Counseling Improves Parental Attitudes for Prevention of Dengue Hemorrhagic Fever (DHF) Shock in Tropical Coastal Area

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ABSTRACT

Dengue Hemorrhagic Fever (DHF) can result in shock complication which eventually lead to death. Family knowledge and attitudes are essential to prevent shock from dengue fever. The provision of education in the form of health education about dengue shock which is self-care strategies for optimizing metabolic control and prevent complications. The purpose of this study was to determine effect of health education toward knowledge and attitude parents for prevention of DHF shock. The research design used was Pre-experimental with one-group pre-post-test design. The population in this study were all parents who have children with DHF. A sample of 20 parents was recruited by a consecutive sampling technique. The variables were measured using a questionnaire and observation sheet. Data analysis was done by a Wilcoxon Signed Rank Test and McNemar Test. The results showed there were increased knowledge and attitudes. Statistical analysis obtained value $\rho = 0.000$ means there were the influence health education of dengue shock to the knowledge and attitude parents of children with dengue hemorrhagic fever. It can be concluded that counselling improves parental attitudes for prevention of DHF shock.

Keywords: Health Education; Parents; Knowledge; Attitude; Dengue Hemorrhagic Fever.

Introduction

Dengue Hemorrhagic Fever (DHF) is a disease caused by dengue virus that is transmitted from person to person through the bite of the Aedes Aegypti mosquito.¹ Signs and symptoms of DHF patients include high fever 4-7 days, headache, muscle pain, joint pain, and bleeding under the skin.² Management with rehydration, antipyretics, and bed rest for DHF patients is adequate because it is self-limited.³ Handling late DHF can lead to dangerous complications.

Dengue Hemorrhagic Fever to date is one of the public health problems in Indonesia that tends to increase the spread and the number of patients. In the last 25 years, hyperendemicity DHF globally has centered in urban tropical areas.⁴ In East Java in 2015 there were 19,942 cases of which 1.4% died.⁵ The death of Dengue Hemorrhagic Fever patients is possibly due to late handling and dengue shock.⁶ This situation can be seen in the report of the incidence of dengue shock in one of the hospitals in Gresik, within three years the average of 34.7% of all cases of DHF.⁷

Signs and symptom of dengue shock are: weak, cold skin, wet skin, restless patients, rapid and weak pulse, blood pressure decreases.⁸ Parents’ knowledge of Dengue Hemorrhagic shock is still lacking where parents do not know what measures should be taken in preventing dengue shock in children. A 2-week survey in the Children’s Room of Muhammadiyah Gresik Hospital found 88.2% of parents to be less knowledge about the meaning of DHF, and the signs and symptom of dengue shock.⁷ Knowledge and parental attitudes are very influential in the attainment of health education.⁹ Nurses as a health worker have a role and responsibility in providing health education, according to the duty of a nurse as educator in giving information.¹⁰ The Muhammadiyah Gresik Hospital Children’s Room only provides information about DHF, but is not specific about
DHF shock. The problem statement in this study was to study the explanation of the influence of counseling on DHF shock on the knowledge and attitude parents of children with dengue fever.

**Method**

**Study Design, Setting, and Sampling:** The research design used pre-experiment with one-group design pre-post-test design. This design was to analyze the knowledge and attitude of parents before and after getting counseling in the prevention of dengue hemorrhagic fever shock.

The population in this study was parents of children patient with DHF in Gresik hospital in tropical coastal areas. A sample of 20 parents of children with DHF was recruited by consecutive sampling technique. Data collection was adjusted to the criteria of the parents can read, write, and their children do not have complications. Data were collected for seven weeks from October to November 2016.

**Study Variables:** The independent variable of this research is health education about prevention of dengue shock. The dependent variable of this study is the knowledge and attitudes of parents in preventing dengue shock. In this study, samples were taken according to the inclusion criteria and exclusion criteria. Health education variables regarding prevention of dengue shock include:

1. Definition of shock
2. Signs and symptoms of shock
3. Complications of shock
4. DB shock prevention

Variable knowledge of parents in the prevention of dengue shock assessed is:

1. Knowing the definition of dengue shock
2. Signs and symptoms of dengue shock
3. Complications from dengue shock
4. How to prevent dengue shock

The variable attitude of parents in preventing dengue shock consists of:

1. Response about the definition of dengue shock
2. Signs and symptoms of dengue shock
3. Complications of dengue shock
4. Prevention of dengue shock

Instruments of knowledge and attitude were assessed with a standard questionnaires which tested as valid and reliable. Counseling instruments were carried out with extension units (SAP) and leaflets. Each subject was conducted pre-counseling data of knowledge and attitude, then counseling for 15-20 minutes every day for three days. Data of knowledge and attitude were obtained after getting counseling on day 4.

**Data Analysis:** Descriptive statistics method was employed to analyze the data to generate the study results in forms of frequencies, and percentages. Inferential data were analyzed with Wilcoxon Signed Ranks Test and McNemar Test with significance \( \alpha \leq 0.005 \).

**Results**

The results of data collection indicate the characteristics of research subjects as presented in Table 1. The subjects of the study showed that the patient’s gender was mostly female. Age of the subjects included in the productive age ranged from 26-45 years. The subject’s education was almost entirely at the senior high school level.

