



The effect of health education by giving leaflets media on behavior changes in prevention of asthma relapse in asthma patients

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Abstract

A quite high asthma relapse was found in Public Health Center. One of the implementation which can be done is to arrange health education about the prevention of asthma relapse. This study aimed to determine the influence of health education and leaflet media on behaviour changing to prevent asthma relapse among asthma patients. The design of this study was pre-experimental with 26 sample sizes of asthma patients who were taken by purposive sampling technique, and the criteria are age > 18, relapse in 2015, and without other diseases. The Independent variable was health education and leaflet media, while the dependent variable was knowledge and attitude. Data were taken using the questionnaire that analyzed with the Wilcoxon signed-rank test ($\alpha < 0.05$). The results showed that health education and leaflet media have a significant influence on improving the knowledge ($p = 0.000$) and the attitude ($p = 0.000$) to prevent asthma relapse among asthma patients in Public Health Center. It can be concluded that health education with leaflet media influences preventing asthma relapse on asthma patients. Therefore, further research needs to research the effect of health education with other media that can influence behavior changing to prevent asthma relapse.

Keywords: asthma relapse, attitude, behavior, health education, knowledge, leaflet

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INTRODUCTION

Asthma is known as a disease that is characterized by the presence of intermittent wheezing. It arises as a response to exposure to an irritant or allergen (Surachmanto et al., 2018; Sims et al., 2020; Clark, 2013; Hanum and Subiyanto, 2015). Asthma patients will often experience a recurrence if they can not take preventive measures of asthma. One of the causes of asthma relapse is inadequate the knowledge and attitude of the patients in preventing asthma relapse. The frequency of asthma relapse can increase periodically. Asthma relapse is still common even though it has been effectively managed by most asthma patients (Nursalam et al., 2017; Wahyuni et al., 2018). The prevalence of Asthma is increasing every year. The estimation of Asthma patients in the world is around 300 million people, and it is estimated to increase to 400 million patients in 2025 according to the survey from The Global Initiative for Asthma (GINA) in 2014 (Clark, 2013). In developing countries such as Indonesia, asthma is still a serious public health problem (Atmoko et al., 2011). Asthma is among the top ten causes of illness and death, 10% of Indonesians suffer from

asthma (Depkes, 2008). According to the Basic Health Research in 2013, the prevalence of asthma in Indonesia in 2013 was 4.5%. This prevalence has increased from 2007 which was 3.5% (Depkes, 2007).

The increasing number of people with asthma because asthma is not a priority disease to treat (Clark, 2013). Although asthma is a common disease, people and health workers consider asthma to be an easily treatable disease. This causes asthma treatment only when symptoms of shortness of breath occur. Treatment can be done by using a bronchodilator without complete asthma management. So that this condition will persist, and decreasing the quality of life also caused further complications (Syamsu and Budu, 2007; Dahlan, 2000).

The best management of asthma must be done early with various preventative measures so the patients will not experience a recurrence. One of the preventive actions which can be done is to increase the knowledge about asthma prevention by providing health education to the patients (Musliha, 2010). Furthermore, the

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knowledge will increase their awareness and establish the behavior in preventing Asthma (Notoatmodjo, 2010). In providing health education, media or tools are needed to facilitate the people in receiving information. One of the media or tools most often used in the delivery of health education is the leaflet media. A leaflet is a sheet that contains a lot of information in writing and drawing (Thriemer et al., 2018; Wahyuni et al., 2019). The advantages of leaflet media are durable, spread easily in large community, the effective cost, no need electricity, easy to carry, and facilitates understanding (Notoatmodjo, 2005).

This study uses a theoretical approach developed by Lawrence Green and Kreuter (Green and Kreuter, 1991). This theory explains the factors that influence a person's behavior and how to act on it. Factors that influence behavior are predisposing, enabling, and reinforcing factors. The variables that will be changed in this study are only knowledge and attitudes as part of the predisposing factors, while the domain of asthma patients' actions is not examined. This is because assessing actions require intensive observation in their daily living (Maulana et al., 2009). Health education which is carried out with leaflets is expected to shape the behavior of asthma recurrence prevention, through increased knowledge and attitudes. So, patients understand and are able to avoid the recurrence of asthma. This study discusses health education and media leaflets on behavior change to prevent asthma recurrence among asthma patients.

METHODS

Based on the research objectives, this research was a pre-experimental study with one group pre-post design. This design aimed to reveal the cause and effect by involving a group of subjects. The subject group was observed again after the intervention by conducting a post-test. The population in this study were all asthma patients during January-December 2015, consisting of 30 people. This study used a purposive sampling method, so the number of samples used is 26 respondents.

The independent variable in this study was health education by providing leaflet media. The dependent variable in this study was the knowledge and attitudes of asthma patients in Palembang Public Health Center. Furthermore, the data were analyzed using a Wilcoxon signed-rank test to find out the effect of health education by giving leaflets to change the behavior of asthma patients on asthma relapse prevention with asthma significance level $\alpha \leq 0,05$.

