Analysis of Health Behavior of Adolescents in Tuban, Indonesia

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Abstract

Adolescence is a period associated with increased risk behaviors such as smoking, sex, fighting, the use of sharp weapons and so on. These conditions coincide with changes in social and school environment. The purpose of this study is to explain how health risk behaviors are to adolescents. The research design used in this study was analytic with a cross sectional approach. The population was all high school/vocational school adolescents with a total of 29,963 boys and girls, with a sample size of 395 using cluster sampling technique. The independent variable of the study is risk behavior and the dependent variables of the study are smoking, bullying, use of sharp weapons, driving, drug consumption, sex, health consultation, nutritional fulfillment, suicide attempt, alcohol consumption, fighting and physical activity. Data collection was carried out using a questionnaire adopted from YRBSS (Youth Risk Behavior Surveillance System) which was translated into Indonesian. The collected data was tabulated and analyzed using Logistic Regression. The results showed that all health behavior including risk behaviors, although based on statistical test results the behavior of alcohol and drug consumption was not significant because (p value) was 0.000>0.005. Smoking behavior had a regression coefficient of 6,904 with a significance level (p value) of 0.000<0.005 and an OR (odds ratio) of 996,365, which means that adolescents have 996 times the chance to smoke. All variables are included in health risk behaviors; however, smoking is the riskiest health behavior carried out by adolescents.

Keywords: *Adolescence, Health Risk Behavior, Tuban, Indonesia.*

Introduction

Adolescence is a period marked by the transition from childhood to adulthood. In general, the adolescent age group ranges from 12-18 years of age, often associated with the onset of puberty. Puberty is a biological phenomenon that is experienced by every teenager and is triggered by the increase of adrenal and gonadal hormones, including the development of secondary sexual characteristics and changes in muscle and fat. In addition, adolescence is also a period associated with the increase of risk behavior and emotional reactivity. These conditions coincide with changes in social and school environment[1]. However, until today there is no explanation on the highest risk behavior in adolescents and the factors that influence adolescents to do so.

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Youth is generally considered a period of good health. However, risk behaviors such as the use of hazardous substances, poor diet or premature sexual activity are topics that often arise. Risk behavior is understood as behavior with unexpected consequences that go hand in hand with damage and loss. These risk behaviors are understood to be directly or indirectly related to health and well-being. The fact that is often found is that risk behaviors generally appear or begin during adolescence[2]. Risk behaviors in adolescents include smoking, anti-social behavior, alcohol consumption and early sexual intercourse[2][3].

Previous research showed that out of 1087 students in the UK, 50% of the students had risk behavior and 18% had high-risk behavior[4]. Meanwhile, a research in Indonesia that involved 368 students in Sidrap Regency

revealed that 2.4% have had sex, 27.4% have smoked, 11.7% have consumed alcoholic beverages, 2.7% have used drugs, 6.5% have experienced acts of violence and all respondents behave in a high manner[5].

WHO set Sustain Development Goals (SDG's) which must be achieved by 2030. This achievement would not be possible without investing in the health and well-being of adolescents[6]. On the other hand, risk behavior in adolescents has a direct or indirect impact on the health and well-being of adolescents, including poor educational attainment, future morbidity and premature death[3].

Understanding the impact of risk behaviors on health in adolescents and studying the importance of adolescent health are important investments to achieve the SDG 2030 target. Achieving this target requires efforts to prevent or reduce the effects that may occur. Nurses have a crucial role in realizing this effort. Health promotion through Health Promotion Model (HPM) theoretical approach can be carried out by nurses to overcome risk behaviors in adolescents. Health promotion encourages a lifestyle and behavior that allows a person to maximize their potential through individual, organizational and community change. HPM combines the perspectives of nursing and behavioral science with the factors that influence health behavior. This model offers guidance to observe complex biopsychosocial processes that motivate a person to engage in behaviors that lead to improved health[6,7].

Method

The research design used in this study was analytical with a cross sectional approach. The population in this study were all high school/vocational school students in the Tuban district with a total of 29,963 teenagers. The participants in this study were teenagers who attended SMA/SMK in Tuban district selected from the population.

The inclusion criteria in this study were: Adolescents registered as high school/vocational school students in all areas of Tuban district. The sample size in this study was 395 respondents and the sampling technique in this study was carried out using cluster sampling.

