



The Relationship Between Knowledge And Teachers' Perception Of Smoke-Free Area (KTR) In Its Implementation In State Junior High School Of Sleman District

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Abstract

Background: KTR is an area prohibited for smoking, promoting, making and/or selling cigarettes. The scope of KTR are locations with academic importance. Sleman Regency has KTR regulation under Sleman Regent's Regulation No 42, 2012. The KTR implementation in Public Junior High Schools (JHS) has not been effective, as depicted by non-smoking rates data which is only 86%. Field studies also showed that some teachers still smoke in schools.

Aims and Scope of the Paper: This research aimed to determine the relationship between knowledge and teachers' perception in KTR implementation in Sleman District Public JHS.

Methods: The method of this study is cross-sectional design with multistage random sampling involving 223 teachers from 11 Public JHS.

Results: Univariate data analysis used to determine the characteristics, knowledge level and perceptions of KTR implementation. Bivariate analysis used to determine the relationship between knowledge and perception. This study was conducted from April to May 2019. Based on total scores, 118 respondents (52.9%) had high knowledge about KTR and 147 respondents (65.9%) had good perceptions of KTR implementation. The chi-square analysis resulted in $p=0.031$ with $r=0.149$.

Conclusion: The majority of teachers have high knowledge and good perception of KTR. There is a positive correlation between knowledge and teachers' perceptions of KTR implementation in Sleman District Public JHS.

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INTRODUCTION

Indonesia is the third country with the largest number of smokers in the world, after China and India (WHO, 2011). The prevalence of smokers in Indonesia has reached 29.3%, with the highest prevalence in the Riau Islands. The prevalence of smokers by age group is highest in the 30-34 age group (Riskesdas, 2013). Meanwhile, for smokers in the 13-15 age group, the prevalence is 21.4% (WHO, 2017).

The prevalence of cigarette consumption in the Special Region of Yogyakarta Province is high, with 21.2% smoking daily and 5.7% smoking occasionally. Active smokers are mostly in the 25-29 age group, with a prevalence of 29.4%. By occupational group, the prevalence of smokers who are employees is 26.5%. The cigarette consumption rate, based on the number of cigarettes in Yogyakarta, reaches 10 cigarettes per day (Riskesdas, 2013).

Smoking behavior at the age of 15 years and above can arise due to the influence of several factors, one of which is the school environment (Kurniadi, 2017). In a study of teachers' smoking behavior in schools, there were 23 teachers who smoked in schools (Imelda, Juanita, & Rusmalawaty, 2012). Teachers' smoking behavior can be imitated by students who observe them. Furthermore, cigarette sales at shops near schools make it easier for teachers to obtain cigarettes (Sari, Affandi, Fauzi, & Aksa, 2015).

Smoking behavior has impacts in various areas, such as health burdens, social and economic burdens, and the environment. These impacts are not only felt by active smokers; they can also be felt by those around them. The health impacts are evident in the health problems that can arise from smoking, as listed on cigarette packaging. Health problems caused by smoking include cancer, heart attacks, pregnancy and fetal disorders in women, and impotence in men (Ministry of Health, 2015; Sismanto, 2015).

Protection against the impacts of smoking in Indonesia is achieved through the creation of smoke-free areas (KTR). KTRs are legally recognized through government regulations, including Sleman Regent Regulation No. 42 of 2012 concerning KTRs in Sleman Regency (Regulation of the Regent of Sleman, 2012). School areas are included in the scope of KTR, according to the Minister of Education and Culture Regulation No. 64 of 2015 concerning KTR in schools. The purpose of implementing KTR in schools is to create a clean, healthy, and smoke-free school environment (Minister of Education and Culture of the Republic of Indonesia, 2015).

Factors originating from individuals such as knowledge and attitudes, as well as behavior, also contribute to realizing maximum implementation of KTR (Yulianto, 2007). Individuals who have knowledge about KTR are significantly related to implementation, especially in teaching and learning environments (Renaldi, 2014). Individual perception is also an internal factor in maximizing the implementation of KTR. The public perception is that KTR benefits from creating a smoke-free environment (Hayati, Prabandari, & Lestari, 2017).

