

## Smoking Behaviour Among Adolescents: Community Health-Based Assistance at an Orphanage in Penang, Malaysia

Henik Tri Rahayu<sup>1</sup>, Anis Ika Nur Rohmah<sup>2</sup>, Indri Wahyuningsih<sup>3</sup>, Nur Melizza<sup>4</sup>, Norasma Binti Bakar<sup>5</sup>, Indah Dwi Pratiwi<sup>6\*</sup>

<sup>1,2,3,4,6</sup>University of Muhammadiyah Malang

<sup>5</sup>Universiti Teknologi Mara (Pulau Pinang), Malaysia

**Corresponding Author:** Indah Dwi Pratiwi [pratiwi\\_indah@umm.ac.id](mailto:pratiwi_indah@umm.ac.id)

---

### ARTICLE INFO

*Keywords:* Adolescents, Smoking, Complications, Community Health

*Received :* 18, July

*Revised :* 20, August

*Accepted:* 22, September

©2024 Rahayu, Rohmah, Wahyuningsih, Melizza, Bakar, Pratiwi: This is an open-access article distributed under the terms of the [Creative Commons Atribusi 4.0 Internasional](https://creativecommons.org/licenses/by/4.0/).



### ABSTRACT

Tobacco use is still an unresolved welfare problem and is still a big problem in the world. The tendency to smoke will increase a person's risk of developing respiratory, cardiovascular, and cancer. Adolescents are believed to try new things and copy others' trends and behavior as part of their development stage. Therefore, they have great potential for smoking behavior in their adult life. This program aims to expand the understanding of adolescents living in orphanages about the dangers of smoking and understanding in planning to be smoke-free. We use an active participation method comprising a two-dimensional, colorful booklet as a learning media to deliver our community program. The result of this program is that participants have a moderate understanding of smoking and its complications in the future.

---

## **INTRODUCTION**

Smoking behavior among adolescents is a significant health problem worldwide, including in Malaysia. Despite continued efforts to control tobacco, the prevalence of smoking among adolescents remains high and is a severe public health concern. Based on data from the 2019 National Health and Morbidity Survey (NHMS), approximately 13.8% of adolescents in Malaysia are involved in smoking behavior. Smoking behavior is classified as a behavior that can endanger health, both for smokers and for other people around them. Smoking is associated with 25 types of dangerous diseases that are deadly, including lung cancer and coronary heart disease. Every year, the death rate caused by cigarettes is increasing, but the number of smokers is also growing, even the age of a person who smokes is also getting younger (Yusoff et al., 2022).

Adolescence is an important period in individual development. This is a period where a person begins to know his identity, pioneers independence and is exposed to various influences from the surrounding environment. One of the issues that often arise during adolescence is the prevalence of smoking behavior. Unfortunately, smoking is usually seen as a way to show independence or a strong personality, and this can lead teens to try smoking. Adolescence is often spent in a variety of environments, including school, peers, and family. Influence from peers and school culture can make a person more susceptible to smoking. If a friend or role model in the family smokes, the individual may find it more likely to try. Many adolescence start smoking at a very young age, and this can carry serious health risks later in life. Smoking in adolescence has a significant health impact. Smoking can lead to impaired physical and mental development, as well as increase the risk of heart disease, cancer, and other health problems later in life. One of the habits of smoking behavior is influenced by the environment.

Various factors, including social environment, peer influence, and exposure to cigarette advertising, influence smoking behavior among adolescents. A study by Lim et al. (2020) showed that adolescents who have friends or family members who smoke are more likely to start smoking. In addition, exposure to cigarette advertising on social media and the internet also contributes significantly to smoking behavior among adolescents (Lim et al., 2020). The negative impacts of smoking on health have long been known, including an increased risk of heart disease, lung cancer, and respiratory disorders. In adolescents, smoking can also interfere with physical and mental development and reduce academic achievement. A study by Cheah & Naidu, (2012) revealed that adolescents who smoke tend to have lower academic achievement compared to those who do not smoke (Cheah & Naidu, 2012)

Tobacco control policies in Malaysia have undergone significant developments in recent years. The implementation of smoking bans in public places, increasing cigarette prices through taxes, and public education campaigns are some of the steps that the government has taken. However, the effectiveness of these policies still requires further evaluation. According to Cheong et al. (2020), although there has been a decline in smoking prevalence among adults, smoking prevalence among adolescents still shows a worrying trend (Cheong, T.W., et al., 2020).

