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# Smoking Behavior Among Adolescents at A Public Junior High School

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#### **Abstract**

The purpose of this study is to determine smoking behavior among adolescents, particularly in a public junior high school of SMP Negeri 9 Palu City. This type of research was qualitative research with a case study approach. The informants in this study consisted of 10 people using a purposive sampling technique. The variables in this study consisted of knowledge, attitudes, facilities and infrastructure, and peers. The results showed that knowledge of smoking behavior was quite good regarding the dangers of smoking. The attitude of most of the informants towards smoking behavior was not good because they still accepted peer invitations to smoke. Access to cigarettes is quite easy by buying retail cigarettes at stalls near the school. Peers have a major influence on smoking behavior at school. Adolescents at SMP Negeri 9 Palu City, despite having good knowledge about the dangers of smoking, demonstrate inconsistent behavior due to positive attitudes, easy access to cigarettes, and strong peer influence. This highlights the need for interventions that address not only knowledge dissemination but also address attitudes and peer pressure, making it harder to access cigarettes near schools.

**Keywords:** Smoking, Behavior, Adolescents, Peer, Facilities, Infrastructure

# **Key Messages:**

 Despite sufficient knowledge about the dangers of smoking, access to cigarettes and peer pressure strongly influence smoking behavior among adolescents, suggesting interventions should focus on reducing access and addressing peer influence in addition to education.

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# 1. Introduction

Smoking behavior is a dangerous habit, even though everyone knows the dangers caused by cigarettes, many teenagers like to smoke. Someone who knows the dangers of smoking but continues to smoke certainly has certain reasons. The reasons they consume small objects that contain tar and nicotine include, they want to know how good cigarettes are and just want to taste them, they feel that cigarettes have become a lifestyle or current trend, they think that cigarettes can relieve stress, relieve boredom, and relieve tension. Some argue that smoking is a symbol of maturity, having enjoyable experiences, and lack of control from parents (1). According to data from the World Health Organization (WHO) in 2020, deaths due to smoking behavior kill more than 8 million people

every year. More than 7 million deaths were active smokers and around 1.2 million people were people who were exposed to cigarette smoke or are called passive smokers (2). Meanwhile, ASEAN is a region with 10% of all world smokers and 20% of global deaths due to tobacco (3).

According to the latest WHO Global Data Cigarettes in Indonesia report, Indonesia has 60.8 million adult male smokers and 3.7 million adult female smokers. Basic Health Research in 2018 also showed that 62.9% of men and 4.8% of women aged 15 years and over used tobacco (4). Teenagers who become smokers usually start in junior high school (SMP) or even before. Seeing the many impacts of smoking behavior, this situation is quite surprising and the number of smokers among teenagers, especially at school age, should be reduced, but in reality, this is not the case (5).

According to the results of Basic Health Research (Riskesdas) in 2018, in Indonesia smoking behavior according to age groups and smoking habits is 0.5% of smokers aged 10-14 years smoking every day and 0.9% of smokers occasionally. In the 15-19 year age group, 11.2% were daily smokers and 7.1% were occasional smokers, while in the 20-24 year age group, 27.2% were daily smokers and 6.9% were occasional smokers. The highest proportion of daily active smokers at the age of 30-34 years is 33.4% and at the age of 35-39 years is 32.2%, which is the productive age population and the prevalence of smoking behavior for those aged >10 years in Indonesia is 28.8% (6).

Data from the Palu City Health Service reveals that the number of smokers under the age of 20 from 2016 to 2018 has increased. In 2016, there were 315 children who smoked, in 2017, there were 948 children who smoked, and in 2018 there were 1,041 children who smoked (7). Based on preliminary studies conducted by researchers in several junior high schools in the city of Palu, such as at the public junior high school of SMP Negeri 2 Palu, the results showed that there were 10 students who smoked; at the public junior high school of SMP Negeri 6 Palu, there were 15 students who smoked; at the private junior high school of SMP SMP Kristen Bala Keselamatan Palu, there were 20 students who smoke; at the private junior high school of SMP IT Bina Anak Bangsa Palu, there were 10 students who smoke; at the private junior high school of SMP Al Azhar Mandiri Palu, there were 5 students who smoke. Of those 6 schools, the highest number of students who smoke was at the public junior high school of SMP Negeri 9 Palu. According to the results of interviews with those students at that junior high school of SMP Negeri 9 Palu, generally, they started smoking in grade 7. Usually, they smoke in the school bathroom. They got the cigarettes from the stalls next to the school. Data from guidance and counseling teachers recorded that from January to March 2022, there were 30 people who were caught smoking at school. However, according to information from one of the students who smoked at school, there were still dozens of students who smoked and had not been recorded because they had never been caught smoking in the school environment. The purpose of this study is to determine smoking behavior among adolescents, particularly in a public junior high school of SMP Negeri 9 Palu City.