RESULTS

This study indicated that there was an increase in knowledge in the prevention of asthma relapse before and after the intervention (Table 1). It was found that

Table 1. Knowledge and attitude in the prevention of asthma relapse before and after health education (leaflets)

| Variable | Before Intervention | | After Intervention | | p-value |
|------------------|---------------------|------|--------------------|------|---------|
| | n | % | n | % | |
| Knowledge | | | | | |
| Poor | 4 | 15.4 | 0 | 0 | 0.000 |
| Fair | 20 | 76.9 | 5 | 19.2 | |
| Good | 2 | 7.7 | 21 | 80.8 | |
| Total | 26 | 100 | 26 | 100 | |
| Attitude | | | | | |
| Less affection | 11 | 42.3 | 0 | 0 | 0.000 |
| High affection | 15 | 57.7 | 26 | 100 | |
| Total | 26 | 100 | 26 | 100 | |

most respondents, 20 people (76.9%), had quite good knowledge before the intervention. After the intervention, the number of respondents with good knowledge increased by 21 people (80.8%).

In Table 1, it can be seen that health education by providing leaflet media has a significant influence on the knowledge of asthma patients in the prevention of asthma relapse. This was indicated by the results of the statistical test Wilcoxon signed-rank test obtained significance value $p=0.000$.

The results of this study indicated that there was a change in attitude in the prevention of asthma relapse before and after intervention was given (Table 1). Before given health education by giving a leaflet about prevention of asthma relapse, it was found that the majority of respondents, 15 people (57.7%) had high affection. After given health education by giving leaflets, the number of respondents with high affection increased by 26 people (100%). Health education by providing leaflets has a significant effect on the attitude of asthma patients in preventing asthma relapse. This was indicated by the results of the statistical test Wilcoxon signed-rank test obtained significance value $p=0.000$.

DISCUSSION

Knowledge of respondents increases after being given health education with leaflet media. This statement is in line with the opinion of Notoatmodjo in 2012 which states that health education is an effort or activity to assist individuals, groups, and communities in improving knowledge, attitudes, and skills to achieve optimal healthy living (Notoatmodjo, 2012). Providing information through health education can change the understanding of someone who originally did not know to know, and was unable to become able. This also inlines with research conducted by Astuti, Sulastri, Kp, and Kartinah in 2012 which stated that health education influenced maternal knowledge in consuming Ferrous tablets at Sri Lumintu Maternity Hospital in Surakarta (Astuti et al., 2012).

Media in health education can also increase one's knowledge. Media is a tool used by educators in delivering educational or teaching materials that function to help and demonstrate something in the education or teaching process (Notoatmodjo, 2012). One of the

media that can be used in health education is a leaflet. The research on leaflets on changes in knowledge had also been done before by Karimawati, Widodo, Kep, and Listyorini in 2013 which get a result that there is an influence of health education with leaflets media on mothers' knowledge about nutritional intake at toddler age in Surakarta (Karimawati et al., 2013). A research conducted by Pramiputra, Kep, and Dwi Handoyo in 2014 indicates that health education using the leaflets method is more effective in increasing knowledge of the society about the prevention of dengue in Wonorejo Polokarto Village (Pramiputra et al., 2014). A research conducted by Kawurian, Fajarsari, and Mulidah in 2010 indicates that leaflets are effective in changing the knowledge of young women in the range of dysmenorrhoea in SMP Kristen 01 Purwokerto (Kawurian et al., 2010).

According to Notoatmodjo in 2012, attitude is a close reaction or response from someone as a response to stimulus or object (Notoatmodjo, 2012). According to the theory of Green and Kreuter in 1991, attitude becomes one of the predisposing factors that influence the creation of (Green and Kreuter, 1991). The formation of attitudes is influenced by experience, education, and interactions with the environment. These factors will shape the beliefs, feelings, and tendencies to behave. In this study, there are no respondents with low attitudes. One of the factors that influence attitudes is the respondent's experience in preventing asthma recurrence. The respondents' experience can be seen from the results of how long the patients suffer from asthma, where the most are started since childhood stage (61.54%). The experience of respondents since their childhood in dealing with asthma relapse caused them to have the ability to overcome their asthma.

The theory of Green and Kreuter in 1991 revealed that health education is one of the factors in influencing, changing, maintaining, or increasing behavior towards more positive directions (Green and Kreuter, 1991). Through health education by giving leaflets can increase knowledge where respondents are directed to be able to understand the prevention of asthma relapse. Then this knowledge will lead respondents to think and build emotions and form respondents' beliefs to be able to change their attitudes in a more positive direction. This theory supports the results of the research showing that the majority of respondents experienced an increase in knowledge and changes in attitudes towards a more positive direction after they have been given health education by giving leaflets.

Research about leaflets on attitude changes had also been conducted before by Rompas, Karundeng, and Mamonto in 2014, which states that after teenagers been given a leaflet, there was a change in their attitudes after the health education about sexually transmitted diseases (Rompas et al., 2014). A research conducted by Karimawati et al. In 2013 indicates a result that there is an effect of health education with leaflet media on mothers' attitudes regarding nutrition at toddler age in Surakarta (Karimawati et al., 2013).

CONCLUSION

Health education and the provision of leaflets media can increase knowledge and attitude change towards a positive direction in preventing asthma relapse in an asthma patient. Future research of the effect on this intervention on the patients' practice should be done to examine the effectiveness and challenges.

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