

# The Relationship of Family Function with Proactive Coping Smoking Cessation in Adolescents

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Proceeding STIKep PPNI Jawa Barat

## Website :

<https://proceedings.stikep-ppnijabar.ac.id/index.php/psi>

Volume 1 (1), 231-237

## Article info

Received : December 28, 2024

Revised : April 22, 2025

Accepted : May 02, 2025

Published : May 19, 2025

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## Citation

Nurazizah, E., & Hadiyani, W.(2025). The Relationship Of Family Function With Proactive Coping Smoking Cessation In Adolescent. *Proceeding STIKep PPNI Jawa Barat*, 1(1), 231-237.

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## Abstract

**Objective:** This study aimed to examine the relationship between satisfaction with family functioning and proactive coping strategies in relation to smoking cessation among adolescents.

**Method:** A descriptive correlational design with a cross-sectional approach was employed. The study involved 161 adolescent respondents selected through total sampling. Data were gathered using the APGAR questionnaire to assess family function satisfaction and the Proactive Coping for Smoking Cessation (PCSC) questionnaire to evaluate coping mechanisms. Kendall's Tau-b test was used for statistical analysis to explore the relationship between variables.

**Results:** The majority of respondents were female (57.8%) with an average age of 14 years. Most participants were categorized as passive smokers (72.7%), and nearly all reported having healthy family relationships (96.9%). Additionally, over half of the respondents (52.2%) demonstrated a moderate level of proactive coping. Bivariate analysis showed a statistically significant relationship between family function satisfaction and proactive coping related to smoking cessation, with a p-value of 0.030 ( $\leq 0.05$ ).

**Conclusion:** There is a significant association between family function satisfaction and proactive coping in adolescents attempting to quit smoking. These findings highlight the role of family support in influencing positive behavioral change. Future studies may use these results as a reference for designing interventions that integrate family dynamics to enhance adolescent smoking cessation efforts.

**Keywords:** Family function, adolescents, proactive coping, smoking cessation, cross-sectional.

## INTRODUCTION

Adolescence is a transitional period between childhood and adulthood. During this time, a child entering puberty often experiences emotional turmoil, isolation from the family, and problems both at home and at school, in the family and peer environment. Many teenagers have smoked, used drugs, had free sex, fought, stolen, and committed various other criminal acts that deviated from the

norms that apply in society and have problems with the law (Karlina, 2020). Many are found in daily life a smoking habit, currently cigarette users have become part of adolescent life, especially school age (Wiliyanarti1 et al., 2020). The smoking lifestyle of adolescents that emerged from the Riskesdas report (2018) shows that the number of smokers aged 11 to 18 years has increased, from 1.9%, in 2013 by 7.2% and in 2018 by 9.1%. Smoking can be said to be a major risk factor for several chronic

diseases that can lead to death (Yulianti et al., 2023). Adolescents are more likely to smoke because they experience more stress from emotional states, the environment, schoolwork, and relationships with parents and friends (Ibrahim et al., 2022). Brain development in immature early adolescents makes feelings and emotions master common sense for reasons that allow adolescents to make unwise choices such as smoking behavior. There are several ways that adolescents can do to deal with various problems experienced without involving the habit of smoking, including talking to their closest people, namely their parents, praying, or by acting positively and doing coping strategies. Thus, adolescents whose feelings and emotions can be controlled will carry out positive coping strategies or make wise choices (Sukma Adhirahmawati, 2019).

One form of coping strategy is proactive coping. This proactive coping aims to improve the ability to deal with life-threatening situations in the future, including smoking behaviors that are currently widely practiced by adolescents (Ibrahim et al., 2022). The ability of adolescents to quit smoking depends heavily on proactive efforts. Adolescents who apply proactive coping strategies are more likely to avoid or quit smoking (Hadiyani et al., 2023). Factors that can affect coping are: 1) physical health, 2) positive beliefs and views, 3) problem-solving skills, 4) social skills and 5) social support. One of these factors is social support including support for the fulfillment of information and emotional needs in individuals provided by parents, family members, siblings, friends, and the community environment (Sitepu & Nasution, n.d.). Family support for adolescents can be seen from the level of satisfaction of adolescents in adapting to family members, being able to communicate well and providing solutions to the problems they face. Parents provide affection, support to develop the abilities of adolescents, and take time to establish togetherness (Hadiyani, 2014).