#### 2. Methods

The type of research used is qualitative research. This research was conducted at SMP Negeri 9 Palu. This research was carried out on 2 November 2022 - 21 November 2022. The interview location was carried out at a place agreed upon by the informants according to their wishes with the aim of making them feel comfortable, not stressed and not burdened so that the information obtained was genuine from what the informants experienced and felt.

There are three research informants as follows: 1) Key Informant is someone who knows and has the main information needed in a study. The key informant in this research was the guidance and counseling teacher at SMP Negeri 9 Palu. 2) The main informants are those who are directly involved in the social interactions being studied. The main informants in this research were students who smoked at SMP Negeri 9 Palu. 3) Additional

informants are those who can provide additional information that can support the research results. Furthermore, if in the information collection process no variations of information are found, then the researcher no longer needs to look for new informants, the information collection process is considered complete. Thus, in qualitative research the number of informants is not questioned. Additional informants in this study were peers of students who smoke.

The data collection technique in this research was carried out by means of in-depth interviews with all informants. The interview guide used is only an outline of the problems to be asked. The time for interviews conducted with informants is determined by the saturation point of the information. Data processing is the process of reducing, summarizing, taking the essence of a large amount of data that has been collected, so that it becomes meaningful and more concise. Complementary instruments in this research include: Interview guide; Mobile phone; Stationery; Voice recorder.

Data processing in this research uses a content analysis approach with matrix techniques where information is processed in tables including: numbers, names of informants, emics, ethics, conclusions. Interpretation of the reduced data by presenting the data in narrative/story text form and finally drawing conclusions. The form of data presentation in qualitative research has no standard limits, and is greatly influenced by the researcher's ability to describe research results.

In this study, a credibility test was used to test the validity of the data which was carried out using triangulation. Data triangulation is defined as checking data from various sources in various ways, and at various times. In this research, the triangulation used is source triangulation. Source triangulation is testing the credibility of the data which is done by checking data that has been obtained through several sources. Source triangulation will be carried out on key informants, namely teachers at SMP Negeri 9 Palu, main informants, namely students who smoke in the school environment, and additional informants, namely friends of students who smoke.

#### 3. Results

# **Knowledge Variable**

Based on the results of our in-depth interviews regarding informants' knowledge of cigarettes with the main informants, the teenage students who smoke. In-depth interviews were conducted with key informants to find out "What do you know about cigarettes"? Based on statements from informants, 1 main informant said that he did not know what cigarettes were and 5 other main informants said that cigarettes were long objects, delicious to smoke, addictive, and had dangerous ingredients. This is the same as the statement of key informants and supporters that cigarettes are dangerous and can cause addiction.

In-depth interviews were also conducted with key informants to find out "In your opinion, is it important to know the harmful effects of smoking?" and the results were obtained based on questions from the main informants. Five main informants said that it was important to know the dangers of smoking, the dangerous effects of smoking can cause lung cancer, heart disease, and shortness of breath. 1 main informant said that it was not important to know the dangers of smoking. This is in accordance with statements from key informants and 3 supporting informants who said that it is important to know the dangers of smoking which can cause lung cancer, heart disease, and shortness of breath.

In-depth interviews were also conducted with key informants to find out "What do you know about the contents of a cigarette?" and the results obtained were based on statements from the informants above that the 6 main informants said that the ingredients contained in a cigarette were nicotine and tobacco. This is in accordance with the statement of the key informant and 3 supporting informants that the ingredients in a cigarette are nicotine and tobacco. In-depth interviews were also conducted with the main informants to find out "In your opinion, what are the factors that make you smoke?" and the results obtained were based on the informants'

statements above that the 6 main informants said that the factors that influenced them to smoke were peer factors, but of the 6 informants there was 1 informant who also said that there were parental factors in smoking behavior. This is in accordance with the statement of the key informant and 3 supporting informants that the factors that really influence them to smoke are factors from peers and factors from parents.

