

Improving Knowledge and Behavior of Children in Dental Care based on Lasallian Health Education

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Abstract - Dental caries is a major dental health problem and often occurs in school-age children 6-12 years as well as children. The objective of this study was to determine the effectiveness of Health Education by using a model of Lasallian education to increase knowledge and behavior dental care of children. The design of this study was True experiment. The independent variable is Lasallian health education and the dependent variable is the knowledge and behavior of children. There are 56 respondents were recruited in this study. Respondents were divided into two groups: the experimental group and the control group consist of 28 people for each group. Data collected by using a questionnaire. Data was analyzed using the Wilcoxon test and Mann Whitney.

The results showed there is no significant difference in knowledge and behavior of dental care before and after treatment. At the Mann Whitney test for knowledge, pre-test phase $P = 0.654 > 0.05$ and a post-test $0.00 < 0.05$ means that the pre-test knowledge there is no difference between the experimental group and control group in post-test have knowledge there is a difference between experimental group with the control group. To conduct pre-test phase $P = 0.374 > 0.05$ and a post-test $0.00 < 0.05$ means that the pre-test there were no differences in behavior between the experimental group and control group in post-test have behavioral differences between the experimental group and control group. Based on the results can be concluded that health education of Lasallian effectively improve the knowledge and behavior of dental treatment of children aged 6-12 years in Public Elementary School Tanamon District of Sinonsayang.

Keywords: *knowledge, behavioral, dental care, Lasallian health education*

I. INTRODUCTION

Dental caries problem is the biggest faced in the field of dental health. Based on the basic health research in 2013 in Indonesia the prevalence of dental caries is 89% of children aged <12 years, North Sulawesi is 29.99% of children aged 5-9 years suffer from dental caries and in South Minahasa district is 44.76%. Based on the data of Ongkaw health center in the district of Sinonsayang in

2014 is 89.7% of elementary school children have caries and in Public Elementary School of Tanamon 89.2% of children aged 6-12 has caries.

The solution to overcome this problem is to provide health education for children and parents about oral health. Health education was done by the health center and school but has not showed significant changes of behavioral in dental care of children. New approach needed to provide health education for school children and parents. Lasallian health education model is expected to improve knowledge and is able to change the behavior of school children's dental care. Health education model is based on the values of Lasallian and pedagogical education such as: teaching mind, touching hearts and transforming life.

The uniqueness from Lasallian health education models illustrated from (1) the content / health education materials are fully equipped to provide the information to improve knowledge about health and dental care of children. (2) Holistic method was used and be able to touch the heart / soul (3). Final results are expected, the change in the behavior of school children's dental care.

Based on the description above, researchers interested in conducting research on improving the knowledge and behavior of children aged 6-12 years in dental care based on the Lasallian health education in Public elementary school of Tanamon.

II. METHODS

The method of this research is true experiment Randomized Pre-test - Post-test Control Group Design. In this design, there are two groups were chosen as research objects. The first group and the second group were measured before (pre-test) and after (post-test). The first group received intervention while the second group did not receive intervention. The second group serves as a comparison group / controller.

The independent variable is Lasallian health education and the dependent variable is the knowledge and

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behavior of children. The populations in this research were students of Elementary School of Tanamon with total 130 people. There are 56 respondents were divided into two groups. Experimental group consist of 28 people and control group 28 people. The sample is determined by using formula of Slovin with random sampling stratification technique (stratified random sampling) from the list of respondents provided by the school based on its class with the formula $n = (\text{class population} / \text{number of total population}) \times \text{number of samples specified}$. The technique of collecting data using questionnaires and interviews guided to children and parents.

Wilcoxon test as an alternative paired sample t test is used to: (1). identifying the knowledge of dental care of children aged 6-12 years before and after Lasallian health education. (2). identify the behavior of dental treatment of children aged 6-12 years before and after Lasallian health education. Mann Whitney test as an alternative of the unpaired t test samples made to: (1). analyze the effectiveness of Lasallian health education model to increase the knowledge of children aged 6-12 years (2). Analyze the effectiveness of Lasallian health education model to improving the behavior of children aged 6-12 years. As an alternative to the use of the Wilcoxon test paired samples t test and Mann Whitney test as an alternative to the unpaired t test sample used because the data does not meet the requirements that the data distribution is not normal on the normality test.

III. RESULTS

Results of the analysis show that as many as 31 people (55.4%), while female is 25 (44.6%). average age of respondents were 8.85 years. Gender distribution of male respondent is bigger.

