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Pengaruh Edukasi Terhadap Perilaku Masyarakat Dalam Swamedikasi Batuk Anak di Desa "X", Kecamatan Purwantoro, Wonogiri

The Effect of Education on Community Behavior in Children's Cough Self-Medication in "X" Village, Purwantoro District, Wonogiri

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Abstract

In recent years, self-medication has become a prevalent practice, including in Central Java Province, Indonesia. Prior studies have suggested that education might influence the behavior of communities that self-medicate. This study specifically aimed to determine the effect of community education on self-medication behavior for children's cough in Village "X," Purwantoro District, Wonogiri. A preliminary study was conducted with a pretest-posttest one-group approach. A cluster sampling technique of 256 respondents was performed by distributing questionnaires to the public community before and after being given education. The data were analyzed descriptively with univariate and bivariate tests based on Wilcoxon tests. As a result, the behavior of respondents has significantly improved after being given education with consecutive pretest and posttest. As the posttest result, the community's knowledge, attitudes, and behavior were in a high category in performing self-medication for the children's cough, notably compared to the pretest one with the sufficient class. The Wilcoxon test analysis was obtained at 0.000 (p <0.05), concluding that providing adequate education positively influences the community's behavior in self-medication for children's cough.

Keywords: *Behavior, Cough, Education, Self-Medication*

Abstrak

Pengobatan sendiri atau swamedikasi telah menjadi praktek yang umum dilakukan dalam beberapa tahun terakhir, termasuk di Provinsi Jawa Tengah, Indonesia. Beberapa faktor pendorong telah dipelajari sebelumnya, dengan edukasi menjadi salah satu factor utama dalam mengembangkan perilaku masyarakat dalam swamedikasi. Penelitian ini bertujuan untuk mengetahui pengaruh edukasi terhadap perilaku masyarakat dalam swamedikasi batuk anak di Desa "X" Kecamatan Purwantoro, Wonogiri. Metode penelitian ini menggunakan pendekatan *one-group pretest-posttest* dengan pengambilan sampel menggunakan teknik *cluster sampling* dan didapat sampel sebanyak 256 responden. Penelitian dilakukan dengan menyebarkan kuesioner kepada masyarakat umum sebelum dan sesudah diberikan edukasi. Data dianalisis secara deskriptif dengan uji univariat dan bivariat berdasarkan uji *Wilcoxon*. Hasilnya, perilaku responden meningkat secara signifikan setelah diberikan edukasi. Berdasarkan hasil post-test, pengetahuan, sikap, dan perilaku masyarakat dalam pengobatan sendiri batuk anak berada pada kategori tinggi, apalagi dibandingkan dengan pretest dengan kategori cukup. Analisis uji *Wilcoxon* menghasilkan nilai 0,000 (p<0,05), menyimpulkan bahwa pemberian edukasi yang memadai berpengaruh positif terhadap perilaku masyarakat dalam swamedikasi batuk anak.

Kata kunci: Batuk, Edukasi, Perilaku, Swamedikasi.

Introduction

Health is a state of well-being that encompasses physical, mental, spiritual, and social aspects, enabling everyone to live productively in social and economic terms [(1)]. There are several ways to restore health, including self-medication [(2)]. Self-medication refers to an individual's attempt to address personal complaints by using simple medicines obtainable at pharmacies or drugstores without guidance or a prescription from a doctor[(3)]. According to BPS (2020), in Indonesia, self-

medication has gained more intention recently. Between 2018-2020, the population ratio, which did self-medication, increased from 70.74% to 72.19%. In particular, the population ratio of self-medication in Central Java Province rose from 66.06% to 68.43% [5]. One driving factor causing this increase is the public awareness that health is essential. Education, information systems, and socio-economic life can increase people's knowledge of self-medication [6]. Knowledge, attitude, and behavior are interrelated stages in self-medication.

Yusuf *et al.* (2021) reported that, regarding the level of knowledge and behavior of self-medication, respondents who got well informed about self-medication behavior were only 43%. Respondents' behavior in self-medication could be improved if they were given more health education or knowledge. Istiqomah *et al.* (2021) showed that the respondents who used traditional medicine had negative behavior before education and improved towards positive behavior after education.

Self-medication is often used to treat complaints and minor illnesses, particularly coughs [9]. Coughing is the body's defense process from the respiratory tract and represents a reflex to irritation of the lungs or airways [10]. The prevalence of the disease with cough complaints is around 20% in adults and 15% in children [11]. In 2020 the percentage of Wonogiri people who self-medicate was 73.76% [5]. A lack of health services in the surrounding area can cause this self-medication. The impact that can arise from this lack of health services is the inaccuracy in self-medication, so errors occur.