#### Attitude Variable

In-depth interviews were conducted with key informants to find out "Can you explain your reasons for smoking?" and the results obtained were based on statements from the informants above that the 6 main informants said that the reasons they smoked were because of curiosity, their own volition, invitations from peers who also smoked, the feeling of being addicted and delicious when smoking, it could relieve stress and they were already addicted to smoking. This is in accordance with statements from key informants and supporting informants who said that the reason they smoked was because of their own will, problems in the family, and invitations from peers. In-depth interviews were conducted with key informants to find out "How would you respond if your friend asked you to smoke?" and the results obtained were based on the main informant's statement above that the informant's response when his friend invited him to smoke was that all the informants said they wanted to and agreed to the invitation. This is also in accordance with the statements of key informants and supporting informants that students will definitely want to smoke if their friends invite them to smoke.

In-depth interviews were conducted with key informants to find out "Do you think there are any benefits you get from smoking?" and the results obtained were based on the statement above. Three main informants said that the benefits they felt were like calming their minds when there was a problem they were experiencing. Three informants also said that when they finished eating, continuing to smoke made them feel pleasure/good, this is in accordance with the statement of 2 Supporting informants that cigarettes can make smokers feel calm and can relieve stress. The statement from the key informant that the benefits that students get from smoking cigarettes is absolutely no benefit. This is also in accordance with 1 supporting informant's statement that smoking has no benefits.

In-depth interviews were conducted with key informants to find out "What is the role of the school in tackling smoking behavior in the school environment?" and the results obtained were based on the statement above. Six main informants said that the school's way of dealing with students who smoke was by punishing them in accordance with school rules. This was in line with the statements of key informants and supporting informants that if they found students who smoked, they would be processed according to the rules. However, until now there are still students who smoke even though there is a ban.

# **Facilities and Infrastructure Variable**

In-depth interviews were conducted with key informants to find out "How do you get a cigarette?" and the results obtained based on the statement above showed that all the main informants got a cigarette by bringing it from home, buying it using pocket money, and given by their friends. This is in line with the statement from the key informants and supporting informants that the way they get a cigarette starts from bringing it themselves from home, bought by myself, and from friends. In-depth interviews were conducted with key informants to find out "Do you have difficulty getting a cigarette?" and the results obtained based on the statement above, all the main informants said that it was not difficult to get a cigarette. This was also in line with the statements from the key informants and supporting informants that getting cigarettes was not difficult because they could buy them and they were usually given to them by friends.

In-depth interviews were conducted with key informants to find out "Where do you buy cigarettes?" and the results obtained based on the statement above, all informants stated that the place they bought cigarettes was at

the stalls next to the school, which was the place they bought most often, brought cigarettes from home and also gave them from friends. This was in line with the key informants and supporting informants that they often get or buy cigarettes at the stalls around the school. In-depth interviews were conducted with key informants to find out "Do you use your pocket money to buy cigarettes?" and the results obtained based on the statement above showed that all the main informants said that the money used to buy cigarettes was pocket money that had been given by their parents. This is in line with the statements from key informants and supporting informants who said that the money used to buy cigarettes was their pocket money.

#### Peer Variable

In-depth interviews were conducted with key informants to find out "Has your friend ever invited you to smoke?" and the results obtained based on the statement above showed that all the main informants said that they were often invited and asked their friends to smoke. This was in line with the key informants and supporting informants that the main informants were often invited and asked each other to smoke. In-depth interviews were conducted with the main informants to find out "Do you have friends who forbid you not to smoke?". The results obtained based on the statement above showed that 4 main informants said that they did not have friends who forbade them from smoking. This was in line with the key informants and supporting informants who said that the main informants did not have friends who forbade them from smoking and it was also found that 2 main informants said that they have friends who forbid them to smoke.

In-depth interviews were also conducted with key informants to find out "What kind of support/attention do your friends give you for not smoking?". The results obtained based on the statement above were that the 4 main informants answered that they did not have friends who gave them attention or support for not smoking and the 2 main informants stated that they had friends who forbade them by warning them not to smoke any more. This is in line with the statement from the key informants and supporting informants who said that the main informants had friends who forbade them by giving warnings or in the form of attention not to smoke. In-depth interviews were conducted with key informants to find out "In your opinion, how much influence do your friends have on smoking behavior?". The results obtained based on the statement above showed that 6 main informants said that the influence of friends on smoking behavior was very large. This was in line with the statements of key informants and supporting informants who said that peers had a very large influence on students' smoking behavior.