Teacher commitment as a member of the school community is crucial in increasing teacher participation in the implementation of KTR in schools. Teachers must have a sense of responsibility and be willing to participate in the implementation of KTR in schools. The purpose of this study was to determine the relationship between knowledge and teachers' perceptions of KTR in its implementation at Sleman Regency Junior High Schools.

METHOD

This research is a quantitative analytical correlation study with a cross-sectional design. The researchers selected the research locations using multistage random sampling. The researchers conducted simple random sampling twice to determine the primary and secondary units. The primary units obtained were 5 sub-districts: Depok, Godean, Seyegan, Ngaglik, and Ngemplak. The secondary units as selected sample locations were 11 schools: SMPN 1, 2, and 3 Depok, SMPN 1 and 2 Godean, SMPN 1 Seyegan, SMPN 1, 2, and 4 Ngaglik, and SMPN 1 and 2 Ngemplak.

Inclusion criteria included both male and female teachers who had taught at the school for more than six months, both those with and without a history of smoking, and those willing to participate in the entire research process. Exclusion criteria included non-permanent teachers or those who did not reside at the school office (teachers on extended hours). The sample size was 223 junior high school teachers.

This study used a questionnaire on knowledge about KTR and a questionnaire on perceptions about KTR implementation. The questionnaires were developed by the research team and first underwent validity and reliability tests. Content validity was tested through consultation with expert lecturers in the fields of KTR, knowledge, and perceptions. Construct validity was

tested on 75 teachers in Mlati District. Several modifications were made to the teacher perception questionnaire on KTR implementation, allowing the researchers to conduct a construct validity test on 223 teachers in Sleman Regency.

The calculated *r* value of the construct validity test items of the knowledge questionnaire is in the range of 0.262-0.545 and the Cronbach's alpha reliability is 0.609. The KTR implementation perception questionnaire has a valid item calculated *r* value in the range of 0.181-0.612 with a reliability value of 0.785. The knowledge reliability value according to the Cronbach's alpha rule > 0.6 is still in the acceptable stage if it is in the range of 0.6-0.715.

Respondents each completed two questionnaires, each taking 20 minutes. Respondents answered the most correct option in the knowledge questionnaire about KTR, while in the perception questionnaire about KTR implementation, respondents chose Yes or No.

Data analysis included two types: univariate and bivariate. Univariate data analysis was used to determine the distribution of respondents' characteristics. Demographic characteristics included gender, age, length of teaching, education level, smoking status, and smoking family members. For respondents who smoked, smoking behavior characteristics were also analyzed. Univariate analysis also showed a picture of teachers' knowledge level about KTR, as well as a picture of teachers' perceptions of KTR implementation at Sleman Regency Junior High Schools.

Bivariate analysis was used to determine the relationship between knowledge and perceptions of KTR implementation among junior high school teachers. The bivariate analysis used chi-square analysis. The data were categorical, with knowledge divided into high, medium, and low, while perception consisted of good and bad perceptions.

This research has received approval from the ethics committee of the Faculty of Medicine, Public Health, and Nursing through letter number KE/FK/0249/EC/2019. Before completing the questionnaire, respondents were given informed consent and consented to participate in the study. Teacher respondents who completed the consent form were allowed to continue the research process.

RESULTS AND DISCUSSION

Results : Respondent characteristics

The results of the descriptive analysis for respondent characteristics include demographic data of the research respondents (Table 1) and respondents' smoking behavior (Table 2). Table 1 shows that the research respondents were predominantly female, with 154 teachers (69.1%). The largest age group of respondents was 51-60 years old, with 143 teachers (64.1%). The highest level of education of respondents was mostly bachelor's degree, with 194 teachers (87.0%) with an average length of teaching at the school where the data were collected for 5 years or more. There were still 20 teachers (9.0%) who were smokers. 68 teachers (30.5%) still had family members who smoked.

