## SOCIAL SUPPORT AND SMOKING BEHAVIOR IN TRADITIONAL ISLAMIC BOARDING SCHOOLS OF ACEH BESAR

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## ABSTRACT

Indonesia was a country with the third-largest number of smokers in the world. Teenagers were one of the age groups at risk of becoming smokers. The smoking behavior of santri in one of the traditional Islamic boarding schools in Aceh Besar was classified as bad. Emotional support is done to change smoking behavior in students. This research used a method quasi experimental through approach pre-postest design with controlling. The sample in this study were students aged >18 years who smoked with a total sample size of 47 people for each intervention. The results showed that emotional support was effective in increasing the knowledge ($p = 0.043$) and attitudes ($p = 0.039$) of students to quit smoking. However, emotional support was not effective in reducing the number of cigarettes smoked per day ($p = 0.906$). Emotional support increases the knowledge and attitudes of students to quit smoking but does not reduce the number of cigarettes smoked per day. It is hoped that it is necessary to increase social support that is more effective with longer interventions to reduce the number of cigarettes smoked per day.

**KEYWORDS:** smoking behavior, knowledge, attitude, action, emotional support.

## BACKGROUND

Indonesia is a country with the third-largest number of smokers in the world, behind China and India (Kemenkes, 2013). Based on the results of research in Java, it was found that the average family where one of its members smokes will spend 10% of the budget on cigarettes (Block & Webb, 2009). The average individual smoker spends IDR 2,592,000 per year on buying tobacco (WHO, 2012).

The results of the Global Youth Tobacco Survey (GYTS) Indonesia 2006 found that 57% of households in Indonesia have at least one smoker and 91.8% of these smoker's smoke indoors (WHO, 2015). Blokland (2004) states that smoking habits in parents will set an example for their children to try smoking. Quitting smoking as early as possible will reduce the desire for children not to smoke (den Exter Blokland, Engels, Hale III, Meeus, & Willemsen, 2004). Protecting children from cigarette smoke is the key to promoting health for children and can reduce sudden infant death syndrome (Blackburn et al., 2005).

Although anti-smoking campaigns have been carried out with various methods and smokers know the effects of smoking on health, smokers' desire to quit smoking is still low (Yun, Kang, Lim, Oh, & Son, 2010). Our government has also made various efforts to reduce/cope with smoking behavior, one of

which is through the implementation of clean and healthy living habits by prohibiting smoking in the home. However, tobacco control policies in Indonesia are still debatable (Laksono WT, 2008).

Several studies have shown that the necessary social support (social support) to change smoking behavior (Laksono WT, 2008). Research conducted by Lichtenstein, at all (2002) states that people get higher social support, have lower psychological and physical symptoms, and also have a lower mortality rate compared to people who have low social support (Lichtenstein, Andrews, Barckley, Akers, & Severson, 2002). Blackburn (2005) states that changing non-smoking behavior in the home is easier to do than stopping smoking behavior itself (Blackburn et al., 2005). However, research conducted by Ismail (2017) found that there was no relationship between social support (wife) and husband smoking behavior in the house (Ismail, 2017).

Various efforts have been made by the health center and the health office to reduce smoking behavior. The results of the interviews also showed that the students, leaders, and teachers were generally smokers. For this reason, researchers are interested in researching "social support and smoking behavior in traditional Islamic boarding schools in Aceh Besar in 2018".

## RESEARCH METHOD

This study was designed for a study quasi-experimental using approach pre-posttest design with controlling. The intervention group was given social support consisting of information, emotional, instrument, and assessment support. Meanwhile, the control group was not given any treatment.

This research was conducted in 2 Islamic boarding schools in Aceh Besar. The sample in this study were smoking santri aged >18 years and had been students for at least 1 year. The sampling technique used total sampling. The number of samples in this study for each intervention group was 47 students.

