

# Enabling and Reinforcing Factor of Smoking Behavior in Rejosari Village, Semarang

Hema Dewi Anggraheny

Department of Public Health Faculty of Medicine,  
Universitas Muhammadiyah Semarang Semarang, Indonesia  
[hemadewi@unimus.ac.id](mailto:hemadewi@unimus.ac.id)

Aisyah Lahdji

Departement of Public Health Faculty of Medicine,  
Universitas Muhammadiyah Semarang  
Semarang, Indonesia  
[ladjiaa@unimus.ac.id](mailto:ladjiaa@unimus.ac.id)

**Abstract**—Rejosari was one of the residences indicated with unhealthy family index in 2018. The result of *Program Indonesia Sehat* (Indonesian Health Program) survey with family approach showed that the lowest indicator found at RW XIV of Rejosari was smoking with 44%. It makes smoking as the biggest trouble which should be handled. This research was aimed to find out the causing factors of smoking at RW XIV of Rejosari. This research was a descriptive study with health problem survey using questionnaire about the affecting factors based on health behavior theory by Lawrence Green which included predisposing factor, enabling factor, and reinforcing factor. The survey was conducted in February 2019 on 258 nuclear families as the sample. The finding showed that 78% residents knew about the danger of smoking, 59% fought against smoking habit, 78% found that cigarette was accessible and affordable in their area, 82% family involved with smoking habit, 61% were about health practitioners role, and 36% were environmental role to the effort to quit smoking. The most dominant factor of smoking behavior in RW XIV Rejosari of Semarang was the accessibility to cigarette around their neighborhood, and the lack of environment role in solving smoking behavior.

**Keywords:** *smoking behavior, predisposing factor, enabling factor, reinforcing factor*

## I. INTRODUCTION

*Program Indonesia Sehat dengan Pendekatan Keluarga* (PIS-PK), was a governmental program to achieve healthy Indonesia during the period of 2015-2019. During the implementation, it was expected that the primary public health centers (*puskesmas*) were able to collect the data about the residents' common health problem. The survey was conducted on each nuclear family based on the family register. The higher score for each indicator meant the better health status of that family. Meanwhile, the health problem was indicated by the low score of each health problem indicator.

The family health index in 2018 showed that Rejosari was considered to have a poor family health condition. The PIS-PK survey showed that the residents of RW XIV got the lowest score on smoking behavior with 44%. It can be concluded that smoking behavior was the biggest health problem to solve.

Indonesia is on the third rank of the worlds' highest smoker, and the first rank on man smoker prevalence in ASEAN.

Smoking behavior can be a big problem when it is not properly solved, as it may cause some bigger health problems either for the active or passive smoker [1]. Smoking behavior is not only a problem for an adult but also children. The data showed that the number of smoker between 10-18 years old was raised from 7.2% in 2013 to 9.1% in 2018. The number was under the target of *Rencana Pembangunan Jangka Menengah Nasional* (RPJMN), National Medium Term Development Plan, which was 5.4%.

According to Lawrence Green, the risk factor of smoking is divided into three, which are predisposing, enabling, and reinforcing factors [2][3]. Predisposing factor includes knowledge, behavior, believe, custom, social norm, and other individual factors. The enabling factor involves the available facilities and access to get the cigarettes, meanwhile reinforcing factors involves the role of family, health practitioners, environment, government, and public figure in giving the education about the risk of smoking.

Based on the illustration above, the researcher would like to find out the highest risk factors relating to the smoking behavior particularly in Rejosari residence, Semarang, which included predisposing factors, enabling factors, and reinforcing factors.

## II. MATERIALS AND METHOD

This study was a descriptive research with a quantitative approach. The subject of the research was the residents of RW XIV Rejosari Semarang which were 258 nuclear families. The research was conducted in the residents' houses during February 2019. The inclusive criteria were the residents who stayed in Rejosari and the exclusive criteria were the residents who disagreed to be the respondents or unable to cooperate with the researcher. The data were collected using interview which was assisted using the risk factor questionnaire by Lawrence Green. The risk factors included predisposing, enabling, and reinforcing factors

*Units*

## III. RESULTS

Figure 1 represents the predisposing factor of smoking behavior which includes the respondents' knowledge and behavior about the risk of smoking for individual and environmental health. The survey showed that most of the respondents (78%) understood the risk of smoking. Most of

the respondents (59%) also fought against smoking behavior.

