in the District of Central Cimahi. This research was conducted from January to December 2021. The population in this study were families in the Cimahi Tengah sub-district, Cimahi City. After calculating using the above formula, the sample size for this study was 28 people, plus the anticipated dropout of 10%, which was 3 people. To determine the intervention and control groups, a draw was conducted. The sampling technique in this study was carried out by proportional random sampling, with inclusion criteria as follows: Families residing in the Cimahi District, Central Cimahi City, Families must participate in all intervention activities in the study. While the exclusion criteria in this study were families who had participated in similar research activities or education/training on Covid-19.

The instrument used in this study is an instrument to measure family health tasks compiled by researchers based on Friedman, Marlyin (2002), Setiawan (2016) and Riasmini (2017) which have been rearranged and modified by researchers. Measurement of family health tasks in preventing transmission of Covid-19 is based on the parameters: Knowledge about Covid-19 and how to prevent transmission based on health protocols in the Covid-19 pandemic. The instrument is a questionnaire with 35 questions in the form of a true-false/yes-no dichotomy. The correct answer is given a score of 1 and the wrong answer is given a score of 0. The assessment ranges from 0-to 100. The results of the assessment can be categorized as high health task implementation, moderate health task implementation 60-79, low health task implementation <60.

Research instruments related to family health tasks have been tested for validity with a correlation coefficient value of r = 0.50 and a reliability test with a Cronbach alpha value of 0.892 (Meilianingsih, 2015). However, in this study, the instrument was modified by the researcher adapted to the conditions of the Covid-19 pandemic and a content test was carried out by the Head of the Covid 19 Task Force, Nursing Department, Poltekkes, Ministry of Health, Bandung.

In carrying out data collection, researchers were assisted by nurses from the Cimahi Tengah Health Center who were previously briefed on research and the process of providing family-based education about Covid-19. Family-based education in the previous plan was given 5 times, but during the COVID-19 pandemic, family-based education was given 3 times with the implementation of health protocols. Each meeting is held for 60-90 minutes. The univariate analysis was carried out to determine the family's health task in preventing the transmission of Covid-19 before and after the intervention using a central tendency, namely the average value and standard deviation. The analysis used is the Wilcoxon signed-rank test and the Mann Whitney U test. The hypothesis is accepted if the p-value < 0. 00 (α = 0.05). Data processing using SPSS program. This research has passed the ethical test with the number 49/KEPK/VI/2021 from the Health Polytechnic of the Ministry of Health Bandung.

**Result**

Table 1 Distribution of Respondents Frequency Based on Family Member Characteristics (n=62)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Characteristic | Intervention | | Control | | p-value |
|  | n | % | n | % |
| * + - 1. Gender |  |  |  |  | 0,541 |
| * + - * 1. Male | 6 | 19,4 | 7 | 22.6 |  |
| * + - * 1. Female | 25 | 80,6 | 24 | 77,4 |  |
| * + - 1. Age |  |  |  |  | 0,499 |
| * + - * 1. 20 – 35 | 2 | 6,5 | 4 | 12,9 |  |
| * + - * 1. 36 – 49         2. 50 - >60 | 18  11 | 58,0  35,5 | 17  10 | 54,8  32,3 |  |
| * + - 1. Education |  |  |  |  | 0,842 |
| * + - * 1. Junior | 13 | 41,9 | 13 | 41,9 |  |
| * + - * 1. Senior | 14 | 45,2 | 13 | 41.9 |  |
| * + - * 1. Academy | 2 | 6,5 | 3 | 9.67 |  |
| * + - * 1. University | 2 | 6,5 | 2 | 6,5 |  |
| * + - 1. Role in family |  |  |  |  | 0,561 |
| * + - * 1. Husband | 7 | 22,6 | 8 | 25,8 |  |
| * + - * 1. Wife | 24 | 77,4 | 23 | 74,2 |  |
|  |  |  |  |  |  |

The table above shows that most of the respondents were female both in the intervention group (80.6%) and 77.4% in the control group. Some of the respondents, namely 56.5% in the intervention group and 54.8% of respondents in the control group were in the age range of 36-49 years. Almost half of them, namely 41.9% of respondents in the intervention group and the control group had junior high school education. Most (77.4%) of respondents act as wives. Based on the homogeneity test of the characteristics of the respondents, it was found that the p-value > 0.05 indicated that the respondents in the intervention group and the control group were homogeneous.