## **METHODS**

### **Study Design**

This study employed a descriptive correlational design using a cross-sectional approach to explore the relationship between family function satisfaction and proactive coping in adolescent smoking cessation. Data were collected at a single point in time to assess associations between variables without manipulating any conditions or introducing interventions.

### **Population and Sample**

The population in this study was 166 students at Junior High School (SMPN 1 Solokanjeruk) Bandung Regency. The criteria inclusion of the respondents were adolescents aged between 14-17 years old. The sampling technique of this study was total sampling technique where the number of samples is equal to the population. The number of samples in this study was 161 respondents of which 5 people were not present.

### **Instruments**

The Proactive Coping Smoking Cessation (PCSC) questionnaire is a tool designed to assess proactive coping strategies used by individuals attempting to quit smoking. It consists of 36 items rated on a Likert scale, which measures behaviors such as planning, self-regulation, and information-seeking. Respondents indicate the extent to which they agree or engage in these behaviors on a Likert scale (e.g., 1 = Strongly Disagree to 5 = Strongly Agree). The total score is calculated by summing individual item scores, with possible subscales assessed separately. Higher scores indicate greater use of proactive coping strategies. The PCSC demonstrates strong psychometric properties, with high internal consistency (Cronbach's alpha > 0.70) and test-retest reliability, and it has been validated for predicting success in smoking cessation. The Family APGAR is a brief and widely used tool to assess family functioning and satisfaction within the family unit. It evaluates five core dimensions of family dynamics: Adaptability,

Partnership, Growth, Affection, and Resolve. The Family APGAR consists of 5 items. Each item corresponds to one of the five dimensions and asks respondents to reflect on their perceptions of family support and functioning. A 3-point Likert scale was used from score 0 = Hardly ever, 1 = Sometimes, 2 = Almost always. The total score is calculated by summing the responses to all five items, yielding a score between 0 and 10. Total score divided into three categories, 7–10: High family functioning, 4–6: Moderate dysfunction, 0–3: Severe family dysfunction. The Family APGAR has demonstrated good content and construct validity across various populations and cultures, with internal consistency (Cronbach's alpha > 0.70).

### Data Analyze

Data analysis involved both univariate and bivariate approaches. Univariate analysis was conducted to describe the distribution of respondent characteristics, including gender, age, smoking status, family function, and proactive coping levels. Bivariate analysis was performed using Kendall's Tau-b test to determine the strength and direction of the relationship between family function satisfaction and proactive coping in adolescent smoking cessation. This method allowed for assessing non-parametric correlations between the two variables.

### Ethical Consideration

This study received ethical approval from the Health Research Ethics Committee of STIKEP PPNI Jawa Barat, with the approval number No. III/036/KEPK-SLE/STIKEP/PPNI/JABAR/I/2024. All respondents were informed about the study's objectives and procedures, and written informed consent was obtained prior to participation.

## RESULT

**Table 1. Demographic Characteristics of the Respondents (N=161)**

Variable	Mean Score (±SD) Range	Frequency	%
Gender			
Men		68	42.2%
Woman		93	57.8%
Age	14.37 (±0.509) 14 - 16		
Families Who Smoke			
Yes		133	82.6%
Not		28	17.4%
Exposure to Cigarette Smoke			
Yes		130	80.7%
Not		31	19.3%
Smokers			
Yes		44	27.3%
Not		117	72.7%
Types of Cigarettes Smoked			
Cigarette		39	24.2%
E-cigarettes (Vapes)		5	3.1%
No smoking		117	72.7%
Easy to get Cigarettes			
Yes		39	24.2%
Not		122	75.8%
Lots of smoking in a day			
< 10 sticks/day		43	26.7%
No smoking		118	73.3%
Smoking in the past week			
Yes		27	16.8%
Not		131	81.4%
First smoking			
Elementary School		14	8.7%
Junior		34	21.1%