Table 1. Demographic characteristics of respondents

Characteristics	Amount (n total=223)	Percentage(%)	mean	Standard deviation
Gender	Woman	154	69.1	
	Man	69	30.9	-
Age (years)	-	-	49.87	9,405
Level of education	Diploma	14	6.3	
	Bachelor	194	87.0	-
	Master	15	6.7	
Length of teaching	-	-	194.73	349.28

Characteristics		Amount (n total=223)	Percentage(%)	mean	Standard deviation
Having a family member who smokes	There is	68	30.5		
	No	155	69.5	-	-
Smoking status	Smoke	20	9.0		
	No	203	91.0	-	-

Table 2. Characteristics of respondents' smoking behavior

Characteristics		Amount (n total=20)	Percentage (%)
A. Daily smoking behavior			
Smoking habit	Every day	16	80.0
	Sometimes	4	20.0
	Once a week	0	0
Access to cigarettes	Easy	20	100.0
	No	0	0
B. Smoking behavior at school			
History of smoking at school	Once	14	70.0
	No	6	30.0
Smoking habits at school	Every day	10	71.4
	Sometimes	4	28.6
	Once a week	0	0
Sanctions for smoking in schools	Once	3	21.4
	No	11	78.6
Form of sanctions	Oral	2	66.7
	Writing	1	33.3

Respondents with smoking status (Table 1) smoked on average every day with a frequency of 16 teachers (80%). All respondents (100%) had easy access to cigarettes through shops, stalls, or their own coworkers. A total of 14 teacher respondents (70%) had smoked at school, with a smoking frequency of every day for 10 teachers (71.4%). There were only 3 teacher respondents (21.4%) who had received sanctions for smoking at school, with the type of sanctions being verbal for 1 teacher (33.3%) and written for 2 teachers (66.7%). Verbal sanctions were in the form of warnings from the principal or teacher responsible for KTR.

Overview of knowledge and perception

The overview of teachers' knowledge and perception levels regarding the implementation of KTR in Table 3 shows that 18 teachers (8.1%) have a low level of knowledge regarding KTR. A moderate level of knowledge is present in 87 teachers (39.0%). Meanwhile, the majority have a high level of knowledge, amounting to 118 teachers (52.9%). Respondents in the high category scored more than 75% on the KTR knowledge indicator. Knowledge indicators include understanding, targets, socialization, sanctions, and indicators for KTR implementation.

Table 3. Overview of teachers' level of knowledge and perception regarding the implementation of KTR

KTR knowledge level	Number (n)	Percentage (%)
Low	18	8.1
Currently	87	39.0
Tall	118	52.9
total	223	100.0
Perceptions about the implementation of KTR		
Bad	76	34.1
Good	147	65.9
Total	223	100.0

A total of 147 teachers (65.9%) had a positive perception of the implementation of KTR at Sleman Regency Junior High Schools. Teachers with a positive perception had a score of more than 75%. Perception indicators included the presence of KTR signs in schools, outreach, access to cigarettes, and monitoring and evaluation of KTR implementation in schools. Seventy-six teachers (34.1%) had a poor perception of implementation.

The relationship between knowledge and teachers' perceptions of KTR

The relationship between knowledge and teachers' perceptions of KTR in its implementation at Sleman Regency Junior High School is shown in Table 4, which is the result of the chi-square test between the knowledge variable and the perception of implementation. The P value results show a figure of 0.031 where $P \text{ value} < \alpha$ ($\alpha = 0.05$) so that the research hypothesis can be accepted. The Pearson correlation test gives a result of $r = 0.149$, which means there is a positive relationship between teachers' knowledge and perceptions of KTR in its implementation at Sleman Regency Junior High School.

Table 4. Relationship between knowledge and teachers' perceptions of KTR in its implementation at Sleman Regency Junior High Schools

Level of knowledge	Perception				Total		P value	r
	Bad		Good		N	%		
	n	%	N	%				
Low	7	9.2	11	7.5	18	7.5	0.031	0.149
Currently	38	50.0	49	33.3	87	33.3		
Tall	31	40.8	87	59.2	118	40.8		
Total	76	100.0	147	100	223	100		

Discussion

A total of 118 teachers (52.9%) had a high level of knowledge about KTR. Respondents' high level of knowledge about KTR indicates that teachers are familiar with KTR regulations and school regulations regarding smoking that apply to the school community. This high level of knowledge may be due to teachers' exposure to information about KTR. KTR is generally communicated through banners, television, radio, and print media (Solicha, 2012).

