

The Increased Interaction of Parents can Prevent Smoking Behavior and Alcohol Consumption of Adolescents in Indonesia

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Abstract: A problem that often occurs in adolescents is their relationship with their parents. When the quality of interaction with parents is reduced, adolescents tend to prefer smoking behavior and consumption of alcohol. Cigarette and alcohol consumption can cause addiction and affect development in adolescent health. The aim of this study is to analyze the relationship between parents' interaction with smoking behavior and alcohol consumption among adolescents. The design in this study was cross-sectional with simple random sampling. The result of sample calculation with power analysis obtained a sample equal to 744. Data collection was carried out with online questionnaires using Google Forms. PACHIQ-R was used for the parent interaction variable, and for smoking behavior and alcohol consumption questionnaires were used that had been tested for validity and reliability and analyzed used by a chi-square test. Independent and dependent variables are parent interaction, smoking behavior, and alcohol consumption. The results showed a significant relation between parent interaction and smoking behavior ($p = 0.044$). Existence of parent interaction relation with alcohol consumption behavior ($p = 0.00$). Improvement of parent interaction with children can increase the intensity of time children spend with parents and parents' love, and improve their relationship, and teen sex will affect the quality of relationship between parents and adolescents.

1 BACKGROUND

The interaction of parents and adolescents is very important in fostering good emotional intelligence in adolescents (Joan S. Tucker, Phyllis L. Ellickson, Maria Orlando and Klein, 2005). The purpose of the interaction of parents with adolescents is to build a fit between the characteristics and abilities of adolescents in adapting to the environment (Santrock, 2014). However, based on the results of previous research, if adolescents feel the acceptance of parents through the interaction of parents and children, this can improve the ability of adolescents to know and manage emotions and can solve their problems (Todd Q. Miller, 2002). The impact of lack of parental interaction on children can lead to negative behavior in children, such as risk behavior. Risk behavior encompasses various aspects of aggressive behavior, free sex, alcohol and drugs, and smoking behavior (Todd Q. Miller, 2002).

Factors that cause smoking and alcohol consumption behavior in adolescents are the

environment, peers, family's economic status, perceptions of smoking, cigarette advertising, psychological factors, and lack of parental interaction with children (Joung, 2014).

Cigarettes and alcohol consumption are among the world's leading causes of death. The World Health Organization (WHO) predicts by 2030 deaths from smoking and consuming alcoholic drinks will reach 12.5 million people per year. Based on data from WHO in 2012, the order of most cigarette consumption at age 15 years and above is Europe 39%, Southeast Asia 32.1%, Africa 24.2%, and America 22.8% (WHO, 2012). According to Basic Health Research Data (RISKESDAS, 2013) in Indonesia in 2013, the incidence of smoking was 34.6%, consisting of 64.4% men and 2.1% women. With regard to age ranges of first smoking, for 5-9 years, it was 1.7%, for 10-14 years 17.5%, and for 15-19 years 43.3%. The average number of cigarettes smoked was about 12.3 cigarettes per day (RISKESDAS, 2013). Regarding age ranges of first consumption of alcoholic beverages, for 5-9 years it was 3.05%, for 10-14 years 8.73%, and for 15-19

years 5.59%. The National Narcotics Agency (BNN) conducted a survey in 2016, and it was found that the number of teenagers who smoke in the province of East Java was 27.5% while the number of teens who drink alcohol was 5% (BNN, 2016). Data from the Surabaya City Health Office stated that the number of smokers in Surabaya up to 2014 was 63.7% and those who consumed alcohol was 20.3% (Guillermo Prado, José Szapocznik, Mildred M. Maldonado-Molina and Schwartz, 2008).

Adolescents are more vulnerable to smoking and drinking alcohol caused by psychosocial influences, i.e, limited ability to think logically, weak emotional regulatory ability, and peer influences. Being an individual who is considered an out-group by peers is an unpleasant experience for teenagers. Consequently, adolescents perform behavior that can be accepted by peers; this is where adolescents adopt the value of peers (Temcheff, C. E., Dery, M., St-Pierre, R. A., Laventure, M. and Lemelin, J. P., 2016). Parents shape the child's behavior through daily nurturing called parenting (Wang *et al.*, 2016).