Variable	Mean Score (±SD) Range	Frequency	%
High School			
No smoking		113	70.2%

Based on Table 1, out of 161 respondents, 68 were male students (42.2%), and 93 were female students (57.8%). The average age of the respondents in this study was 14 years old. Most of the respondents did not smoke (72.7%). However, a significant portion of respondents had family members who smoked (82.6%). Respondents who start to smoke since Elementary School were 8.7%. Table 2. Family Function and Proactive Coping Smoking Cessation of the Respondent (N=161)

**Table 2 Distribution of Family Function and Proactive Coping for Smoking Cessation Among Adolescents**

Variable	Frequency	%
<b>Family Function</b>		
Family Dysfunction	0	0%
Poor Family Function	5	3.1%
Good Family Function	156	96.9%
<b>Proactive Coping Smoking Cessation</b>		
Low	53	32.9%
Moderate	84	52.2%
High	24	14.9%

Based on table 2, it was stated that almost all (96.9%), and 52.2 had Proactive Coping Smoking Cessation in the moderate category

**Table 3. The Relationship Between Family Function and Proactive Coping Smoking Cessation in Adolescents**

	Proactive Coping Smoking Cessation	
	<b>Correlation Coefficient t</b>	<b>Sig. (2-tailed)</b>
Family Function	0.164	0.030

Based on table 3, there was a relationship between family function and proactive coping smoking cessation in adolescents. The correlation coefficient has a positive value of 0.164 with P-value was 0.030 ( $P \leq 0.05$ ).

## DISCUSSION

The lifestyle of adolescents aged 14 to 18 years will be interested in smoking and become a habit of smoking (Adhirahmawati, 2019). The results showed that the average respondent was 14.37 years old (64.6%). The most respondents were women (57.8%). Most of the respondents did not smoke (72.7%) but there were respondents who had a smoking family (82.6%), so the respondents were exposed to cigarette smoke (80.7%). This research is in line with Parwati's (2018) research that a person with passive smokers is more dangerous than active smokers because cigarette smoke inhaled contains more carbon monoxide, 4 times containing nicotine and tar (Parwati, 2008). Based on the results of Rikesdas (2018), adolescents who live with smoking parents and are often exposed to cigarette smoke are more likely to become active smokers. Supported by the results of the GYTS (*Global Youth Tobacco Survey*) survey (2019) showing that 57.8% of adolescents are exposed to cigarette smoke at home (Damanik, 2023). If no one in their family smokes, then the permissive attitude of parents is a positive reinforcement of smoking behavior. A permissive social environment towards teenage smokers reinforces their behavior. The more family members who smoke, the greater the risk of adolescents becoming permanent smokers (Dewi, 2021).

A small number of respondents were smokers and smoked for the first time in junior high school. In line with Panata's (2018) research, smoking behavior begins when teenagers are still in junior high school and it is not uncommon for them to do it in prohibited places such as toilets, school canteens, and even they can do it during empty hours or breaks (Patana & Elon, 2018). Adolescent smokers smoke conventional cigarettes (24.2%). Teenagers will find it difficult to quit conventional smoking even though they have tried e-cigarettes because family members use conventional cigarettes. Many conventional cigarettes that are often consumed before using e-cigarettes make it difficult for teenagers to get rid of conventional cigarettes after teenagers try e-cigarettes (Sihaloho & Tambak, n.d.). As many as 26.7% of the number of cigarettes smoked is less than 10 cigarettes/day. In line with the research of Misbakhul Munir (2019) which stated that as many as (64%) respondents consumed less than 10 cigarettes/day (Munir, 2019). As many as 75.8% of respondents feel that it is not easy to get cigarettes, A study in Indonesia shows that up to 74% of smokers will stop buying cigarettes if the price is Rp 70,000. Therefore, the government through the Ministry of Finance must continue to increase the price of cigarettes so that the younger generation does not easily access cigarettes. In addition, the prohibition of selling cigarettes to children under the age of 18 is also affirmed (Damanik, 2023).

Good family functioning is characterized by effective family functions in problem solving, communication, fair and clear division of roles, emotional sensitivity, and affective involvement and control over the behavior of its members. After entering adolescence, children's social life becomes wider than late childhood, which causes the pattern of interaction with the family to change. If a child has satisfactory social relationships with family members, then the child can fully enjoy social relationships with others outside the family environment, develop a good attitude towards

others, and learn to apply a good role in the community environment (Kholifah & Rusmawati, 2018).