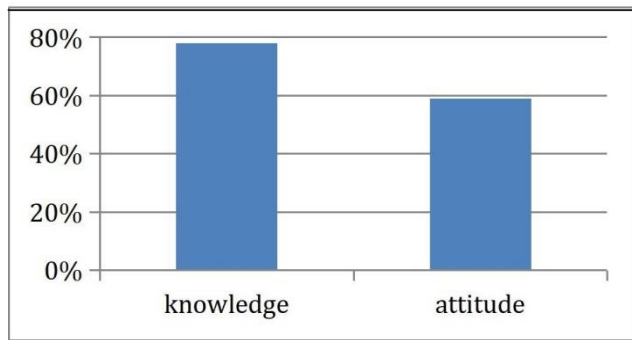


Fig. 1. The representation of the predisposing factor of RW XIV residents' smoking behavior at Rejosari Village, East Semarang

Figure 2 represents the enabling factors of the respondents smoking behavior which includes the availability of facilities and infrastructure to enable the smoking behavior. Most of the respondents (78%) stated that they easily got a cigarette and could freely smoke around their neighborhood.

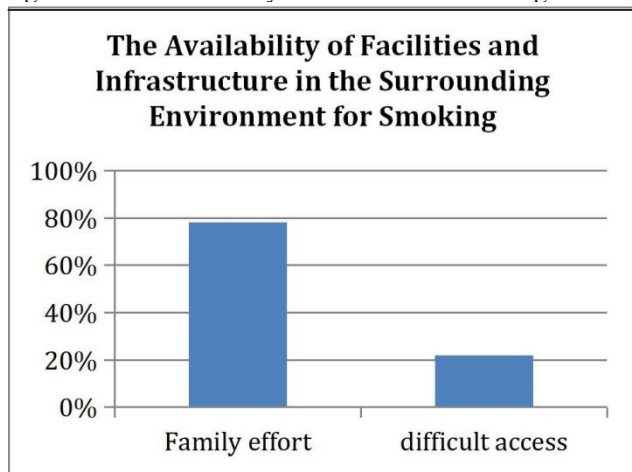


Fig 2. the representation of the enabling factor of RW XIV residents' smoking behavior at Rejosari East Semarang

Figure 3 represents the reinforcing factor of smoking behavior which includes the role of family, health practitioner, and neighborhood to stop smoking. The survey showed that most of the respondents (82%) stated that the family commonly had already reminded to avoid smoking. 61% stated that the health practitioners had already given the socialization and recommendation to avoid and stop smoking. Meanwhile, 36% stated that the other residents, such as neighbor and religious figure, had already suggested avoiding and stopping smoking.

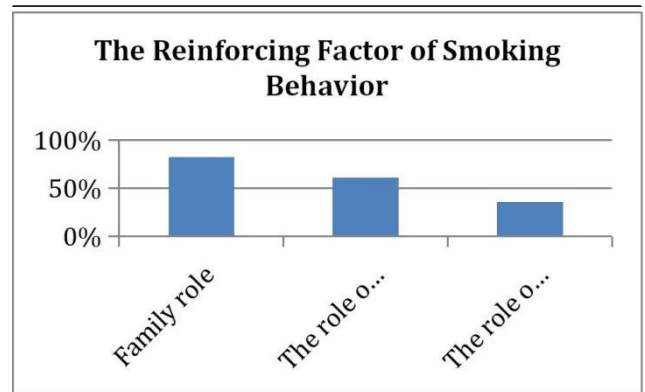


Fig 3. the representation of reinforcing factor of RW XIV residents' smoking behavior at Rejosari Semarang Timur

#### IV. DISCUSSION

The survey found that smoking habit was still an unsolved problem for the residents of RW XIV Rejosari, East Semarang. Socialization, education, and local government regulation about smoking prohibition could not completely solve the problem. Therefore, finding out the causing factor is important to solve the problem.