This study aimed to determine the community's behavior in performing self-medication for children's coughs in "X" Village, Purwantoro Wonogiri District, and the effect of education on their self-medication behaviors. There has been no research on this topic in the Wonogiri area, especially in Purwantoro District.

Research Method

Tools and Materials

The tool used is a questionnaire. The questionnaire has been previously evaluated for validity and reliability. It consisted of 5 parts, including (1) an informed consent sheet, questions related to (2) demographic data, (3) knowledge, (4) attitudes, and (5) self-medication behavior for children who cough. The scale used to measure knowledge, attitude, and behavior variables in this study uses the Linkert scale.

The material employed in this study was a questionnaire regarding the knowledge, attitudes, and behaviors of the people in "X" Village, Purwantoro District, who perform self-medication for children's coughs.

Procedure

Data collection was conducted under direct observation from the respondents. A cluster sampling technique was applied to the total population of 256 respondents. This Number of samples was determined based on Isaac and Michael's Formula under an error rate of 10% and 90% truth. The data collection was conducted in sequence steps: pretesting, providing education, and post-testing. The questionnaire materials were distributed to respondents directly and were filled out before and after being given education. The pretest was given for one week. After the respondent filled out the pretest, educational leaflets were

immediately distributed, and three days later, a posttest was given to find out the final result of the respondent.

Several inclusion criteria applied during data collecting were (1) the respondent's ages are between 19 – 55 years; (2) able to communicate well; (3) not working as health workers and have a health education background; and (4) able to read and write. Meanwhile, the exclusion criteria were (1) the respondents who filled out the questionnaire were imperfect and (2) multiple data filling.

The parameters regarding the respondents' knowledge, attitudes, and behaviors were analyzed using the Linkert scale. The response of 'strongly agree', 'agree', 'neutral', 'disagrees', and 'strongly disagrees' were scored as 5, 4, 3, 2, and 1, respectively. Each respondent's score was then calculated to find the percentage value as in Eq. (1), then categorized based on the percentage results.

Tabel 1.

$$P = \frac{F}{N} \text{ X } 100\%$$

Explanation :
p = Score Percentage Value (%)
F = Number of correct answers
N = Ideal Score

Table 1. Scoring Categories Related To The Knowledge, Attitude, And Behavior In This Study.

Category	Score
Very high	≥ 85%
High	69% - 84%
Sufficient	53% - 68%
Low	37% - 52%
Very low	≤ 36%

Descriptive analysis with the univariate test was performed based on the percentage of respondents' characteristics. Subsequently, a bivariate analysis was conducted with the Wilcoxon test to determine the effect of education on behavior (e.g., knowledge, attitudes, and behaviors) in performing self-medication children's cough. The parameter of Asymp Sig (2-sided) was evaluated, whereas if the value is less than 0.05, it will reveal that providing education influences community behavior in child cough self-medication. Meanwhile, if the Asymp sig (2-sided) value is higher than 0.05, it will have no significant effect.

Finding and Discussion

Characteristics of respondents

Table 2 shows the characteristic of the respondent. Among 256 respondents who filled out the questionnaire, most were women. This typical tendency was reported in [12], mentioning that women mostly carry out medicinal treatments because women tend to be more informative in knowledge, perception, and

behavior related to medical treatments than men. Women tend to rely on memories and social conditions. Besides, women also have faster absorption than men.

Based on the personal age category, the highest age distribution is 36-45 years, where this personal Age is said to be late adulthood, the ripe period for making decisions. The personal Age during self-medication is a prominent factor because it correlates to personal experiences that affect his mindset. The older he gets, the more mature his mindset will be, and the knowledge he gains will be more comprehensive, so his preferences in determining and consuming drugs are getting more extensive [13].

Regarding educational background, SMA/SMK graduates were the most significant population. A person's academic level affects the knowledge he gains—the higher the educational level, the better his knowledge of self-medication treatment. Higher education provides more access to information or insight toward performing a more proper and precise self-medication treatment.

In addition, the housewife was the most dominant population in the case of working activities among the respondents, meaning that housewives tend to perform self-medication. This is due to self-medication being considered more practical and not interfering with other work activities. The housewives often buy medicine and give cough medicine to their children. This tendency agrees with the behavior of a typical Indonesian family; a mother is usually required to put the child's interests first.