# 4. Discussion

# **Knowledge Variable**

Knowledge is a result of curiosity through sensory processes, especially the eyes and ears regarding certain objects. Knowledge is an important domain in the formation of open behavior. Knowledge is the result of human sensing or the result of a person's knowledge of an object through their five senses. The five human senses for sensing objects are sight, hearing, smell, taste, and touch. When sensing to produce knowledge it is influenced by the intensity of attention and perception of the object. A person's knowledge is mostly obtained through the sense of hearing and the sense of sight (8).

Based on the results of our in-depth interviews conducted with the main informants regarding what they know about cigarettes, most of them answered that cigarettes are long objects, delicious to smoke, addictive, and have dangerous ingredients. The key informants and supporters stated that cigarettes are dangerous and can cause addiction. Cigarettes are objects made of long paper and filled with tobacco whose ends are burned to produce smoke that is inhaled by the smoker (9). Based on the results of in-depth interviews conducted with key informants regarding whether it is important to know the dangers of smoking, the results showed that the harmful

effects of smoking can cause lung cancer, heart disease, and shortness of breath. This is in accordance with statements from key informants and supporting informants who said that it is important to know the dangers of smoking which can cause lung cancer, heart disease, and shortness of breath. Cigarettes contain dangerous chemicals that can cause various diseases such as lung disease, coronary heart disease, mouth, and throat cancer. The results of research in England show that around 50% of smokers who have smoked since they were teenagers will die from diseases related to smoking habits (10). Smoking habits have been proven to be associated with approximately 25 types of diseases from various organs of the human body. These diseases include cancer of the mouth, esophagus, pharynx, larynx, lung, pancreas, and blood vessel disease (11).

Apart from the consequences of consuming cigarettes, such as bad breath and stained teeth, particles from cigarettes can give yellow to brown spots on the teeth, this will also cause odor-producing bacteria to be trapped, this can also cause gum disease and damage to the sense of taste. Apart from that, smoking causes a lack of oxygen to the skin, which can accelerate aging and make the skin appear grayish (12).

Based on the results of in-depth interviews conducted with the main informants regarding the question of the ingredients in a cigarette, all the main informants said that the ingredients in a cigarette are nicotine and tobacco. This is in accordance with the statements of key informants and supporting informants that the ingredients in a cigarette are nicotine and tobacco. Nicotine can increase adrenaline, causing heart frequency and contractions thereby increasing blood pressure. Tar is a sticky hydrocarbon, contains carcinogens, and sticks to the lungs. Carbon monoxide gas can interfere with the function of red blood cells in binding oxygen, damage the inner lining of blood vessels, and increase fatty deposits in blood vessels. This can result in blockage of blood vessels (13).

Based on the results of in-depth interviews conducted with the main informants regarding the question what are the factors that make you smoke, all the main informants said that the factors that influence them to smoke were peer factors, but there was 1 informant who also said that there were parental factors in smoking behavior. This is in accordance with the statements of key informants and supporting informants that the factors that really influence them to smoke are factors from peers and there are also factors from parents. There are various factors that cause teenagers to develop the habit of smoking, including the influence of peers (14). This is in accordance with various facts which reveal that the more an individual smokes, the more that individual's friends will smoke, and vice versa (14). Peer influence has an important role in teenagers' decisions to smoke (15). This is because teenagers want a status symbol that can show that the person who has it is higher or has more status in the group. So teenagers look for a sense of comfort and closeness in peers and teenagers have self-confidence which puts pressure on them to adopt behavior that they think is liked by other people. Apart from peers, parents are also believed to have a very important influence on children's development. Parents as people who provide attention both emotionally and physically are important for the mental health of children and adolescents. If both parents smoke, children are four times more likely to smoke as well than if no family member smokes. Then looking at the lack of parental supervision which is usually related to raising children, it can have an impact on teenagers' lives in the future (15).

# **Attitude Variables**

Attitudes are basically the result of a person's socialization process and interaction with their environment which is a manifestation of a person's thoughts, feelings, and assessments of objects based on knowledge, understanding, opinions, and beliefs, as well as ideas about an object, resulting in a tendency to act on a particular object. Attitude is an individual's tendency to respond positively or negatively to an object. Each person has a different attitude towards an object. Attitudes cannot be seen but can be interpreted first rather than closed behavior. Attitude is also an emotional reaction to social stimuli (16).