A total of 217 teachers (97.3%) were able to correctly answer the definition of KTR. Respondents were familiar with the definition of KTR in general and educational contexts as

stipulated in regional regulations in Sleman Regency (Regulation of the Regent of Sleman, 2012). In contrast to the KTR sanction indicator, 206 teachers (92.4%) had incorrect answers. The majority of sanctions for KTR violations were given in the form of verbal warnings by the head of an agency or KTR manager (Waliyanti & Sandika, 2015). Written sanctions for violations by smokers are entitled to be given by the education department as stated in the regulations (Minister of Education and Culture of the Republic of Indonesia, 2015).

In general, junior high school teachers in Sleman Regency have a high level of knowledge about KTR. This is an increase from the previous year, when 137 teachers (86.7%) had a high level of knowledge about KTR in Sleman Regency in 2017 (Kurniadi, 2017). The community already has good knowledge of KTR, especially those in educational environments (Azmi, Istiarti, & Cahyo, 2016; Renaldi, 2014).

A total of 147 teachers (65.9%) had a good perception of the implementation of KTR. Teachers with a good perception believed that KTR can provide benefits, namely protecting the community from the impacts of smoking. Teachers who still had a bad perception of the implementation of KTR believed that KTR was unnecessary because smoking had become a habit (Khairatunnisa & Fachrizal, 2019). The suboptimal implementation of KTR, such as the difficulty of monitoring cigarette access in schools, also contributes to the poor perception of its implementation. Teachers' perceptions can be improved by increasing their understanding of KTR, including its benefits and impacts. A positive teacher perception is expected to help control smoking behavior that can emerge from school age (Roohafza, Heidari, & Omid, 2014).

The highest frequency of positive (yes) choices came from the prohibition on smoking in school regulations (96.9%). In line with the steps for implementing the KTR, teachers have a positive perception of the regulations in force at school. The highest frequency of negative (no) choices was related to the existence of a working committee to prepare the KTR at school. In implementing the KTR in schools, responsibility tends to be delegated to a single teacher or employee. Establishing SOPs related to the implementation of the KTR can help all school parties, one of which is by forming a working committee in the field (Ministry of Health, 2011). Teacher participation certainly also supports the successful implementation of KTR.

There is a positive correlation between teachers' knowledge and perceptions regarding the implementation of KTR at Sleman Regency Junior High Schools (SMPN) (State Junior High School) (Sleman Regency) ($p=0.031$; $r=0.149$). This means that the higher the teachers' knowledge about KTR, the better their perceptions of its implementation. The correlation between knowledge and perceptions also applies to the implementation of information delivery regarding the procedures for implementing the action ($p=0.00$; $r=0.766$). Good knowledge and perceptions increase the level of individual safety (Mbonera & Chironda, 2017). Good knowledge and perception regarding the implementation of KTR will protect individuals from the dangers of smoking. The individual behavior component illustrates the relationship between knowledge, attitudes, and actions ($p=0.00$). Individual behavior is divided into active behavior that can be seen and passive behavior that cannot be seen, such as perception or motivation (Lake, Hadi, & Sutriningsih, 2017).

Knowledge about KTR is a process aspect in implementing KTR. Lack of KTR knowledge can lead to KTR violations (Ilmaskal, Prabandari, & Wibowo, 2017). Perception is also influenced by experience and knowledge. Through experience, a person's knowledge of an object increases, thus fostering positive attitudes and behavior (Septiaji, 2014).

The level of knowledge about KTR is crucial for the successful implementation of KTR. Teachers, as KTR managers, must at least know and understand the existing KTR regulations, including the benefits of having KTR in the school environment (IWG, 2018). Knowledge of KTR can be increased through education and outreach. The education provided includes KTR concepts and programs, while the outreach includes providing KTR information through various available

media (Trisnowati & Sunarti, 2016). Knowledge about the impact of smoking can increase awareness of KTR (Onigbogi, Odukoya, Onigbogi, & Sekoni, 2015).

CONCLUSION

Most junior high school teachers have a high level of knowledge about the KTR program in Sleman Regency. Most teachers also have a positive perception of the implementation of KTR in Sleman Regency junior high schools. There is a positive correlation between knowledge and teachers' perceptions of the implementation of KTR in Sleman Regency junior high schools.

Suggestions are directed at teachers, schools, and education departments to increase outreach to increase school community awareness regarding KTR. Education departments are expected to collaborate with community health centers (PUSKESMAS) in the outreach and monitoring of KTR to ensure its implementation runs smoothly across all schools.

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