Table 2 Distribution of Family Health Tasks in Preventing the Transmission of Covid 19 Before and After Treatment in the intervention group and control group

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Family Health Task | Intervention Group | | | Control Group | | |  |
| Mean | Min | Max | Mean | Min | Max |
| Pre | 57.54 | 51,61 | 67,74 | 57,64 | 51,61 | 67.74 |  |
| Post | 72.95 | 64,52 | 83,87 | 58.06 | 54,84 | 67,74 |  |
| Perubahan / selisih | 15.41 | **-** | **-** | 0,42 | **-** | **-** |  |

The table above shows family health tasks in preventing transmission of Covid 19 in the intervention group, namely before treatment 57.74 were included in the category of low health task implementation and after treatment 72.95 was in the medium health task implementation category. In the intervention group, there was an increase of 15.41. family health tasks in the control group before treatment or at the initial measurement 57.64 and the final measurement 58.06. This shows that there is a slight increase of 0.42 and is still in the category of low health task implementation.

Picture 1 “ Family health tasks in preventing the transmission of Covid-19 before and after being given family-based education in the intervention and control groups

Table 3 Family Health Tasks in Preventing Covid 19 Transmission Before and After Treatment in the intervention group and control group.

|  |  |  |  |
| --- | --- | --- | --- |
|  | N | Z | *p-value* |
| Intervention Pre – Post | 31 | 4,892 | 0.00 |
| ControlPre - Post | 31 | 1.890 | 0.60 |

The table above explains The Wilcoxon test results show that in the intervention group a p-value of 0.000 means that there is a significant effect of family health tasks in preventing the transmission of Covid 19 after being given Family-Based Education. The results of statistical analysis in the control group showed a p-value of 0.60. This means that there is no significant difference in family health tasks in preventing the transmission of Covid 19 in the initial and final measurements in the control group.

Table 4 Family Health Tasks in Preventing Covid 19 Transmission Before and After Treatment in the intervention group and the control group

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Group | | *N* | *Mean Rank* | *Sum of Ranks* | *p-value* |
|  | Intervention Group | 31 | 47.00 | 1457.00 | 0.00 |
| Control Group | 31 | 16.00 | 490.00 |  |
| Total | 62 |  |  |  |

The table above provides information that there are differences in the increase in family health tasks in preventing the transmission of covid 19 in the intervention group and the control group.

Discussion

Based on the results of the initial measurement of the implementation of family health tasks in preventing the transmission of covid 19, the intervention group showed an average of 57.54 and 57.64 in the control group. This value is in the category of low family health tasks. In this study, the family already knew the meaning and causes of Covid 19 but did not know in detail the symptoms when exposed to covid 19. The process of recognizing health problems, including covid 19, was related to the perceptions, views and knowledge of the family. The higher the knowledge of the family, the faster the process of recognizing health problems will be carried out by the family.

Families are sufficiently aware of the decisions that must be taken to prevent the transmission of covid 19 and create a home environment that can prevent the transmission of covid 19. However, they do not yet know the consequences or impacts of covid 19. This can cause families to not understand the nature, severity and consequences of the problem. According to Bailon and Maglaya, in Friedman (2010), however powerless a family is, the family still has the right and obligation to make decisions. The family's feelings and opinions on their problems and how they solve them need to be considered.

The results showed that the family as respondents had not been able to optimally implement health protocols. From the results of family observations, it is still not appropriate to wash hands, use and remove masks, and apply cough/sneeze etiquette. The results of interviews with puskesmas officers, cadres and families may be because during the covid 19 pandemic, socialization has been carried out in RW 04 and RW 02 about covid 19 and health protocols, but most of the material is given using the lecture method so that it is not optimal to internalize the material provided. . Observations also show that there are no leaflets or posters related to health protocols as information material in RW meeting halls or public places, and there are no public handwashing facilities/facilities. The ability to apply health protocols will be hampered if there is a lack of knowledge and skills and the lack of facilities needed to carry out health protocol procedures.