Parent-teen interaction is very influential on aspects of adolescent life. The active role of the parents also greatly aids the emotional process of the child. This can be seen from the form of support related to the formation and emotional development of children; namely, it releases the creative power and imagination of children who have positive impact and, of course, the child is always directed. Attitude and attention is the key to creating a harmonious relationship between parents, children, and other family members. It is important for parents to intensely communicate with their children. Through the results of this study, it is expected to know whether there is correlation between interaction of parents and the behavior of smoking and drinking alcohol in adolescents (Ross and Mirowsky, 2011).

2 METHODS

The design of this study was cross-sectional, and it was conducted in Indonesia in September-December 2017. The population of this study were adolescents aged 12-19 years in Indonesia. The sampling method used was simple random sampling. The results of power analysis calculation obtained 744 samples. Data collection was carried out using online questionnaires using Google Forms that contained the purpose of the study, informed consent sheet, demographic data questionnaire, PACHIQ-R questionnaire, smoking behavior questionnaire, and

questionnaire about alcoholic beverage consumption behavior. Inside the questionnaires, there was a description of how to fill it in. The completion of the informed consent sheet was done by the teenagers themselves. They filled out the informed consent sheet first, after the researchers obtained their approval to fill in demographic data and the questionnaires in Google Forms. Filling out the questionnaire took approximately 20 minutes. After the questionnaires were filled out, respondents submitted the questionnaires so that data that had been supplied could be directly entered into researchers' e-mail. The independent variable was parent interaction with adolescent.

The dependent variable of smoking behavior and alcohol consumption in adolescents was measured using PACHIQ-R questionnaire, a smoking behavior questionnaire, and a questionnaire about alcoholic beverage consumption behavior and analyzed using the chi square statistical test. This study has passed the review and certification of the Ethical Agreement with no. 548 - KEPK 6 November 2017 issued by the Faculty of Nursing Universitas Airlangga.

3 RESULTS

Respondents in this study were mostly in the age range of 15-17 years, as many as 374 people (50.2%). The majority of respondents had high school education, as many as 606 people (81.3%). The majority of respondents' parents had a senior high school education; there were 328 people (44,1%) with fathers who had a senior high school education and 314 people (42.2%) with mothers who had a senior high school education. The majority of respondents, 672 people (90.3%), live with their parents. Most respondents used a motorcycle as a medium of transportation to school, as many as 462 people (62.1%), and the majority of respondents were given pocket money by their parents, as much as less than Rp 50,000 and as many as 626 people (84.1%).

Respondents in this study were mostly in the category of not smoking, as many as 533 people. The majority of respondents in the category, 671 people (90.2%) did not consume alcoholic drinks. The majority of respondents who live with parents are in the high interaction category, 566 people (76%). Mostly respondents who live with parents do not smoke cigarettes, as many as 489 respondents (65.7%). The majority of respondents who live with

parents do not consume alcoholic beverages, as many as 610 respondents (82.1%).

For most respondents in this study, those who had high parent interaction also had non-smoking behavior, that is, 458 people (61.8%). Still, it was found that the respondents who exhibit smoking behavior had high parent interaction, that is, 168 people (22.4%).

From the results of statistical analysis of the relationship of parent interaction with smoking behavior in adolescents based on the statistical test of the chi square with significant value $p = 0,044$, it can be concluded there is relationship between parent interaction with behavior of smoking in adolescents.

For most respondents in this study, those who had high parent interaction also did not consume alcoholic beverages, that is, 575 people (77.3%). Still, it was found that the respondents who did consume alcoholic had high parent interaction, that is, 51 people (6.9%).

The results of statistical analysis of the relationship of parent interaction with alcoholic beverage consumption behavior of adolescents were based on chi square statistical test with significant value $p = 0,000$; hence can be concluded there is relation between parent interaction and alcohol consumption behavior of adolescents.

4 DISCUSSION

4.1 The Correlation of Parent Interactions with Smoking Behavior in Adolescents

The result of statistical analysis using chi square showed that there is relationship between parent interactions with behavior of smoking in adolescents.