Based on the risk factor developed by Lawrence Green which includes predisposing, enabling, and reinforcing factor [3][4], it was found that the most dominant factors were the accessibility to cigarette and the lack of circumstantial role in solving the smoking behavior at RW XIV Rejosari. The finding was in line with the research about the analysis of smoking behavior which mainly involved the accessibility to cigarette and smoking behavior, also the social involvement in stopping smoking behavior [5][6][7][8]

The survey about respondents' knowledge showed that 78% of respondents understood the risk of smoking. However, only 59% of respondents took action to stop smoking. Some studies concluded that there was a correlation between knowledge and smoking behavior [9][10][11]

The survey showed that most of the respondents (78%) answered that it was easy to get a cigarette and to smoke around their residence. The residents conveyed that they could easily get the cigarette at an affordable price from the cigarette retailer. Besides, they could freely smoke in the public area around their neighborhood, despite the regulation of free smoking area. It was because the regulation had not been properly socialized and implemented at Rejosari.

The smoking behavior was not only found in adult but all of the age range. It was in line with the research about the smoking habit at a young age [4][5][11]. Based on observation and the review of related research, the main problem was the same that everyone could easily get the cigarette with the affordable price and get the chance to smoke in public places. In addition, despite the smoking prohibition conveyed through cigarette advertisements on the mass media, the number of advertisement is increasing, not only on the mass media but also in the public places in the form of text such as poster and leaflet. It contributes to the cigarette promotion rate [5][12].

The policy about access to cigarette, non-smoking area, and the implementation of a specific smoking area in public places can help to prevent smoking behavior [13][14]. Government regulation no. 109 of 2012 mentions that non-smoking area is an obligatory facility in public places such as health care center, a place for teaching and learning process, playground, religious place, public transportation, workplace, and the other appointed places.[14][15].

The regulation also mentioned that the places mentioned above should provide a smoking area which is an open space with good air circulation [15]. And in order to implement the regulation, support from the related parties is needed, especially from the local environment. [7] It is suitable for the risk factors of smoking which showed the dominant influence of availability of access to smoke and the lack of environmental role in preventing smoking.

People behavior and custom may resolve by the support of the local environment. [16] the support should be complete and comprehensive, not only in the public places of the big city [17]. One of the supports showed by the environment in achieving the non-smoking area is by giving reward and punishment to give a deterrent effect fo smokers [18]. The consistent implementation of the regulation may change people behavior [17].

The role of the environment could also be managed by public figures such as religious leader and local leader by giving an example of non-smoking behavior and giving the advice to avoid smoking. It is difficult since some of the public figures are smoking, so they cannot be a good example. In addition, limited access to smoke may also significantly reduce or even stop smoking behavior [19]. In the government regulation no 19 of 2012, it is clearly mentioned about the prohibition to sell a cigarette for pregnant women and children under 18 years old. [15] The policies are the representation of government effort in reducing the diseases related to smoking and reducing the rate of smoker number in Indonesia, as implemented by other countries in reducing smoking behavior [20].

#### ACKNOWLEDGMENT

The researchers would like to express their appreciation to Faculty of Medicine Muhammadiyah University of Semarang for providing the fund for this research. Thank you is also given to all of the residents and stakeholder of RW XIV Rejosari Village, East Semarang.