The data were collected by distributing a questionnaire before the intervention to measure the smoking behavior of the students which consisted of knowledge, attitudes, and actions in the form of the number of cigarettes smoked per day. The intervention was given 1 meeting, then the students' smoking behavior was measured 1 month after the intervention.

The results of the normality test showed that the data were not normally distributed, so the data analysis used was the Wilcoxon test and the Mann Whitney test. Univariate and bivariate data analysis was performed using the SPSS application.

## RESEARCH RESULTS

**Table 1 Characteristics of the Frequency Distribution of Santri**

| No | Characteristics | Intervention Group | | Control Group | |
|---|---|---|---|---|---|
| | | f | % | f | % |
| 1 | **Age** | | | | |
| | 18 years | 18 | 38.3 | 18 | 38.3 |
| | 19 years old | 15 | 31.9 | 15 | 31.9 |
| | 20 years | 14 | 29.8 | 14 | 29.8 |
| 2 | **Father's Education** | | | | |
| | Primary school | 1 | 2.1 | 1 | 2.1 |
| | Junior High | 3 | 6.4 | 3 | 6.4 |
| | High school | 29 | 61.7 | 29 | 61.7 |
| | College | 14 | 29.8 | 14 | 29.8 |
| 3 | **Father's occupation** | | | | |
| | Civil servants | 11 | 23.4 | 11 | 23.4 |
| | Farmers / Fishermen | 7 | 14.9 | 7 | 14.9 |
| | Private | 15 | 31.9 | 15 | 31.9 |
| | entrepreneur | 14 | 29.8 | 14 | 29.8 |
| | Does not work | 0 | 0.0 | 0 | 0.0 |
| 4 | **Mother's Education** | | | | |
| | Primary school | 0 | 0.0 | 0 | 0.0 |
| | Junior High | 9 | 19.1 | 9 | 19.1 |
| | High school | 25 | 53.2 | 25 | 53.2 |
| | College | 13 | 27.7 | 13 | 27.7 |
| 5 | **Mother's occupation** | | | | |
| | Civil servants | 5 | 10.6 | 5 | 10.6 |
| | Farmers / Fishermen | 0 | 0.0 | 0 | 0.0 |
| | Private | 4 | 8.5 | 4 | 8.5 |
| | entrepreneur | 7 | 14.9 | 7 | 14.9 |
| | Does not work | 31 | 66.0 | 31 | 66.0 |

Based on table 1. it shows that the age category of santri was highest in the intervention group, namely 18 years as much as 38.3%, as well as in the control group as much as 42.6%. The highest father's education was in the intervention group, namely SMA as much as 61.7%, as well as in the control group as much as 51.5%. For father's occupation, the highest in the intervention group was private as much as 31.9%, while in the control group was self-employed as much as 31.9%.

The highest level of maternal education was in the intervention group, namely high school (53.2%), as well as in the control group (57.4%). For maternal occupation the highest in the intervention group was not working as much as 66.0%, as well as in the control group as much as 40.4%.

**Table 2. Distribution of Smoking Behavior in the Intervention Group**

| Smoking Behavior | Group | Mean | Median | Minimum | Maximum | Std. Deviation |
|---|---|---|---|---|---|---|
| Knowledge | Pre-Test | 6.3 | 6.0 | 4.0 | 9.0 | 1.54 |
| | Post-Test | 11.2 | 11.0 | 8.0 | 14.0 | 1.28 |
| | Difference | 4.97 | 5.0 | 1.0 | 9.0 | 1.82 |
| Attitude | Pre-Test | 4.8 | 5.0 | 3.0 | 8.0 | 1.30 |
| | Post-Test | 6.6 | 7.0 | 4.0 | 9.0 | 1.29 |
| | Difference | 1.7 | 2.0 | 0.0 | 5.0 | 1.34 |
| Action | Pre-Test | 10.6 | 10.0 | 6.0 | 20.0 | 3.39 |
| | Post-Test | 10.1 | 10.0 | 3.0 | 20.0 | 3.62 |
| | Difference | -0.51 | 0.00 | -10.0 | 10.0 | 5.31 |

Based on table 2. the average knowledge of students in the experimental group before being given the intervention was 6.3 with a standard deviation of 1.54. After being given the intervention, the average knowledge of the students was 11.2 with a standard deviation of 1.28. There was an increase in the average adolescent knowledge about smoking as much as 4.97 with a standard deviation of 1.82.