The results of this study are in line with the proposed theory of Joung (2014) that children who have emotional closeness embodied in interactions with good parents will grow into children with higher self-esteem and better emotional well-being. One of the contributing factors to being a smoker is the unstable emotions of a person (Arnett, J.J., 2007). Parental interactions are important in fostering good emotional intelligence in adolescents (Santrock, 2014). The results of this study are in line with the results of previous research that mentions that adolescents will feel the acceptance of parents through the interaction of parents with adolescents and that this can improve the ability of teenagers to

know and manage emotions, and solve problems faced (Kim, I. J., Ge, X., Conger, R. D., Brody, G .H., and Gibson, 2003). If the need for interaction between parents and children can be well established, teenagers will find it easier to get through the crises in their development. Fulfillment of needs during adolescence will create a positive climate so that adolescents have stable emotional well-being. This will not make teenagers fall into risky smoking behavior during times of crisis (Calvert, W. J., Bucholz, K. K and Steger-May, K., 2010).

The process of interaction starts with the family, that is, the relationship between parent and child, and the interaction of parents has a very strong relationship with behavioral changes in children. This is in accordance with the theory of Kathryn E. Barnard (1994), which states that a person's behavior change is influenced by interaction; the interaction itself involves parent-to-child interaction, child-to-parent interaction, and interaction with the environment (Guarnieri, Ponti and Tani, 2010).

Gender according to Scalici and Schulz (2017) is also one of the factors that can influence smoking behavior. Men are usually more interested in trying new things such as smoking than women, but some research suggests that men consume more cigarettes than women because men prefer to join a peer group and try to do things like that that are beyond their ability to reason about. In teenagers, especially males, gender has the greatest impact and influence on smoking behavior because adolescence is the stage of a person where they are between the phases of child and adult characterized by physical and psychological changes. Teenagers sometimes question the values that exist during this time; consequently teenagers experience various conflicts related to themselves, and they begin to question their self-concept. Other than that, teenagers also start thinking about the ideal characteristics for themselves and compare themselves with the ideal standards of others (Rioux C, Castellanos-Ryan N, Parent S, Vitaro F, Tremblay RE, Séguin JR, 2010).

It is not impossible for adolescent girls to try to smoke cigarettes. The data showed there are teenage girls who smoke cigarettes. Factors that encourage young women to start smoking are very diverse, both in the form of factors from within oneself (personal), sociocultural factors, and the strong influence of the environment (Lacey *et al.*, 2016). Cigarettes also have a bad impact on the health of young women as they can lead to heart and lung disease, reproductive health problems, cancer, and also social diseases (Green *et al.*, 2017).

4.2 The Correlation of Parent Interaction with Alcoholic Consumption Behavior in Adolescents

The results of statistical analysis show that there is relation between parent interaction and alcohol consumption behavior of adolescents. According to Gross and John (2003), one of the findings on the consumption of alcoholic beverages in adolescents is that young people from households who do not have harmonious relationships, causing parent-child interaction to be low and where parents are not too concerned about who children associate with and are happy giving hard physical punishment, it is easier to be a deviant child than it is for young people from a harmonious shome environment.

The distribution tables of parents' interaction with adolescents are divided into three categories: low, medium, and high with acceptance and conflict resolution parameters. This is shown based on the distribution data of the parent interaction category, which indicates that the majority of parent interactions are in the high category. This can be caused by several demographic factors of respondents, such as respondent education, respondent age, parents' education, living with whom, school transportation, and pocket money per respondent.

Interaction is very important for families because if there is a good relationship in the family, then the hope of becoming a happy family will be easier to fulfill. Thus in a family there must be communication, interaction, flexibility, attachment, personality suitability, and cooperation in conflict that occurs (Guarnieri, Ponti, and Tani, 2010).

Interaction of teenagers with parents declines because teenagers prefer to interact with peers; early adolescents consider relationships with peers to be very important. Peers meet their needs to be part of the group, the need for social interaction, and support their personal identity. Friendship at this time is more intimate and reciprocal. Decreased interaction between parents and adolescents is also caused by several other factors: the lack of intensity of time spent with the parents, the quality of parent interaction with the child, parental affection, the importance of the relationship, and the sex of the adolescent will affect the quality of the overall relationship between the older person and teenager (Parna, K. Rahu, K., Fischer, K., Mussalo-Rauhamaa, H., Zhuravleva, I., Umbleja., T., and Rahu, M., 2003). Emotional problems often experienced by adolescents are usually associated with the transition period they undergo from

childhood into adulthood. Lack of parental interaction with children is one factor that can cause negative changes in children, such as the risk behavior of alcohol consumption.