Based on interviews conducted by researchers with the main informants regarding the reasons they smoke, namely because of curiosity, self-will, and invitation from peers who also smoke, it feels addictive and delicious when smoking, it can relieve stress and they are already addicted to smoking. This is in accordance with statements from key informants and supporting informants who said that the reason they smoked was because of their own volition, relieving stress and invitations from peers. One of the factors that influence smoking is psychological factors, where teenagers smoke to get pleasure and comfort, feel free from anxiety, and gain self-confidence (17).

In-depth interviews were also conducted with the main informants regarding the question of how students responded when their friends invited them to smoke. All informants said they wanted to and agreed to the invitation. This is also in accordance with the statements of key informants and supporting informants that students will definitely want to smoke if their friends invite them to smoke. Teenagers' smoking habits occur as a result of interactions with their social friends who smoke (18). Invitations from group friends are difficult to avoid because of the high sense of solidarity so they feel bound and start smoking cigarettes because they want to be recognized and taken into account by those in their group. In this group, if anyone does not smoke, they will be ostracized from the group because they consider cigarettes a symbol of togetherness (18).

In-depth interviews were also conducted with the main informants regarding the questions regarding the benefits they get from smoking. The 3 main informants said that the benefits they felt were like calming their minds when they had problems. The 3 main informants also said that when they finished eating, continuing to smoke made them feel pleasure. This is in accordance with the statement from 2 supporting informants, that cigarettes can make smokers feel calm and can relieve stress. The statement from the key informant that the benefits that students get from smoking cigarettes is absolutely no benefit. This is also in accordance with 1 supporting informant's statement that smoking has no benefits. Teenagers who smoke are more likely to agree with positive statements about smoking and that smoking can provide a sense of calm if they are stressed (19). Apart from that, according to teenagers who smoke, smoking can also provide a sense of comfort and high self-confidence (19).

In-depth interviews were also conducted with the main informants regarding the question regarding the role of the school in dealing with smoking behavior in the school environment. All the main informants said that the school's way of dealing with students who smoke was by law in accordance with school rules. This was in line with the statements of the key informants and supporting informants that If you find students who smoke, they will be processed according to school rules, but up to now there are still students who smoke even though there is a ban. The rules for not smoking at school must be followed by students and teachers to help suppress the desire to smoke in teenagers. If students are caught smoking in the school environment, they will receive a warning from the school (20). If this happens again, the school will call the student's parents so that the parents can help control their child's behavior at home so that they don't smoke (20).

# **Facilities and Infrastructure Variables**

Facilities and infrastructure in the form of cigarette advertisements which show that smokers are a symbol of masculinity mean that teenagers are often triggered to follow behavior like these advertisements. Apart from cigarette advertising, another factor is that the price of cigarettes are easily accessible to teenagers because they are relatively cheap, can be bought per stick, and are available at stalls near schools (21).

In-depth interviews were also conducted with the main informants regarding the question of how students get a cigarette. It was found that all the main informants got a cigarette by bringing it from home, buying it using pocket money, as well as given by their friends. This is in line with the statement from the key informants and supporting informants that the method they get cigarettes from bringing them from home, buying them

themselves, and from friends. School teenagers obtained cigarettes purchased at stalls or shops near the school or near their homes (22). They buy cigarettes from the pocket money given by their parents. Teenagers smoking is an attempt to make them accepted in their environment. The greatest consumption of cigarettes is when they gather together (22).

In-depth interviews were also conducted with key informants regarding the question of whether you have difficulty getting a cigarette. All the main informants said that it is not difficult to get a cigarette. This is also in line with the statements from key informants and supporting informants that getting cigarettes is not difficult because they can buy and buy cigarettes. usually given by friends. Most teenagers can easily get cigarettes if they want them. This is supported by the availability of shops or stalls selling cigarettes near schools. With this stall, teenagers can easily get cigarettes in the school environment (23).

In-depth interviews were also conducted with the main informants regarding the question of where students buy cigarettes. All informants stated that the place they buy cigarettes is at the stalls in front of the school, which is the place they buy most often, bringing cigarettes from home and also given by their friends. This is in line with key informants and supporting informants that they often get or buy cigarettes at the stalls in front of the school.