Table 2. Characteristics of Respondents

Gender	N (Amount)	Percentages (%)
Female	185	72,3
Male	71	27,3
Personal Age (years)		
18-25	18	7,0
26-35	86	33,6
36-45	96	37,5
46-55	56	21,9
Background educational level		
Not completed in primary school	3	1,2
Elementary School Graduation	62	24,2
Graduated Junior High School	87	34,0
Graduated Senior High School	91	35,5
College	13	5,1
Working activities		
Housewife	116	45,3
Private employees	66	25,8
Farmer	25	9,8
Laborer	23	9,0
Doesn't work	15	5,9
Self-employed	11	4.3

Note: data were collected from March to May 2022.

Knowledge of respondents before and after being given education

Table 3 shows the respondents' knowledge before and after being given education. 'Pretest' and 'Posttest' refer to the conducted tests before and after being given education, respectively. Before being given education, most were in the category of sufficient knowledge, as notable of 113 respondents (44.1%). Interestingly, after being provided education, the respondent's knowledge about self-medication for children's cough significantly increased. Most were in the high knowledge category, as of 137 respondents (53.5%).

This finding agrees with Sari *et al.* (2019), mentioning that respondents' knowledge increases with individual awareness, which is first aware of and knowing the object. Then the individual will begin to be interested and pay attention to the thing, subsequently begin to consider or evaluate the good and bad actions or attitudes that will be taken toward the object.

Table 3. Knowledge Before and After Education

Knowledge	N(Amount)		Percentages (%)	
	Pretest	Posttest	Pretest	Posttest
Very high	0	5	0,0%	2,0%
High	22	137	8,6%	53,5%
Sufficient	113	98	44,1%	38,3%
Low	98	16	38,3%	6,3%
Very low	23	0	9,0%	2,0%

The respondents' knowledge increased after education, most of whom were in the high category. One factor that can cause an increase in knowledge after being given an education is related to the background education level. As described in the characteristics of the respondents, most had high school educations. The higher the level of education, the easier it is to absorb new information. Knowledge is positively related to the education level, where the higher the education a person has, the more information he gets, making it easier to process the delivered information. In addition, the educational information between the pretest and posttest was about self-medication for cough. The information provided through posters and leaflets affects the increasing knowledge because the messages are conveyed mostly through audio-visuals. Since sight is more dominant than other senses, visual messages are easily understood and conveyed.

Respondent's attitude before and after being given an education

Table 4 shows the respondent's attitudes before and after being given education. Before being given education, most were categorized as having a sufficient attitude, with 146 respondents (57.0%). After being given education, the respondent's attitude against self-medication for children's coughs has significantly improved, with the majority in the high attitude category, with 201 respondents (78.5%).

This improving attitude after being given education was agreed to another study reported by Sulastri (2018), mentioning that, toward maintaining personal hygiene of teeth and mouth, the majority of respondents (69.4%) had a good attitude in maintaining personal dental and oral hygiene after being given education. Meanwhile, the rest (30.6%) still had a bad attitude. In essence,

someone will show an evaluation response in the form of positive or negative towards something new. According to Noto's theory, attitude is a response that appears before action. The initial process is that someone is aware of and knows the given stimulus.

Table 4. Attitudes Before and After Education

Attitude	N(Amount)		Percentages (%)	
	Pretest	Posttest	Pretest	Posttest
Very high	8	12	3,1%	4,7%
High	52	201	20,3%	78,5%
Sufficient	146	41	57,0%	16,0%
Low	50	2	19,5%	0,8%
Very low	0	0	0,0%	0,0%

Most respondents' attitudes became well accepted and positively responded to the provided education about coughing in children. Their understanding of the provided information drove the increase in respondents' attitudes after being given the education. In addition, their education level also affects their attitudes while making decisions.

The behavior of respondents before and after being given an education

Table V shows the respondents' behaviors before and after being given education. 'Pretest' and 'Posttest' refer to the conducted tests before and after being given education, respectively. Before being given education, most were in the sufficient category, notably 160 respondents (62.5%). After being given education, most respondents' behaviors against self-medication of children's cough have significantly increased to the high category, as of 199 people (77.7%).

This improvement in behavior after being given education was agreed to another study reported by Safitri *et al.* (2021), mentioning that, regarding cough self-medication, the majority of respondents (95.52%) had good behavior in cough self-medication after being given education. Meanwhile, the rest (4.48%) still have sufficient behavior.