Many adolescents start smoking at an early age out of curiosity and curiosity, and starting smoking at an early age makes it more difficult for them to quit smoking (Kaufman et al., 2020). The habit of smoking in adolescents is not only a gateway to all kinds of drug abuse but also causes various health problems, including upper respiratory tract infections, immature lung development, reduced maximum vital capacity, and lung cancer (Kavita-Jetly et al., 2021). Adolescents who have smoking friends have a risk of having a smoking habit of 13.74 times compared to adolescents who do not have smoking friends (Gana et al., 2018). Therefore, it is pretty essential to prevent adolescents from smoking. Reducing smoking rates in adolescents cannot be achieved only through social restrictions such as stereotypical education about the dangers of smoking and checking self-identity (Park, 2011). Tobacco use is still an unresolved welfare problem and is still a big problem in the world (Yusoff et al., 2022). The tendency to smoke will increase a person's risk of developing respiratory, cardiovascular, and cancer diseases (Otten et al., 2009).

To significantly reduce teenage smoking rates, every level of society must develop standardized programs and make related efforts. The home environment or school life greatly influences it, and it is necessary to carry out practical educational and social strengthening efforts in schools, establish related norms, and implement preventive education through peer groups (Wojtecka et al., 2023). When these efforts are spread throughout society in households and communities, they will significantly help protect the health of adolescents and improve their quality of life (Park, 2011).

Orphanage's residents may understand the dangers of smoking and its complications so that they can reduce the potential for smoking behavior in that age range. With a better understanding of the dynamics of smoking behavior in adolescents, it is hoped that more targeted interventions can be developed to reduce smoking rates among adolescents and improve overall public health. We implement assistance and health education about smoking and its dangers using media such as booklets that can be used as a guide or reference for orphanage managers and their residents.

## **IMPLEMENTATION AND METHODS**

This community service program is designed to provide smoking education to teenagers in Malaysia through a comprehensive and sustainable approach. The approach used in this community service activity is using synergistic partnerships to increase and support community participation. The approach taken involves the management of orphanages and their residents. This service focuses on brainstorming, discussing smoking and its potential complications among orphan children, and using a booklet or module as a learning media. The participants were asked to deliver feedback on this program during the evaluation process. The method involves various stages, including preparation, implementation, and evaluation. Each stage is designed to ensure active involvement from teenagers, schools, and communities.

This current activity involved orphanage managers and residents in discussions about smoking behavior and its potential complications. The brainstorming and discussion were conducted to explore orphanage adolescents' experiences and prior knowledge and attitudes about smoking. In this activity, the team also explained in more detail the dangers of smoking and the complications that might arise as a result of this behavior. This socialization is made more accessible by using a booklet about smoking. The next activity is making a service product in a module about smoking. This activity begins with collecting/reviewing libraries as source material, creating a module layout, and printing the module.

The orphanage manager and its residents' participation in this activity are very active; where they actively participate in brainstorming, play an active role in brainstorming with the community service team to discuss activity models, play an active role in discussion, participate actively in small groups, and actively participate in evaluation and feedback.

## **RESULTS AND DISCUSSION**

Approximately 22 orphanage residents aged 8 to 15 years old participated in this community program on 30 April 2024. The program was conducted in Rumah Anak Yatim Azzahra, an orphanage in Penang, Malaysia.