The rapid growth of mini markets has helped the spread of cigarettes among students and small stalls have also contributed to making it easier for teenagers to get cigarettes (23). This happens because for small shops like that, cigarettes are the spearhead of their sales which are easy to sell in the surrounding area and it doesn't matter whether the buyers are adults or teenagers. This is what makes the number of young smokers, especially teenagers, increase from year to year and is a problem that must be immediately addressed by the government. And it is necessary to create a policy regarding smoking restrictions, especially for teenagers (23)

In-depth interviews were also conducted with key informants regarding the question of whether pocket money was used to buy cigarettes. All the main informants said that the money used to buy cigarettes was pocket money that had been given by their parents. This was in line with statements from key informants and supporting informants who said that money used to buy cigarettes is their own pocket money. Cigarettes are goods that are very easy to obtain in society (24). Prices that are very affordable and can be obtained in various places will have a negative impact on teenagers. Pocket money has the potential to be a factor in the emergence of student smoking behavior due to the absence of parental monitoring of pocket money spending. Those who have high or low allowances can buy cigarettes per cigarette by setting aside a small portion of their allowance. The factor of low pocket money being protective can occur because teenagers' ability to buy cigarettes is lower than teenagers with bigger pocket money. Giving pocket money should be given on a policy basis and not in excess, pocket money given unwisely can cause problems, such as teenagers becoming wasteful, teenagers not valuing money, and teenagers being lazy about studying so teenagers tend to be tempted and feel addicted to cigarettes because of the price of cigarettes is affordable and can be bought per stem (24).

# **Peer Variables**

One of the factors that causes teenagers to have smoking behavior is their peers. Adolescents have a high potential to follow what their peers do. In adolescence, peers have a strong role and influence on adolescents, especially in terms of forming attitudes and behavior. One of the characteristics of teenagers is that they want to join and adapt to a group or gang. This adjustment is carried out by behaving in the same way as other group members. Therefore, they often imitate their friends' smoking behavior because they want to look the same as their close friends. Teenagers are often outside the home and spend time with their peers. Adolescents will tend to want to be accepted in their group so adolescents will have the potential to imitate what their peers do. If group members have smoking behavior, then teenagers will tend to follow the same thing without caring about the consequences (3). In students aged 12-18 years in two cities in Botswana, it shows that the risk factors for teenage

smoking are influenced by self-image factors and acceptance by peers is the strongest predictor factor overall. Hong Guo and Chen explained that teenagers usually make friends with teenagers who smoke so that when they get together they smoke. It is difficult for teenagers to stop smoking because their close friends smoke. Friends are the most important factor for teenagers to control smoking behavior (25).

In-depth interviews were conducted with the main informants regarding the question of whether your friends have ever invited you to smoke. All the main informants said that they often invite or ask their friends to smoke. This is in line with the key informants and supporting informants that the main informants are often invited and invite each other to smoke. Adolescent smoking behavior begins with the invitation of their peers to smoke (26). Teenagers are offered cigarettes when they are hanging out together and there is an unpleasant feeling if teenagers do not accept the cigarettes offered by their friends. Seeing friends who smoke and getting invitations to smoke from friends, teenagers finally tried smoking until now. When gathering with friends who smoke and teenagers who don't smoke, teenagers are teased and said they are not gentle if they don't smoke, so the teasing influences teenagers to smoke (26).

Teenagers who carry out smoking behavior are not solely due to influence or invitations from friends, but teenagers carry out smoking behavior because of their own will due to curiosity about cigarettes (9). In-depth interviews were conducted with the main informants regarding the question of whether you have friends who forbid you not to smoke. It was found that 4 main informants said that they did not have friends who forbade them to smoke. This was in line with the key informants and supporting informants who said that the main informants did not have friends. who forbade them to smoke and it was also found that 2 main informants said that they had friends who forbade them to smoke. The social environment of teenagers has a big influence on the occurrence of delinquency in teenagers, including smoking behavior (27). The more supportive the social environment for teenagers to smoke, the higher a person's smoking behavior will be (27).

In-depth interviews were conducted with the main informants regarding the question regarding what kind of support/attention your friends give you for not smoking, it was found that 4 main informants answered that they did not have friends who gave attention or support for not smoking and 2 main informants stated that they have friends who forbid them by warning them not to smoke any more. This is in line with statements from key informants and supporting informants who say that there are key informants who have friends who forbid them by giving warnings or in the form of attention not to smoke. The greater the peer support for smoking, the higher the smoking behavior that occurs (28). Most of their peers are supportive because there are no friends who forbid teenagers from smoking and smoking behavior. It is found that most smoking behavior is due to the support of positive feelings when smoking and it has become a habit. Only a small number of friends forbid smoking, advise against smoking, and tell them about the dangers of smoking (28).