Table 2 shows the research results of respondents’ knowledge before being given counseling intervention on DHF shock, mostly sufficient knowledge (60%). After getting intervention, respondents’ knowledge was almost entirely classified as good knowledge (90%). The result of Wilcoxon Signed Rank Test statistics shows that \( \rho = 0.000 \), which means there is influence of counseling about the shock of DHF on the knowledge of the parents in Marwah Children’s Room Muhammadiyah Gresik Hospital. The respondents’ attitudes before being given counseling about DBD shock were mostly negative (70%). After obtaining counseling intervention, respondents’ attitudes were mostly positive (70%). A small element of respondents’ attitude was still found to be a negative attitude, 30%. Result of the McNemar Test showed \( \rho = 0.000 \), which means there is influence of counseling about shock of DHF to attitude of parents in Marwah Children’s Room Muhammadiyah Gresik Hospital.
Table 1: Sample Characteristics (N = 20)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>%</th>
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<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Female</td>
<td>18</td>
<td>80</td>
</tr>
<tr>
<td>Age</td>
<td></td>
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<tr>
<td>17-25 years old</td>
<td>3</td>
<td>15</td>
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<tr>
<td>26-45 years old</td>
<td>17</td>
<td>85</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
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<tr>
<td>Senior high school</td>
<td>13</td>
<td>65</td>
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<tr>
<td>College</td>
<td>7</td>
<td>35</td>
</tr>
</tbody>
</table>

Table 2: Statistical results of knowledge and attitude of parents for prevention of DHF shock (N = 20)

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Before intervention</th>
<th>After intervention</th>
<th>Wilcoxon Signed Rank Test</th>
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<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>3</td>
<td>15</td>
<td>18</td>
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<tr>
<td>Sufficient</td>
<td>12</td>
<td>60</td>
<td>2</td>
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<tr>
<td>Less</td>
<td>5</td>
<td>25</td>
<td>0</td>
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<tr>
<td>Wilcoxon Signed Rank Test</td>
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<tr>
<td></td>
<td>p = 0.000</td>
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<td></td>
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<tr>
<td>Attitude</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>6</td>
<td>30</td>
<td>14</td>
</tr>
<tr>
<td>Negative</td>
<td>14</td>
<td>70</td>
<td>6</td>
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<tr>
<td>McNemar Test</td>
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<tr>
<td></td>
<td>p = 0.000</td>
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Discussions

Knowledge of DHF Shock: The results showed that counseling about DHF shock had an effect on the increase of parents’ knowledge of the child. These results are in accordance with previous research that the increasing knowledge of parents will affect the incidence of DHF shock. The results are reinforced by the theory that counseling is an effective method to instill knowledge and motivation.

Another factor that can increase the knowledge of parents of children about DHF shock is possibly the characteristics of respondents. This result is consistent with the theory that knowledge is influenced by education, experience, age, occupation, income, and information. Characteristics of the subjects, including the age of patients, are included in the productive age which greatly affects the mindset and the process of acceptance. This situation is in accordance with the theory that the adult age of individuals can make self-adjustment independently of social life, being able to decide the problem rationally, and, thus, stable and mature emotionally. This condition shows a person can decide rationally about the importance of understanding DHF shock for himself.

The next characteristic is the level of subject education above the basic education. The published theories suggest that the more educated one becomes, the easier the person is to receive information. This condition shows that a person’s higher education will tend to get information, and the more information that goes in, the more knowledge gained.

Attitude to DHF Shock: Results of research on the counseling of DHF shock can improve the attitude of parents of children in preventing the occurrence of shock. This result is in accordance with previous research that health promotion improves parental attitudes in preventing dengue fever. This result is in line with previous theories which show that attitudes are a form of evaluation or reaction of feelings, whereby something that we have been experiencing is shaping and influencing our appreciation of the stimulus. This condition explains that the response will be one of the foundations of the formation of attitudes, to be able to have a response and appreciation one must have experience related to psychological objects.

Respondents who are waiting for and receiving DHF shock prevention counseling can increase awareness of the importance of holistic distraction prevention of dengue fever. Awareness is the attractiveness (Interest) of respondents in applying the intervention of DHF shock counseling through various considerations (Evaluation). Interest becomes the motivation to try (Trial) and implement (Adoption) prevention intervention of DHF shock as a whole. Increased knowledge of respondents makes the basis of increasing attitudes, because attitudes are the embodiment of knowledge received by respondents caused by infection of dengue virus transmitted by the female Aedes mosquito. This is the second leading cause of deaths in Champasack Province, where Pakse district has the highest number of this outbreak. This cross-sectional study was designed to assess the knowledge, attitude, and practice of people regarding dengue disease.
in 9 villages of the Pakse district from July to September 2006. Purposive sampling was done to collect data from 230 subjects. They had a fair knowledge about the vector 163 (70.9%) A good understanding of the handling of shock DHF makes respondents positive, because of the supporting, characteristics of respondents, such as age, and education.

The results also indicate that there are still respondents who have negative attitude after obtaining counseling. This result is possible because there are respondents who entered early adulthood, so like to make adjustments independently, and demand rationalization. This condition indicates that the emergence of attitude is based on the evaluation process in individuals who give conclusions on the stimulus in the form of positive or negative. This condition supports that parents who are given counseling should be given in-depth knowledge. The result of knowledge research is still found by respondents whose knowledge is sufficient, so there is a possibility that his attitude is still negative and major outbreaks occurred in 2006 and 2010. However, no data on the local knowledge, attitude and practice (KAP This knowledge will form the trust, so that it becomes the basis of one’s attitude toward a particular object.

Conclusion

Prevention of DHF shock can be achieved through health education interventions in the form of counseling. Counseling on the prevention of DHF shock can improve the cognition and affection aspects (knowledge and attitude) of parents of dengue fever in doing self-care and prevention.

The nurse as an educator should be active in providing counseling to patients and parents about the signs, symptoms, and impact of DHF Shock. Researchers are then expected to develop counseling by adding online media in counseling as a form of innovation in educational activities.

Ethical Clearance: The ethical approval for this study was granted by the IRB committee of the Faculty of Health Science at the Universitas Gresik in 2016.

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Conflict of Interest: None

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