Tabel 1. Differences of the Knowledge Before and After Intervention

| Group | N | Mean Rank | | Significance |
|------------|----|-----------|-------|--------------|
| | | Pre | Post | |
| Experiment | 28 | 0,00 | 12,50 | 0,000 |
| control | 28 | 9,50 | 8,89 | 0,016 |

Tabel 2. Differences in Behavior Before and After Intervention

| Group | N | Mean Rank | | Significance |
|------------|----|-----------|-------|--------------|
| | | Pre | Post | |
| Experiment | 28 | 0,00 | 14,00 | 0,000 |
| control | 28 | 15,88 | 11,27 | 0,111 |

Knowledge variable with the use of the Wilcoxon test showed an increase in mean rank in the experiment group is 0.00 on pre-test be 14.00 on post test while in the control group decreased mean rank with the pre-test is

15.88 into 11.27 in post test. (Table 1) Knowledge variable with the use of the Wilcoxon test, has significance score obtained in the experiment group with 0,000 the value of $p < 0.05$, it is concluded that there is a difference in behavior before and after intervention in the experiment group. Figures significance in the control group was $0.111 > 0.05$ means that there is no difference in behavior before and after intervention in the control group. (Table 2) From these data it is concluded there is an increasing in the behavior of the experimental group were given Lasallian health education compared with a control group that was not given intervention.

Tabel 3 Effectiveness of Lasallian health education on knowledge

| Group | N | Significance | |
|------------|----|--------------|-----------|
| | | Pre Test | Post Test |
| Experiment | 28 | 0,654 | 0,000 |
| Control | 28 | | |

Tabel 4 Effectiveness of Lasallian health education on Behavior

| Group | N | Significance | |
|------------|----|--------------|-----------|
| | | Pre Test | Post Test |
| Experiment | 28 | 0,374 | 0,000 |
| control | 28 | | |

Mann Whitney test above is obtained an increase in mean rank in the experimental group is 29.46 in the pre-test be 36.34 on post test while in the control group score of mean rank has decreased is the pre-test 27.54 into 20.66 in post test. The significance of the pre-test value is $0.654 > 0.05$. (Table 3). This means there is no significant difference on knowledge between the experimental group and control group, while the value of post test with the significance of $0.000 < 0.05$. This means that there is a significant difference on knowledge between the experimental group were given Lasallian health education with a control group that was not given intervention. It can Concluded that La Sallian health education can improve children's knowledge of dental care. Mann Whitney test above is obtained an increase in mean rank in the experimental group is 30.43 in the pre-test be 37.02 on post test while in the control group decreased in score of mean rank is the pre-test 26.57 into 19.98 in post test. Mann Whitney test pre significance value is $0.374 > 0.05$. (Table 4). This means that there is no difference on knowledge in the experimental group and the control group, while the value of post test of significance is $0.000 < 0.05$. This means that there are significant differences in

behavior between the experimental groups were given Lasallian health education with a control group that was not given intervention. It can be concluded that Lasallian health education can improve the behavior of children in dental care.

IV. DISCUSSION

The result of Wilcoxon test showed an increase in knowledge of dental treatment in both study groups, but more significant increasing seen in the experimental group were given Lasallian health education compared with a control group that was not given intervention. Same also with the behavior, Wilcoxon test showed an increase in dental care behavior in the experimental group were given lasallian health education compared with the control group showed an increase in behaviors. Knowledge test showed an increase in knowledge in both study groups. However, increased knowledge is much higher in the experimental group were given Lasallian health education compared with a control group that was not given intervention. Mann Whitney test results for the behavior of dental care showed improvement on behavioral in the experimental group were given Lasallian health education and there is no increasing on the behavior of the control group were not given intervention. These results are similar with previous studies conducted by the Melkisedekh (2009) and Widyawati (2009) showed an increase in knowledge, attitudes and behavior of elementary school students in improving their status of oral hygiene by providing intervention (health education) in the form of lectures with audiovisual media props and leaflets as well as methods of tooth brushing demonstration. Another study by Rina (2004), showed that health education using lecture method accompanied by demonstration of tooth brushing at students aged 7-8 years can improve knowledge, attitude, behavior and status of oral and dental hygiene of students.

Thus an increase in knowledge and behavior after the dental treatment given based on Lasallian health education in the experimental group, it can be concluded that Lasallian health education effective in improving the knowledge and behavior of children aged 6-12 years in the Public Elementary School Tanamon District of Sinonsayang.

Health education should be provided in a comprehensive manner with an interesting method, can touch the behavior and touching heart and be able to change into a positive direction. Lasallian health education is an innovation that researchers do base on the Lasallian education model that emphasizes the teaching aspect of the mind, touching heart and transforming life. Lasalian

health education content comprises components / materials are full of dental caries, as well as the impact of prevention efforts. The method is used not only lectures, also through demonstrations, sharing and engaging the child's parents, who are expected to touch the heart / soul thus increase knowledge and change the behavior of dental care not only children but their parents only as a motivator child care home. Thus transforming life manifested by an increase in knowledge and behavior of this dental care. This is supported by Covey's theory that explains that an act would be an individual habit to do consistently if it has elements of knowledge, skills and desire to be manifested in the form of behavior as the output of the process.

V. CONCLUSION

Based on the results of this study was concluded that Lasallian education can be the basic / model of health education. Where the content of teaching minds illustrated by the complete health education materials; touching heart illustrated from the holistic and creative health education methods and capable of touching heart; and transforming life illustrated from the resulting of output is behavior changes.

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