In-depth interviews were also conducted with key informants regarding the question of how much influence friends have on smoking behavior. It was found that all the main informants said that the influence of friends on smoking behavior was very large. This was in line with the statements of key informants and supporting informants who said that peers had a very big influence on students' smoking behavior. The existence of peers can bring negative support for teenagers, teenagers who are easily influenced by the behavior shown by their peers, where teenagers who hang out with peers who behave badly will tend to lead teenagers towards negative or bad behavior too (29). The peer environment can support smoking activities in teenagers, the more people who smoke, the greater the support for smoking, and because of the frequent meetings and gatherings, teenagers who initially did not smoke can imitate and follow their peers who smoke (28).

# 5. Conclusion

Based on the results of research conducted on the smoking behavior of teenagers at the public junior high

school of SMP Negeri 9 Palu, it was concluded that the knowledge of the smoking behavior of teenagers at this school was quite good regarding the dangers and ingredients in cigarettes, but the knowledge of informants at the application stage was not good. The informant only knows about the dangers to health and the ingredients in cigarettes but has not yet reached the stage of applying them in everyday life. The attitude towards the smoking behavior of teenagers at this public junior high school of SMP Negeri 9 Palu is not good, the attitude of most informants towards smoking behavior is at the stage of accepting and paying attention to the invitation of their peers to smoke, the informants say that cigarettes are dangerous but they still smoke them because they are addicted, the informants feel pleasure and comfort if you smoke, cigarettes become a necessity that is difficult to eliminate. Ease of access to cigarettes on adolescent smoking behavior at the public junior high school of SMP Negeri 9 Palu. Informants get cigarettes by buying a retail or per stick and given by their friends. Informants' pocket money influences teenagers' decisions to buy cigarettes, informants tend to buy cigarettes using their own pocket money given by their parents. The places that informants often visit to buy cigarettes are the stalls next to the school. Peers in the smoking behavior of teenagers at the public junior high school of SMP Negeri 9 Palu, some of the informants' peers provide advice and support to teenagers to avoid smoking behavior, such as students not being allowed to smoke because they are still in school and it can harm their health. However, peers are also the most influential factor in the informants' own smoking behavior.

The suggestion from this research is that it is hoped that the public junior high school of SMP Negeri 9 Palu School will increase its outreach to students regarding the dangers of smoking, carry out advocacy, and even prohibit the stalls around the school from selling cigarettes to students.

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# References

- 1. Lawerissa MH, Tarigan FL, WH. Determinan Perilaku Merokok Pada Siswa Smp Swasta Immanuel Kabanjahe Tahun 2020. PREPOTIF: Jurnal Kesehatan Masyarakat. 2021;5(2):796–803.
- 2. WHO. Tobacco [Internet]. 2021 [cited 2021 Aug 30]. Available from: https://www.who.int/news-room/fact-sheets/detail/tobacco
- 3. Kalalinggi Y, Wuni C, Parman. Factors Related To Smoking Behavior In Adolescents In Pakuan Baru Sub-District. Journal of Healthcare Technology and Medicine. 2021;7(2):2615–109.
- 4. World Health Organization. Raise Tobacco Taxes and Prices for a Healthy and Prosperous Indonesia [Internet]. World Health Organization; 2020. Available from: https://cdn.who.int/media/docs/default-source/searo/indonesia/indonesia-tobacco-tax-paper-2020.pdf?sfvrsn=67c3d89a\_2
- 5. Beda Ama PG, Rivanto R, Ramon V. Pengaruh Faktor Intrinsik dan Ekstrinsik terhadap Perilaku Merokok pada Siswa SMP Trisoko. Jurnal Ilmu Kesehatan Masyarakat. 2021;10(02):102–9.
- 6. Kemenkes. Hasil Utama Riskesdas 2018. 2018;
- 7. Dinas Kesehatan Kota Palu. Posbindu Dinkes Kota Palu. 2018.
- 8. Notoatmodjo. Promosi Kesehatan dan Perilaku Kesehatan. Rineka Cipta; 2012.
- 9. Setyani AT, Sodik MA. Pengaruh Merokok Bagi Remaja Terhadap Perilaku dan Pergaulan Sehari-hari. STIKes Surya Mitra Husada. 2019;1–8.
- 10. Widigdo BT. Pengaruh Negatif Rokok bagi Kesehatan. 2020;
- 11. Nururrahmah. Pengaruh Rokok Terhadap Kesehatan Manusia. Jurnal Dinamika. 2021;02(2):45-51.
- 12. Sholihah H, Novita A. Hubungan Persepsi, Pengaruh Teman Sebaya dan Dukungan Keluarga dengan Perilaku Merokok Remaja Laki-Laki. Journal of Public Health Education. 2021;1(01):20–9.