The activity began with a speech by the orphanage management, who was very happy with the attention and this program (**Picture 1**). They were very open to the team's arrival and welcomed our community service activities. The team then brainstormed with orphanage adolescents and explored their basic knowledge about smoking and its dangers (**Picture 2**). Changes in Attitudes and Behaviors: Significant changes in adolescents' attitudes and behaviors towards smoking indicate that education not only provides information but also influences social norms and adolescents' perceptions about smoking. According to a study by Cheong et al. (2020), changes in social norms and attitudes are vital in reducing the prevalence of smoking among adolescents (Cheong, T.W., et al., 2020). The brainstorming results found that most of them did not smoke and would never try smoking when they grew up.



**Picture 1. Greetings From The Orphanage Manager**



**Picture 2. Discussion and Brainstorming**



Picture 3. Booklet "Smoking"



Picture 4. Program Team



**Picture 5. Evaluation**

The orphanage teenager also said that he often saw advertisements about cigarettes and also saw people smoking around their neighborhood. However, they realize that smoking will be detrimental to their health in the future. They mention that smoking may destroy healthy lung cells and it will lead to several deadly complications such as cancer, heart attack, and stroke. The statement supports this, "*you should not smoke cigarettes, this can cause your lungs to become damaged*"; "*fear of damaged lungs*"; "*smoking causes heart attacks*"; "*lung cancer*". This education and training activity gave good results because of several motivating factors, which include: 1) the material presented is new and uses simple language with a combination of clear picture examples, 2) the material presented is designed in two-dimensional, complete color form so that it becomes more attractive for the residents, 3) the material is presented using learning media in the form of booklets (**Picture 3**).

Effectiveness of the Education Program: Participants' perceptions of smoking tended to be negative, with all participants stating that they had never smoked and did not want to try smoking in the future. This result shows that the education program has great potential to reduce smoking rates among adolescents. This current result is in line with the findings of Lim et al. (2019), which stated that comprehensive and sustainable educational interventions can effectively reduce smoking behavior among adolescents (Lim et al., 2019).

The results of the community service program showed that the smoking education program conducted in an orphanage in Malaysia had a positive impact on reducing the prevalence of smoking and increasing adolescents' knowledge and attitudes toward the dangers of smoking. Effective education involves various methods such as direct counseling, visual media use, and participants' active participation in discussions and health-related activities. Increased Knowledge: Increased knowledge of participants regarding the dangers of smoking after participating in the education program reflects the importance of accurate information in influencing health behavior. A study by Tan et al. (2021)

supported this finding by showing that adolescents who had better knowledge about the negative impacts of smoking tended to have more negative attitudes toward smoking (Tan, C.Y., et al., 2021).

School and Community Involvement: Active involvement of the school where participants attend, and the community in the education program also plays an important role. Education involving teachers and other community members provides broader and more sustainable support for adolescents. A study by Williams et al. (2021) showed that support from the surrounding environment can strengthen the effects of smoking education programs (Williams et al., 2021). The results of community service program activities can generally be seen based on the following components: the success of the target number of program participants can be said to be very good, where participants can always attend service activities fully and cooperatively; the goal of community service has been achieved, where the planned activities can be carried out well and smoothly, where the service partners are very enthusiastic and participate in the activities from start to finish.

Smoking education at an Orphanage in Malaysia has shown promising results in reducing smoking prevalence among adolescents and improving knowledge and attitudes towards the dangers of smoking. Comprehensive and sustainable programs, with support from schools and communities, are needed to achieve more significant and sustainable results.

## **CONCLUSIONS AND RECOMMENDATIONS**

This program for partners can be organized well and run smoothly even though the service's goals have not been achieved perfectly following the activity plans that have been prepared. This activity was very well received, as evidenced by the participants' active participation in the discussion by not leaving the place before the program ended and positive testimonials several weeks after the mentoring activity was carried out. We hope that this program can continue according to the needs of participants.