According to Scragg *et al.* (2010), in adolescence people have problems such as adjustment problems, religious issues, health problems, economic problems, and other problems that cause them to seek solutions outside the home by trying to consume alcohol. The majority of teenagers who consume alcoholic beverages are male because males prefer interaction with their peer groups. Adolescents learn to make their own decisions and do everything independently while learning the patterns of behavior received and performed by friends or groups. This is done in order to gain recognition and acceptance from friends or groups. Peer groups are important to teenagers so they tend to follow the behaviors that the group receives (Ross and Mirowsky, 2011).

The behavior of consumption of alcoholic beverages can be due to predisposing factors that cause antisocial personality disorder, intelligence and depression. Non-intact families allow children to seek satisfaction outside the home. In adolescence, the individual is more concerned with the views of his group's friends than his parents'. Often, alcohol is used for reasons of showing group solidarity. Peer dependence, social interaction that occurs in groups, and competition among friends aims to gain status and self-esteem in groups so as to encourage adolescents to take action and gain new experiences (Chaplin *et al.*, 2012). Individuals who consume alcoholic drinks usually do so as a result of conscious processes, but not in all cases (Chaplin *et al.*, 2012). Sociocultural factors have a very diverse role in the consumption of alcoholic beverages many individuals are influenced by those who consume alcohol around them to start using alcoholic beverages. Those with parents who consume alcohol are likely to consume it; with this model as an example, the individual will have a greater tendency to consume alcoholic beverages than if there is no consumption model (Sieving *et al.*, 2000).

When exposed to others drinking alcohol, it is commonly observed that consumption of alcoholic beverages can alter mood; this is a distinct reinforcement for consuming alcoholic beverages. It can be seen that individuals start consuming alcoholic beverages due to their lifetime experience with the consumption of alcoholic beverages, that is, the environmental conditions surrounding alcoholic beverages including genetic and cultural factors. It then affects the personality and cognitive

functioning of individuals, so they do not take a stand regarding alcohol consumption Calvert, W. J., Bucholz, K. K and Steger-May, K., (2010).

Distribution data shows there is a relationship between smoking behavior and alcohol consumption in adolescents. Teenagers usually consume alcohol at the same time as smoking cigarettes. Smoking habits and alcohol consumption in adolescents can be influenced by various factors, among others, because developing children seek identity and always want to try new things in the environment (Griesler, Kandel, and Davies, 2002). Family and peers are the ones that will greatly affect teenagers' habits. In addition, the media show that airs a teen idol figure who smokes cigarettes will encourage teenagers to follow him (Scalici and Schulz, 2017). Behavioral consumption of cigarettes and alcoholic beverages is not good for adolescent health because cigarettes and alcoholic beverages have substances in them that are harmful to the human body and cause side effects such as addiction (Barmpagianni E, Travlos A, Kalokairinou A, and Sachlas A, 2014). Smoking and consuming alcoholic beverages is seen by some people, including among teenagers, as an activity that can be stressful (Temcheff, C. E., Dery, M., St-Pierre, R. A., Laventure, M. and Lemelin, J. P., 2016). Peers can influence a teenager's judgment and decisions about his behavior. Research in New York shows that the role and consent of peers affects smoking intentions and the consumption of alcoholic beverages in the future in adolescents (Trucco, Elisa M, 2011). Teens usually consume cigarettes side by side with alcoholic drinks. Because cigarettes and alcoholic beverages are very easy to find/get in a stall, by pooling their resources in a joint venture, teenagers can buy cigarettes and alcoholic beverages. The development of technology has affected teenagers in obtaining a pleasant picture when smoking cigarettes and consuming alcoholic beverages; almost every television station shows a movie that gives an idea of how good it is to smoke and consume alcohol, as if smoking and consuming alcohol as a teenager would make one look more slick, cool, and professional, and make stress disappear (Mcgee CE, Trigwell J, Fairclough SJ, Murphy R, Porcellato L, and Ussher M, 2015).