- 13. Pramonodjati F, Prabandari AS, Angelo F, Sudjono E. Pengaruh Perokok Terhadap Adanya C Reaktive Protein (CRP). Jurnal Ilmiah Rekam Medis dan Informatika Kesehatan. 2021;9(2):1–6.
- 14. Mirnawati, Nurfitriani, Zulfiarini FM, Cahyati WH. Perilaku merokok pada remaja umur 13-14 tahun. Higeia J Public Heal Res Dev. 2020;2(3):396–405.
- 15. Safitri A, Avicenna M, Asosiasi NH, Islam P. Faktor-Faktor Yang Mempengaruhi Perilaku Merokok Pada Remaja. TAZKIYA Journal of Psychology. 2021;18(1):47–65.
- 16. Maulana heri. Promosi kesehatan. Jakarta: EGC; 2009.
- 17. Ali MA. Pengetahuan, Sikap, Dan Faktor Psikologis Berhubungan Dengan Perilaku Merokok Pada Pegawai Poltekkes Kemenkes Jakarta III. Jurnal Ilmu dan Teknologi Kesehatan. 2021;2(1):101–7.
- 18. Agustang A. Perilaku Merokok Remaja Siswa Sma Negeri 1 Sinjai Utara Kabupaten Sinjai. Jurnal Ilmiah Kesehatan Diagnosis. 2021;13(1).
- 19. Munir M. Pengetahuan Dan Sikap Remaja Tentang Risiko Merokok Pada Santri Mahasiswa Di Asrama Uin Sunan Ampel Surabaya. KLOROFIL: Jurnal Ilmu Biologi dan Terapan. 2020;1(2):93.
- 20. Elon Y, Malinti E. Fenomena Merokok Pada Anak Usia Remaja: Studi Kualitatif. Klabat Journal of Nursing. 2021;1(1):78.
- 21. Fransiska M, Firdaus PA. Faktor yang berhubungan dengan Perilaku Merokok pada Remaja Putra SMA X Kecamatan Payakumbuh. Jurnal Kesehatan. 2021;10(1):11.
- 22. Jannah M. Determinan Perilaku Merokok Pada Remaja Sekolah Menengah Atas (Sma) Di Kota Palopo. Jurnal Kesehatan. 2021;14(1):6–12.
- 23. Sarino\* MA. Perilaku merokok pada siswa smp. Jurnal Keperawatan. 2021;VIII(2):148-55.
- 24. Destri Y, Sari FE, Perdana AA. Perilaku Merokok dan Faktor yang Berhubungan pada Siswa. Jurnal Kesehatan Metro Sai Wawai. 2022;12(2):17.
- 25. Abidin LS. Tugas Kesehatan Keluarga Dalam Mencegah Perilaku Merokok Remaja. Jakarta: Penerbit P4I; 2022.
- 26. Novariana N, Mega Rukmana N, Supratman A, Studi P, Masyarakat K. Hubungan Teman Sebaya Terhadap Perilaku Merokok Pada Siswa SMP Negeri di Kabupaten Way Kanan. Jurnal Ilmu Kesehatan Indonesia (JIKSI) E-ISSN. 2022;3(1):39.
- 27. Maki EC, Mantjoro EM, Asrifuddin A. Hubungan Lingkungan Pergaulan Dengan Perilaku Merokok Pada Remaja Di Desa Karumenga Kecamatan Langowan Utara. Jurnal Kesehatan Masyarakat. 2022;6(2):1192–8.
- 28. Setianto B. Hubungan Dukungan Teman Sebaya Dengan Perilaku Merokok Remaja Laki-Laki di RW 05 Kelurahan Wonokromo Surabaya. Jurnal Widyaloka IKIP Widya. 2021;7(1):97–108.
- 29. Amalizar DO, Afridah W, Setianto B, F AHZ. Hubungan Dukungan Teman Sebaya Dengan Perilaku Merokok Remaja Laki-Laki di RW 05 Kelurahan Wonokromo Surabaya. WIDYALOKA. 2023 Jan 31;10(1):59–69.