The results of this study were obtained from all respondents based on the results of univariate analysis which found (96.9%) had good family function, and (3.1%) had poor family function. Respondents mostly have good family functions, because adolescents feel fair with the division of tasks they receive, thus making adolescents feel comfortable in their home environment. A good family is one that is able to divide duties and responsibilities fairly according to the abilities of family members. Adolescents who are given responsibilities at home are better able to control themselves. This is as stated by (Kholifah & Rusmawati, 2018). One factor that protects adolescents from smoking is emotional: attachment and warmth from parents. Attachment and warmth provided by parents help maintain children's health and prevent risk factors such as smoking. Good parenting and support for children can increase self-esteem and a sense of security, and can provide a good environment for the child's growth and development process (Septiana, Syahrul, 2016).

The ability of an adolescent smoker to overcome his problems depends on how the teenager responds to the situation, which is commonly called a coping mechanism. Coping that is done before a stressful situation arises is called proactive coping (Ibrahim et al., 2022). The results of this study indicate that most adolescents have proactive coping with moderate values (52.2%), low values (32.9%) and those with high values (14.9%). Feelings and emotions in early adolescents can overpower common sense which allows adolescents to make unwise choices such as smoking behavior. Thus, adolescents who can control their feelings and emotions will make wise choices or carry out positive coping strategies such as solving their problems (Sukma Adhirahmawati, 2019). Adolescents who use

active coping mechanisms are better able to adapt, think about the future, and maintain good social relationships so that they can successfully solve problems. Proactive coping is low because the longer smoking, the more difficult it is to quit (Ibrahim et al., 2022).

Based on the results of statistical analysis using Kendall'Tau-b with a meaning value of  $\alpha < 0.05$  where the results of the study obtained a p-value of 0.030 which shows  $p < \alpha$  then  $H_a$  is accepted and  $H_0$  is rejected. This shows that there is a relationship between family function and proactive coping smoking cessation in adolescents at SMPN 1 Solokanjeruk Bandung Regency. It can be seen that in the non-smoking category as much as (72.7%) and adolescent satisfaction with the family (96.9%) which has been going well. This shows that the family has played a role in preventing smoking behavior among adolescents. The results of this study are in line with the research of Kholifah & Rusmawati (2018) that there is a positive and significant relationship between family function and adolescent self-control in SMAN 2 Semarang students. The better the family performs family duties, the higher the level of adolescent self-control. A supportive family environment can reduce delinquency committed by adolescents (Kholifah & Rusmawati, 2018). According to the theory of addiction, the more often an addictive product is consumed, the more developed a person's tolerance to the product and the more difficult it is to be relieved, and the longer a person consumes cigarettes, the higher the level of addiction that a person has, so it is difficult to reduce cigarette consumption or quit smoking. Therefore, a *coping* strategy is needed to improve *coping* in adolescents (Ibrahim et al., 2022). When the coping mechanism is successful, a person is able to adapt to the changes that occur. The coping mechanism can be learned from the occurrence of stressors. An individual's ability to cope with problems is determined by his temperament, perception and cognition, as well as the background of the

norms and culture in which he was raised (Syarif et al., 2018).

## CONCLUSIONS

Based on the results and discussion, this study concludes that there is a significant relationship between family function and proactive coping for smoking cessation among adolescents. A supportive and well-functioning family environment plays an important role in helping adolescents develop effective coping strategies to reduce or quit smoking. Therefore, it is recommended that parents actively engage in guiding and monitoring their children's behavior, particularly regarding smoking habits. Parental involvement, open communication, and emotional support can positively influence adolescents' motivation and ability to cope with smoking cessation challenges. The findings of this study can serve as a valuable reference for future research focusing on adolescent smoking behavior and family dynamics. Further studies may explore intervention models that incorporate family-based support systems to enhance the success of smoking cessation efforts in youth. Understanding the role of family function can help address the broader psychological and social factors contributing to adolescent smoking behavior.

## Acknowledgement

The authors would like to thank the participating students and school authorities for their cooperation and support throughout the data collection process.

## Conflict of Interest

The authors declare that there are no personal or financial conflicts of interest related to this research.

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