The results of the univariate analysis on the final measurement of family health tasks in preventing Covid-19 transmission in the intervention group showed an average of 72.95 included in the category of medium family health tasks. In the intervention group, there was an increase of 15.41. This shows an increase in the family in recognizing the Covid-19 problem, making the right decisions in dealing with covid, carrying out efforts to prevent the transmission of Covid-19 through the application of health protocols, utilizing health facilities appropriately, and creating a home environment that can prevent the transmission of Covid-19. 19. This increase was due to the intervention group being given family-based educational treatment. Family-based education is a health education application with a family nursing approach. Health education is all activities to provide and improve knowledge, attitudes and practices for individuals, families or communities (Notoatmodjo, 2010). The implementation of family-based education does not only provide information/knowledge through lecture and discussion methods but also efforts or activities to influence people so that they behave by health values ​​(Fitriani, 2010). The learning process through family-based education is more interesting and interactive so that families can better understand and apply the material being studied.

The family is the only social institution that is first given the responsibility to introduce the desired behaviour, teach adjustment to the social environment and adapt to environmental changes that occur. The family is one of the most important agents of socialization in teaching its members about the rules expected by society. The ability of the family to control the individual continuously is a social force that cannot be found in other institutions. Family-based education will be a determining factor in the application of health protocols that become a new habit among family members (Satrio, 2020).

The task of family health in preventing transmission of Covid-19 in the control group at the final measurement was 58.06. This shows that there is a slight increase of 0.42 but it is still in the category of low health tasks. This is because this group was not given family-based education so there was no additional information on family health tasks in preventing the transmission of Covid-19.

Wilcoxon test results from measurements before and after giving family-based education in the intervention group showed a p-value of 0.000 < (0.05) the null hypothesis was rejected meaning that there was a significant effect of family-based education on family health tasks in preventing the transmission of Covid-19. Family-based education is education given to family members who have a strong relationship and influence in the family so that it can be a reminder and supporter in changing family behaviour to be healthier (Naim, 2017).

Family-based education provides an opportunity for individuals to acquire the information and skills needed to make quality health decisions (Edelman in Rosani Naim, 2017). Health education in the family aims to empower and change families so that they can grow healthy lives and develop health efforts that come from families and communities (Faisal, 2017). This is confirmed by the research results of Tetti Seriati.S that there is a significant effect between family-based education on the implementation of IMD (p-value 0.004). Likewise, the research conducted by Heni R showed that family-based education had a significant effect (p-value 0.044) on the hypertension diet pattern.

The family is the first and foremost institution in educating and protecting family members. The results of research that are in line with this opinion were stated by Rosani Naim (2017) there is a significant effect (p-value 0.000) between family-based education on the intentions of pregnant women to optimize nutrition in the first 1000 days of life. Based on this, family-based education has a very important role to socialize and teach family members about health protocols that must be carried out during the Covid-19 pandemic.

In the pre-treatment / initial measurement, there were no differences in family health tasks in preventing Covid-19 transmission in the intervention group and the control group, both were in the low health task category with values ​​of 57.54 and 57.64. This illustrates that the two groups have the same start in the study. However, the measurement after treatment/end of the analysis showed that there was a significant difference in the family health task in preventing the transmission of Covid-19 in the intervention group and the control group (p-value 0.000). These results can be interpreted that family-based education is meaningful or has an effect on family health tasks in preventing the transmission of Covid-19. Sari, Haroen and Nuriswati's (2016) research shows that family-based education is effective in increasing self-care knowledge and skills. Through family-based education, families can carry out their health duties properly. According to Ridwan (2016) and Rasmini (2017)

Families who carry out their health duties well will be the most important socialization agents in teaching their family members about implementing health protocols during the Covid-19 pandemic. Compliance with family members in carrying out health protocols will protect against Covid-19 transmission. If every family is well entrenched in the habit of wearing a mask when leaving the house, the habit of keeping a distance, the habit of washing hands, then we will believe that controlling the spread of Covid-19 will be effective. Because the family is the smallest unit of a society that greatly influences the degree of public health (Friedman, Bowden, and Jones, 2020).

Conclusion

There is an effect of providing family-based education on family health tasks in preventing Covid-19 transmission in the intervention group with a p-value of 0.000.

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