Smoking behavior and alcoholic drink consumption behavior are usually interconnected. Researchers argue when teenagers are gathered with peers who consume alcoholic beverages, these are usually accompanied by cigarettes that complement their alcohol consumption. This is because smoking and alcohol consumption can make the mind calm, make stress disappear, and make one feel comfortable (Lacey *et al.*, 2016).

Parent interaction is very influential in the development of children. The giving of love and affection must be improved if parents are to avoid teenagers pursuing deviant behavior such as smoking and consumption of alcoholic beverages. The higher the quality and intensity of interaction given by parents to adolescents, the lower the smoking behavior and consumption of alcoholic beverages in adolescents, and also the lower the quality and quantity of interaction that parents give to adolescents, the higher the smoking behavior and consumption of alcoholic beverages in adolescents.

5 CONCLUSIONS

Parent interaction has a relationship with smoking behavior and alcohol consumption in adolescents. The higher the parent's interaction with the child, the more the smoking behavior and alcohol consumption behavior of adolescents can be prevented. Parent interaction is one of the factors that influence and shape the behavior of respondents and can cause behavioral changes regarding risk behaviors such as smoking and alcohol consumption.

REFERENCES

- Arnett, J. J. (2007) 'The Myth of Peer Influence in Adolescent Smoking Initiation', *Health Education & Behavior*, 34(4), pp. 594–607. doi: 10.1177/1090198105285330.
- Barmpagianni E, Travlos A, Kalokairinou A, Sachlas A, Z. S. (2014) 'Predictor of Smoking and Alcohol Use Behaviour in Undergraduate Students: Application of the Theory of Planned Behaviour', *International Journal of Caring Sciences*, 7., pp. 477–487.
- Calvert, W. J., Bucholz, K. K and Steger-May, K. (2010) 'Early Drinking and Its Association With Adolescents' Participation in Risky Behaviors', *Journal of the American Psychiatric Nurses Association*, 16(4), pp. 239–251. doi: 10.1177/1078390310374356.
- Chaplin, T. M. et al. (2012) 'Addictive Behaviors Parent – adolescent conflict interactions and adolescent alcohol use', *Addictive Behaviors*. Elsevier Ltd, 37(5), pp. 605–612. doi: 10.1016/j.addbeh.2012.01.004.
- Green, M. J. et al. (2017) 'Social Science & Medicine Causal effects of transitions to adult roles on early adult smoking and drinking: Evidence from three cohorts'. *J Soc Sci Med*. Elsevier Ltd, 187, pp. 193–202. doi: 10.1016/j.socscimed.2017.06.018.
- Griesler, C., Kandel, B. and Davies, M. (2002) 'Ethnic differences in predictors of initiation and persistence