The mean score of the students' attitude in the experimental group before being given the intervention was 4.8 with a standard deviation of 1.30. After being given the intervention, the average score for the attitude of the students was 6.6 with a standard deviation of 1.29. There was an increase in the average score of adolescent attitudes about smoking by 1.7 with a standard deviation of 1.34.

The average action of the students in smoking cigarettes in the experimental group before being given the intervention was 10.6 cigarettes/day with a standard deviation of 3.39. After being given the intervention, the average action of the students in smoking cigarettes was 10.1 sticks/day with a standard deviation of 3.62. There was a decrease in the actions of the students in smoking cigarettes per day as much as -0.51 sticks/day with a standard deviation of 5.31.

**Table 3. Difference Average Smoking Behavior Before and After Intervention By Intervention Group and Control Group (Wilcoxon Sign Test)**

| Smoking Behavior | Groups | Mean ± SD | | Δmean ± SD | P-value |
|---|---|---|---|---|---|
| | | **Pre- Test** | **Post-Test** | | |
| Knowledge | **Intervention** | 6.3 ± 1.54 | 11.2 ± 1.28 | 4.97 ± 1.82 | 0.000 |
| | **Control** | 6.3 ± 1.23 | 10.4 ± 1.23 | 4.1 ± 1.757 | 0.000 |
| Attitude | **Intervention** | 4.8 ± 1.30 | 6.6 ± 1.29 | 1.7 ± 1.34 | 0.000 |
| | **Control** | 4.8 ± 0.94 | 7.1 ± 1.06 | 2.2 ± 1.09 | 0.000 |
| Action | **Intervention** | 10.6 ± 3.39 | 10.1 ± 3.62 | -0.51 ± 5.31 | 0.511 |
| | **Control** | 9.5 ± 2.47 | 8.6 ± 2.55 | -0.8 ± 3.74 | 0.119 |

Based on Table 3. the results of statistical analysis showed that there are significant differences in average knowledge before and after the intervention in the group given support social with p-value = 0.000 (p <0.05). The results also showed that there was a significant difference in the average knowledge before and after intervention in the control group with p- value = 0.000 (p <0.05).

The statistical test results showed that there was a significant difference in the average attitude before and after the intervention was given to the group that was given social support with p-value = 0.000 (p <0.05). The results also showed that there was a significant difference in the average attitude before and after intervention in the control group with p-value = 0.000 (p <0.05).

The results of statistical tests showed that there was no significant difference in the average number of cigarettes smoked per day before and after the intervention was given to the group given social support with p-value = 0.511 (p> 0.05). The results also showed that there was no significant difference in the average number of cigarettes smoked per day before and after the intervention was given to the control group with p-value = 0.119 (p> 0.05).

**Table 4. Differences in Average Smoking Behavior Before and After Intervention (Mann Withney)**

| Smoking Behaviour | | Mean ± SD | | P-value |
|---|---|---|---|---|
| | | Intervention Group | Control Group | |
| Knowledge | Pre-Test | 6.3 ± 1.54 | 6.3 ± 1.23 | 0.981 |
| | Post-Test | 11.2 ± 1.28 | 10.4 ± 1.23 | 0.002 |
| | Difference | 4.97 ± 1.82 | 4.1 ± 1.57 | 0.043 |
| Attitude | Pre-Test | 4.8 ± 1.30 | 4.8 ± 0.94 | 0.675 |
| | Post-Test | 6.6 ± 1.29 | 7.1 ± 1.06 | 0.102 |
| | Difference | 1.7 ± 1.34 | 2.2 ± 1.09 | 0.039 |
| Action | Pre-Test | 10.6 ± 3.39 | 9.5 ± 2.47 | 0.134 |
| | Post-Test | 10.1 ± 3.62 | 8.6 ± 2.55 | 0.040 |
| | Difference | -0.51 ± 5.31 | -0.8 ± 3.74 | 0.906 |