#### REFERENCES

[1] M. Parascandola, "Tobacco harm reduction and the evolution of nicotine dependence," vol. 101, no. 4, pp. 632–41, 2011.  
 [2] N. Lacobelli, S. Gallus, and E. Petridou, "Smoking behaviors and perceived risk of injuries in Italy, 2007," *Prev Med*, vol. 47, no. 1, pp. 123–266, 2008.  
 [3] K. R. Mackinnon, L. A. Tarasoff, and H. Kia, "Predisposing,

reinforcing, and enabling factors of trans-positive clinical behavior change: A summary of the literature change: A summary of the literature.," 2016.  
 [4] K. S. Freedman, N. M. Nelson, and L. L. Feldman, "Smoking Initiation Among Young Adults in the United States and Canada, 1998–2010," *A Syst. Rev.*, vol. 9, no. 5, 2012.  
 [5] J. T. Macy and L. P. Chassin, "Smoking behaviors and attitudes during adolescence prospectively predict support for tobacco control policies in adulthood. *Nicotine Tob res* [Internet].," vol. 14, no. 7, pp. 871–9, 2012.  
 [6] Y. Kim, "Impact of Work Environments and Occupational," vol. 64, no. 3, pp. 103–13, 2015.  
 [7] D. Aisyah, S. Musthofa, and R. Indraswari, "Analisisfaktor-faktor yang mempengaruhiperilakumerokok pada anggota TNI-AD di YonifMekanis 201/Jaya Yudha, Jakarta," *J KesehatMasy*, vol. 5, pp. 504–18, 2017. F. Faridah, "Analisisfaktor-faktorpenyebabperilakumerokokremaja di SMA 'X' Surakarta," . *J KesehatMasy*, no. 3, pp. 887–97, 2015.  
 [8] F. Rutten, E. M. Augustson, and R. Moser, "Smoking knowledge and behavior in the United States: sociodemographic, smoking status, and geographic patterns. *Nicotine Tob res*," vol. 10, no. 10, pp. 1559–70, 2008.  
 [9] S. Chotijah, "Pengetahuan tentang rokok, pusat kendali kesehatan eksternal dan perilaku merokok," *Makara, Sos. Hum.*, vol. 16, no. 1, pp. 49–56, 2012.  
 [10] E. Wijayanti and C. D. Rifqatussa'adah, "Faktor-faktor yang berhubungan dengan perilaku merokok pada remaja Kampung Bojong Rawalele, jatimakmur, Bekasi," *Glob. Med. Heal. Commun.*, vol. 5, pp. 194–8, 2017.  
 [11] K. D. Blake, K. Viswanath, and R. J. Blendon, "The role of tobacco-specific media exposure, knowledge, and smoking status on selected attitudes toward tobacco control. *Nicotine Tob res*," vol. 12, no. 2, pp. 117–26, 2010.  
 [12] D. Hammond, G. T. Fong, and M. P. Zanna, "Tobacco denormalization and industry beliefs among smokers from four countries," *Am J Prev Med*, vol. 31, no. 3, pp. 225–2, 2006.  
 [13] S. Ferrite and V. Santana, "Joint effects of smoking, noise exposure, and age on hearing loss," *Occup Med. 2005*, vol. 55, no. 1, pp. 48–53, 2005.  
 [14] *Republik Indonesia. PeraturanPemerintahRepublik Indonesia No. 109 Tahun 2012 tentangPengamananBahan yang MengandungZatAdiktifBerupaProdukTembakauBagiKesehatan.* Jakarta, 2012.  
 [15] B. Raingruber, *Health promotion theories in Contemporary healthh promotion in nursing practice.* In Jones and Barlett Publishers, 2014.  
 [16] E. J. Hahn, M. K. Rayens, and K. M. Butter, "Smoke-free laws and adult smoking prevalence," *Prev Med*, vol. 47, no. 2, pp. 20–9, 2008.  
 [17] S. A. Glantz and P. Jamieson, "Attitudes toward secondhand smoke, smoking and quitting among young people," *Pediatrics*, vol. 106, no. 6, p. E82, 2000.  
 [18] W. Rachel and B. Debra, "Policy interventions and surveillance as strategies to prevent tobacco use in adolescents and young adults.," *Am J Prev Med*, vol. 33, no. 6, pp. 335–9, 2007.  
 [19] D. Amott, M. Dockrell, A. Sandford, and I. Willmore, *Comprehensive smoke-free legislation in England: how advocacy won the day.* 2007.