- of adolescent cigarette smoking in the National Longitudinal Survey of Youth.’, *Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco*, 4(1), p. 79.
- Gross, J. J. and John, O. P. (2003) ‘Individual Differences in Two Emotion Regulation Processes: Implications for Affect, Relationships, and Well-Being Theoretical Background: A Process Model of Emotion Regulation’, *Journal of Personality and Social Psychology*, 85(2), pp. 348–362. doi: 10.1037/0022-3514.85.2.348.
- Guarnieri, S., Ponti, L. and Tani, F. (2010) ‘The inventory of parent and peer attachment (IPPA): A study on the validity of styles of adolescent attachment to parents and peers in an Italian sample’, *TPM - Testing, Psychometrics, Methodology in Applied Psychology*, 17(3), pp. 103–130.
- Guillermo Prado, José Szapocznik, Mildred M. Maldonado-Molina, S. J. and Schwartz, H. P. (2008) ‘Drug Use/Abuse Prevalence, Etiology, Prevention, and Treatment in Hispanic Adolescents: A Cultural Perspective’, *the Journal of Drug Issues*. doi: 0022-0426/08/01 5-36.
- JOAN S. tucker, phyllis l. ellickson, maria orlando, s. c. m. and klein, d. j. (2005) ‘substance use trajectories from early adolescence to emerging adulthood: a comparison of smoking, binge drinking, and marijuana use’, *the journal of DRUG ISSUES*. doi: 0022-0426/05/02 307-332.
- Joung, C. S. & K. (2014) Risk Factors For Smoking Behaviors Among Adolescents. Korea. Korea.
- Kim, I. J., Ge, X., Conger, R. D., Brody, G. H., & Gibson, F. . (2003) ‘Parenting Behaviours and the occurrence and Co-occurrence Of depressive Symptoms and Conduct Problems Among African American children’, *Journal Of Family Psychology*.
- Lacey, R. E. et al. (2016) ‘Parental absence in early childhood and onset of smoking and alcohol consumption before adolescence’, pp. 1–4. doi: 10.1136/archdischild-2016-310444.
- Mcgee CE, Trigwell J, FaircloughSJ, Murphy R, Porcellato L, Ussher M, F. L. (2015) Influence of Family and Friend Smoking on Intentions to Smoke and Smoking-Related Attitudes and Refusal Self-Efficacy among 9-10 Year Old Children from Deprived Neighbourhoods: A Cross-Sectional Study. doi: 10.1186/s12889-015-1513-z.
- Parna, K. Rahu, K., Fischer, K., Mussalo-Rauhamaa, H., Zhuravleva, I., Umbleja., T., and Rahu, M. (2003) ‘Smoking and associated factors among adolescents in Tallinn, Helsinki and Moscow: a multilevel analysis’, *Scand J Public Health*, 31, pp. 350–358.
- RISKESDAS (2013) Riset Kesehatan dasar Tahun 2013. Jakarta.
- Rioux C, Castellanos-Ryan N, Parent S, Vitaro F, Tremblay RE, Séguin JR (2018) ‘Age of Cannabis Use Onset and Adult Drug Abuse Symptoms: A Prospective Study of Common Risk Factors and Indirect Effects’, *The Canadian Journal of Psychiatry*. doi: 10.1177/0706743718760289.
- Ross, C. E. and Mirowsky, J. (2011) ‘Social Science & Medicine The interaction of personal and parental education on health’, *Social Science & Medicine*. Elsevier Ltd, 72(4), pp. 591–599. doi: 10.1016/j.socscimed.2010.11.028.
- Santrock, J.(2014) *Adolescence: Perkembangan Remaja. Keenam*. Jakarta: Erlangga.
- Scalici, F. and Schulz, P. J. (2017) ‘Parents ’ and peers ’ normative influence on adolescents ’ smoking : results from a Swiss- Italian sample of middle schools students’, *Substance Abuse Treatment, Prevention, and Policy*. pp. 1–10. doi: 10.1186/s13011-017-0089-2.
- Scragg, R. et al. (2010) ‘THE NEW ZEALAND adolescent tobacco smoking’, 123(1326), pp. 77–88.
- Sieving, R. E. et al. (2000) ‘Pathways to Adolescent Alcohol Use: Potential Mechanisms of Parent Influence’, *Journal of Research on Adolescence*, 10(4),pp. 489–514. doi: 10.1207/SJRA1004_06.
- Temcheff, C. E., Dery, M., St-Pierre, R. A., Laventure, M. and Lemelin, J. P. (20016) ‘Precocious Initiation into Smoking, Alcohol Use, and Gambling among Children with Conduct Problems’, *The Canadian Journal of Psychiatry*, 61(1), pp. 50–58. doi: 10.1177/0706743715620402.
- Todd q. miller, r. j. v. (2002) ‘family relationships and adolescent cigarette smoking: results from a national longitudinal survey’, *the journal of drug issues*. doi: 0022-0426/02/03 945-972.
- Trucco, Elisa M, et al (2011) ‘Interpersonal Goals and Susceptibility to Peer Influence: Risk Factors for Intentions to Initiate Substance Use during Early Adolescence’, *Journal Early Adolesc*, 31., pp. 526–547.
- Wang, C. et al. (2016) ‘Coevolution of Adolescent Friendship Networks and Smoking and Drinking Behaviors With Consideration of Parental Influence’, 30(3), pp. 312–324.