Based on Table 4. the results of statistical analysis showed that there is no difference in the mean knowledge before intervention between the intervention group and the control group with p-value = 0.981 (p> 0.05). After being given the intervention, there was a significant difference in the mean knowledge between the intervention group and the control group with p-value = 0.002 (p <0.05). The results also showed that there was a significant difference in the mean difference in knowledge between the intervention group and the control group with a p-value = 0.043 (p <0.05).

Test results statistics showed that there was not difference in the average attitude before intervention between the intervention group and the control group with p-value = 0.675 (p>

0.05). After being given the intervention, there was no significant difference in the average attitude between the intervention group and the control group with p-value = 0.102 (p> 0.05). The results also showed that there was a significant difference in the mean difference in attitudes between the intervention group and the control group with a p-value = 0.039 (p <0.05).

Test results statistics showed that there was not difference in the average smoking per day before the intervention is given between the intervention group and the control group with p-value = 0.134 (p> 0.05). After being given the intervention, there was a significant difference in the average smoking per day between the intervention group and the control group with p- value = 0.040 (p <0.05). The results also showed that there was no significant difference in the average difference in smoking actions per day between the intervention group and the control group with p-value = 0.906 (p> 0.05).

## DISCUSSION

Smoking behavior can be measured from the knowledge, attitudes, and actions of a person in smoking cigarettes per day. The results showed that there were differences in the average knowledge and

attitudes of the students before and after being given social support interventions. However, the results of the study did not show a significant difference in the average action of cigarettes smoked per day before and after the intervention was given.

This research is in line with the research of Said Usman (2018) which shows that health promotion interventions, one of which consists of social support to increase knowledge, attitudes, and statistically have a significant effect on increasing smoking behavior in employees and developing the concept of smoking cessation behavior. The high social support for quitting smoking will be able to realize it to quit smoking, so that the intention to quit smoking is getting stronger, and vice versa (Usman, 2018).

Social support has a positive effect on smoking cessation behavior (Park, Tudiver, Schultz, & Campbell, 2004). However, some studies show no major effect of social control on the point of the prevalence of abstinence and the number of cigarettes smoked per day. This happens because the social support received on smoking cessation is less consistent with the literature. After all, perceived support was generally assessed in the study of behavioral change (Ochsner et al., 2015).

According to Sarafino and Smith, social support consists of emotional support, appreciation, instrumentalism, and information. Support provided by others will help individuals in overcoming the problems at hand. Social support can be obtained from anyone, be it from health workers, family, friends, or teachers (Sarafino & Smith, 2014).

Supporters from informational support quit smoking longer than support providers from caregiver support. Whereas recipients of support from informational support quit smoking faster than recipients of support from caregiver support (Zhang & Yang, 2015). Social support can also be done online. Smoking cessation people who participate in online social groups may benefit from peer support and information sharing, thereby preventing smoking again (Cheung, Chan, Wang, Li, & Lam, 2017).

Smokers who received behavioral support groups (either closed or rolling groups) were three times more likely to quit smoking than those who had only seen a general practitioner or pharmacy provider (OR 3.4, 95% CI 1.7-6.7) (Dobbie et al., 2015). The results of other studies conducted on students at SMP X also showed that there was an effect of family support on students' smoking behavior (ANGGRIANI, 2017). Social support plays an important role in determining and directing individual behavior. Social support can be obtained from various sources, one of which is family, both wife and children (Laksono WT, 2008).