Table 5. Behavior Before and After Education

Behavior	N(Amount)		Percentages (%)	
	Pretest	Posttest	Pretest	Posttest
Very high	7	14	2,7%	5,5%
High	41	199	18,0%	77,7%
Sufficient	160	39	62,5%	15,2%
Low	46	4	16,0%	1,6%
Very low	2	0	0,8%	0,0%

The positive changes in behavior, becoming the high category, can be attributed to the majority of respondents having fairly good knowledge after being educated. Well-established personal knowledge is influenced by factors such as education level, personal Age, environmental, and occupational factors. A high level of education would make it easier for an individual to gather and understand new information. The higher a person's education level, the more information is obtained. The behavior change is also driven by respondents receiving information

through educational media (i.e., posters and leaflets). A non-formal educational process (i.e., health education or counseling) could also be used to adjust personal behavior toward better knowledge, skills, and attitudes.

The Effect of Education on Community Behavior (Knowledge, Attitude, Behavior).

Self-medication of over-the-counter and over-the-counter drugs must follow the general principles of drug use, which are well-known as appropriate and safe drugs. A technical health worker should manage self-medication, providing support and advice in communities wishing to self-medicate. In the case of self-medication, the use of over-the-counter drugs and over-the-counter medicines is still limited, so a technical health worker should play an essential role in providing information on related disease indications, as well as behavior in choosing effective, safe, economic drugs, and how to use drugs properly and correctly.

Parents' knowledge of self-medication for children's cough in this study included several aspects related to coughing, i.e., the definitions of self-medication for cough, cough symptoms, drug marking, drug use, drug dosage, drug storage, drug side effects, and methods of drug selection. Self-medication using over-the-counter drugs and limited over-the-counter medicines by ordinary persons must be based on several considerations that are easy to implement, affordable, and alternatively available from the consulting medical personnel, even with self-medication health workers can only overcome the symptoms of the disease [17].

In order to understand the effect of education on the community's behaviors (knowledge, attitude, and behavior) in performing cough self-medication in children, the obtained data were first analyzed using the normality test based on the Kolmogorov-Smirnov test. In this normality analysis, the data are normally distributed if the significance value (Sig) is greater than 0.05. Otherwise, the data are not normally distributed if the significance value (Sig) is smaller than 0.05. However, the results of this normality test revealed that the significance value (Sig) was 0.000, smaller than 0.05, meaning that the obtained data in this study were not normally distributed.

Subsequently, since the data were not normally distributed, those data were subjected to the Wilcoxon test to determine the effect of the parameter study. If the result of the Wilcoxon test is the Asymp Sig (2-sided) value < 0.05, it means there is an effect, and If the Asymp Sig (2-sided) value is > 0.05, it means there is no effect.

Interestingly, the Wilcoxon test result showed that the Asymp sig (2-sided) was 0.000, significantly smaller than 0.05, which reveals the prominent effect of providing education on the behavior (knowledge, attitude, behavior) of the community in self-medication for children's cough. Providing education could enrich insight and be a source of information for the community. The information provided both from posters and leaflets regarding self-medication and cough disease is able to increase public awareness toward appropriate, suitable, and responsible performing self-medication for children's cough. This trend result also agreed with another report by Mardiati, N & Restapaty, R (2018), which mentioned the influence of the use of learning video media on understanding communication and drug counseling in students [18]. It could be suggested that different forms of educational media are applicable to perform public education regarding self-

medication, such as print media (i.e., leaflets, booklets, flip charts, and posters), electronic media (i.e., radio, video, and television), board (or billboard) media in public transportation [19]. Research by Nur Hudzaifah (2021), quoted from Notoatmodjo, explained that the purpose of providing health education or counseling is to improve health status and prevent disease, maintain a degree to prevent complications and help individuals or families overcome health problems.

Conclusion

The respondent's behavior, encompassing knowledge, attitude, and action, was assessed both before and after the education was provided. During the pretest, the respondent's behavior fell into the sufficient class. After the education intervention, their behavior rose to the high class, suggesting that education effectively increased and broadened the respondent's understanding of self-medication for children's coughs.

Additionally, the Wilcoxon Sign Rank Test yielded a p-value of 0.000, less than 0.05, indicating a significant influence on the respondent's behavior before and after receiving education about self-medication for cough. The findings imply that personal behavior in self-medication can be enhanced with greater health education or knowledge.

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