## **ACKNOWLEDGMENT**

This program was supported by the Faculty of Health Sciences University of Muhammadiyah Malang in collaboration with the University of Technology Mara Malaysia and Rumah Anak Yatim Azzahra, Penang, Malaysia

## **REFERENCES**

- Cheah, Y. K., & Naidu, B. M. (2012). Exploring factors influencing smoking behaviour in Malaysia. *Asian Pacific Journal of Cancer Prevention*, 13(4). <https://doi.org/10.7314/APJCP.2012.13.4.1125>
- Gana, G. J., Idris, S. H., Sabitu, K., Oche, M. O., Abubakar, A. A., & Nguku, P. M. (2018). Prevalence and perception of cigarette smoking among out of school adolescents in Birnin Kebbi, North-Western Nigeria. *Pan African Medical Journal*, 30. <https://doi.org/10.11604/pamj.2018.30.304.16641>

- Kaufman, A. R., Twesten, J. E., Suls, J., McCaul, K. D., Ostroff, J. S., Ferrer, R. A., Brewer, N. T., Cameron, L. D., Halpern-Felsher, B., Hay, J. L., Park, E. R., Peters, E., Strong, D. R., Waters, E. A., Weinstein, N. D., Windschitl, P. D., & Klein, W. M. P. (2020). Measuring Cigarette Smoking Risk Perceptions. In *Nicotine and Tobacco Research* (Vol. 22, Issue 11). <https://doi.org/10.1093/ntr/ntz213>
- Kavita-Jetly, K. J., Azmawati, M. N., & Nur Shuhada, R. (2021). Smoking in Malaysia: Early Initiation and Ways to Overcome. *IIUM Medical Journal Malaysia*, 20(3). <https://doi.org/10.31436/imjm.v20i3.1727>
- Lim, Kuang H., Ghazali, S. M., Lim, H. L., Kee, C. C., Cheah, Y. K., Singh, B. S. G. P., Heng, P. P., Teh, C. H., Cheong, Y. L., & Lim, J. H. (2020). Tobacco use and other aspects related to smoking among school-going adolescents aged 13-15 years in Malaysia: Analysis of three cross-sectional nationally representative surveys in 2003, 2009 and 2016. *Tobacco Induced Diseases*, 18(9). <https://doi.org/10.18332/TID/127231>
- Lim, Kuang Hock, Ghazali, S. M., Lim, H. L., Cheong, K. C., Teh, C. H., Lim, K. K., Heng, P. P., Cheah, Y. K., & Lim, J. H. (2019). Smoking susceptibility among non-smoking school-going adolescents in Malaysia: Findings from a national school-based survey. In *BMJ Open* (Vol. 9, Issue 10). <https://doi.org/10.1136/bmjopen-2019-031164>
- Otten, R., Engels, R. C. M. E., & Prinstein, M. J. (2009). A Prospective Study of Perception in Adolescent Smoking. *Journal of Adolescent Health*, 44(5). <https://doi.org/10.1016/j.jadohealth.2008.09.004>
- Park, S. hee. (2011). Smoking and adolescent health. In *Korean Journal of Pediatrics* (Vol. 54, Issue 10). <https://doi.org/10.3345/kjp.2011.54.10.401>
- Williams, A., Az-Zahrah Amir, S. F., & Zulhelmi, M. (2021). Smoking Trends: A Cross Sectional Study in Dengkil, Sepang, Selangor, Malaysia. *International Journal of Science and Healthcare Research*, 6(3). <https://doi.org/10.52403/ijshr.20210704>

- Wojtecka, A., Kalinowska-Beszczynska, O., Tyrańska-Fobke, A., Kaleta, D., Wojnarowska, M., Robakowska, M., & Balwicki, Ł. (2023). Adolescents' Perceptions and Attitudes towards Traditional and Electronic Cigarettes – Results of Focus Group Interviews. *International Journal of Environmental Research and Public Health*, 20(2). <https://doi.org/10.3390/ijerph20021438>
- Yusoff, M. F. M., Lim, K. H., Saminathan, T. A., Hasani, W. S. R., Lourdes, T. G. R., Ghazali, S. M., Hamid, H. A. A., Majid, N. L. A., Rifin, H. M., & Yn, J. L. M. (2022). The pattern in prevalence and sociodemographic factors of smoking in Malaysia, 2011–2019: Findings from national surveys. *Tobacco Induced Diseases*, 20(10). <https://doi.org/10.18332/tid/152410>