Social support from parents, school, or good peers will affect students' smoking attitudes (Gumanty, Afandi, & Zulharman, 2015). Social support moderates the relationship between self-efficacy and smoking, as well as response planning and smoking but not between action planning and smoking (Ochsner et al., 2014). Social support is a heterogeneous concept and can affect mental and physical health. Social support demonstrates health-relevant outcomes, including health behaviors. One of them

is smoking cessation behavior. Good social support is likely to increase 50% of individuals to survive (Holt-Lunstad & Uchino, 2015).

The results of this study also showed that emotional support was more effective in increasing the knowledge and attitudes of students to quit smoking. However, emotional support interventions were not effective at reducing the number of cigarettes smoked in a day. This is assumed because the action to reduce the number of cigarettes smoked cannot be done in the short term.

The results of this study are in line with research conducted on grade 1 students of the Department of Automotive Mechanics, which shows that there is no significant relationship between school environmental support and knowledge, attitudes, and actions of smoking respondents (Zulkarnain, 2018).

Smoking behavior is not only influenced by social support but is also influenced by age, occupation, gender, education level, economic status, smoking rules in the home, the influence of advertising, studying in private schools, having friends who smoke, smoking parents, perceptions. ill health and the perception of dissatisfaction with life (Alsubaie, 2018; Rahim, Suksaroj, & Jayasvasti, 2016). Also, socioeconomic position, depressive symptoms, physical

dependence, and different gender functions determine whether a person should smoke and stop smoking (Castro, 2016). The higher the social support for students, the higher the motivation to quit smoking in adolescent boys (Rahmasari, 2015).

Researchers assume that social support is provided in the form of information, instrumental, emotional, and assessment can increase the knowledge and attitudes of students to quit smoking. However, it is not effective at reducing the number of cigarettes smoked in a day. It is assumed by the authors because individuals who have been smoking for a long-time experience addiction so that it takes a long time to quit smoking. Besides, the emotional support provided in this study was only done once and monitored within 1 month, so that the monitoring time is relatively short to determine the decrease in the number of cigarettes smoked per day.

## CONCLUSION

Social support is more effective in increasing the knowledge and attitudes of students to change smoking behavior. However, social support is not effective at reducing the number of cigarettes smoked per day. For this reason, researchers hope that further research can be carried out by adding time to social support interventions and re-analyzing the number of cigarettes smoked per day.

## REFERENCES

Alsubaie, A. S. R. (2018). Prevalence and determinants of smoking behavior among male school adolescents in Saudi Arabia. International Journal of Adolescent Medicine and Health, 1(ahead-of-print).

Anggriani, S. D. (2017). Pengaruh Dukungan Keluarga Dan Teman Sebaya Terhadap Perilaku Merokok Pada Siswa Di Smp X. University of Muhammadiyah Malang,

Blackburn, C., Bonas, S., Spencer, N., Dolan, A., Coe, C., & Moy, R. (2005). Smoking behaviour change among fathers of new infants. Social science & medicine, 61(3), 517- 526.

Block, S., & Webb, P. (2009). Up in smoke: tobacco use, expenditure on food, and child malnutrition in developing countries. Economic Development and Cultural Change, 58(1), 1-23.

Castro, Y. (2016). Determinants of smoking and cessation among Latinos: Challenges and implications for research. Social and personality psychology compass, 10(7), 390-404.

Cheung, Y. T. D., Chan, C. H. H., Wang, M. P., Li, H. C. W., & Lam, T.-h. (2017). Online social support for the prevention of smoking relapse: a content analysis of the WhatsApp and Facebook social groups. Telemedicine and e-Health, 23(6), 507-516.

den Exter Blokland, E. A., Engels, R. C., Hale III, W. W., Meeus, W., & Willemsen, M. C. (2004). Lifetime parental smoking history and cessation and early adolescent smoking behavior. Preventive medicine, 38(3), 359-368.

Dobbie, F., Hiscock, R., Leonardi-Bee, J., Murray, S., Shahab, L., Aveyard, P., . . . Purves, R. (2015). Evaluating Long-term Outcomes of NHS Stop Smoking Services (ELONS): a prospective cohort study. Health Technology Assessment (Winchester, England), 19(95), 1.

Gumanty, H., Afandi, D., & Zulharman, Z. (2015). Gambaran Dukungan Sosial pada Siswa Siswi terhadap Sikap Merokok di Sekolah Menengah Pertama Negeri Kota Pekanbaru. Riau University, Holt-Lunstad, J., & Uchino, B. N. (2015). Social support and health. Health behavior: Theory, research and practice, 183-204.

Ismail. (2017). The Relationship of Wife's Attitude and Family Support towards Smoking Husband's Behavior inside the House in Ulee Susu, Darul Imarah Sub-District Aceh Besar, International Journal of Medical Science and Clinical Invention

Kemenkes, R. (2013). Infodatin Perilaku Merokok Masyarakat Indonesia. Kemenkes RI, Jakarta, 1-11.

Laksono WT. (2008). Hubungan antara Dukungan Sosial dengan Intensi Berhenti Merokok pada Mahasiswa. Universitas Muhammadiyah Surakarta.

Lichtenstein, E., Andrews, J. A., Barckley, M., Akers, L., & Severson, H. H. (2002). Women helping chewers: partner support and smokeless tobacco cessation. Health Psychology, 21(3), 273.

Ochsner, S., Knoll, N., Stadler, G., Luszczynska, A., Hornung, R., & Scholz, U. (2015). Interacting effects of receiving social control and social support during smoking cessation. Annals of Behavioral Medicine, 49(1), 141-146.

Ochsner, S., Luszczynska, A., Stadler, G., Knoll, N., Hornung, R., & Scholz, U. (2014). The interplay of received social support and self-regulatory factors in smoking cessation. Psychology & health, 29(1), 16-31.

Park, E.-W., Tudiver, F., Schultz, J. K., & Campbell, T. (2004). Does enhancing partner support and interaction improve smoking cessation? A meta-analysis. The Annals of Family Medicine, 2(2), 170-174.

Rahim, F. K., Suksaroj, T., & Jayasvasti, I. (2016). Social determinant of health of adults smoking behavior: differences between urban and rural areas in Indonesia. Kesmas: National Public Health Journal, 11(2), 51-55.

Rahmasari, W. R. (2015). Hubungan Dukungan Sosial Dengan Motivasi Berhenti Merokok Pada Masa Remaja Laki-Laki Kelas VIII SMP Negeri 2 Papar Kediri Tahun Pelajaran 2014/2015. Kediri (ID): Universitas Nusantara PGRI Kediri.

Sarafino, E. P., & Smith, T. W. (2014). Health psychology: Biopsychosocial interactions: John Wiley & Sons.

Usman, S. (2018). Pengaruh promosi kesehatan terhadap perubahan perilaku merokok karyawan (studi kasus di Rumah Sakit Umum Daerah Dr. Zainoel Abidin Banda Aceh). Majalah kesehatan masyarakat aceh (makma), 1(1), 1-12.

WHO. (2012). Factsheet: Morbidity and Mortality:Cessation of Smoking, Center for Diseases Control and Prevention.

WHO. (2015). Global Youth Tobacco Survey (GYTS) 2014: Indonesia Factsheet.

Yun, E. H., Kang, Y. H., Lim, M. K., Oh, J.-K., & Son, J. M. (2010). The role of social support and social networks in smoking behavior among middle and older aged people in rural areas of South Korea: a cross-sectional study. BMC Public Health, 10(1), 78.

Zhang, M., & Yang, C. C. (2015). Using content and network analysis to understand the social support exchange patterns and user behaviors of an online smoking cessation intervention program. Journal of the Association for Information Science and Technology, 66(3), 564-575.

Zulkarnain, E. (2018). Dukungan Sosial Dalam Pembentukan Perilaku Merokok Pada Siswa Kelas 1 Jurusan Mekanik Otomotif SMKN 2 Jember.