The independent variable in this study is health risk behavior and the dependent variables in this study are smoking, physical activity, bullying, sex, use of sharp weapons, fighting, drug consumption, alcohol, health consultation, nutritional fulfillment, suicide attempt and driving. The instrument used in data collection was a questionnaire adopted from the YRBSS (Youth Risk Behavior Surveillance System) which was translated into Indonesian and tested for its validity and reliability. The statistical test used logistic regression to analyze the dominant behavior.

Results and Discussion

The characteristics of the respondents were mostly female (65.1%), half were 16 years old (50.1%), more than half had a normal body mass index (54.2%), and all have experienced puberty.

Table 1. Distribution of Respondent Characteristics

Characteristic	Total n = 395	%
Gender		
Male	138	34,9
Female	257	65,1
Age		
15 years old	22	5,6
16 years old	198	50,1
17 years old	133	33,7
18 years old	27	6,8
19 years old	15	3,8
Body Mass Index		
Thin	137	34,7
Normal	214	54,2
Fat	44	11,1
Puberty		
Have Experienced	395	100
Have Not Experienced	0	0

The health behavior of adolescents in Tuban Regency shows that driving has the highest risk percentage, namely 80.5%. This is followed by the second highest risk behavior, namely nutritional fulfillment 45.8% and bullying 26.3%. Meanwhile, other behaviors have a

lower risk percentage.

Table 2. Percentage of Adolescent Risk Health Behaviors.

Behavior	Total n = 395	%
Smoking		
Risk	90	22.8
Non-Risk	305	77.2
Physical Activity		
Risk	75	19
Non-Risk	320	81
Use of Sharp Weapons		
Risk	45	11.4
Non-Risk	350	88.6
Driving		
Risk	318	80.5
Non-Risk	77	19.5
Alcohol Consumption		
Risk	23	5.8
Non-Risk	372	94.2
Fighting		
Risk	90	22.8
Non-Risk	305	77.2
Sex		
Risk	36	9.1
Non-Risk	359	90.9
Nutrition Fulfillment		
Risk	181	45.8
Non-Risk	214	54.2
Bullying		
Risk	104	26.3
Non-Risk	291	73.7
Consultation with a Doctor Regarding Disease/ Medication		
Risk	59	14.9
Non-Risk	336	85.1
Attempted Suicide		
Risk	25	6.3
Non-Risk	370	93.7
Use of Drugs		
Risk	5	1.3
Non-Risk	390	98.7

Based on the data presented in Table 3, it can be concluded that smoking, physical activity, use of sharp weapons, driving, fighting, sexual behavior, nutritional fulfillment, bullying, health behavior and suicide attempt have significance of <0.05, which means that these behaviors are included in health risk behaviors in adolescents. Meanwhile, although drug consumption statistical test results showed no significance (>0.05), there were adolescents who consumed drugs, hence this behavior is considered as a risk behavior. Smoking held the largest odds ratio, namely 996,365, which is the most influential variable in the occurrence of health risk behaviors in adolescents.

Table 3. Analysis of Health Risk Behavior in Adolescents in Tuban Regency

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I. for EXP(B)	
							Lower	Upper
Smoking	6,904	1,285	28,883	1	,000	996,365	80,337	12357,166
Physical Activity	5,356	,882	36,837	1	,000	211,862	37,575	1194,551
Use of Sharp Weapon	6,834	1,564	19,102	1	,000	928,530	43,342	19892,195
Driving	3,673	,837	19,241	1	,000	39,385	7,629	203,313
Alcohol Consumption	,121	1,913	,004	1	,949	1,129	,027	47,973
Fighting	6,544	1,189	30,286	1	,000	695,064	67,585	7148,223
Sex	5,927	1,552	14,584	1	,000	374,881	17,902	7850,399
Nutrition Fulfillment	5,214	,819	40,570	1	,000	183,851	36,954	914,684
Bullying	6,388	1,035	38,107	1	,000	594,441	78,221	4517,476
Health	5,382	,997	29,142	1	,000	217,561	30,823	1535,616
Attempted Suicide	5,058	1,566	10,432	1	,001	157,311	7,306	3386,999
Drug Consumption	15,610	12650,371	,000	1	,999	6017306,980	,000	.
Constant	-133,391	25300,746	,000	1	,996	,000		

The majority of adolescents have started smoking since the age of 13 and even some have started since the age of 8 and under. The types of cigarettes consumed include electrical cigarettes, tobacco and cigars, with the number of cigarettes consumed ranging from one to over ten a day. Adolescents obtain cigarettes from friends or by being in debt in order to 'buy' cigarettes. The frequency of smoking starts from a few times a month until almost every day. Some teenagers have tried to quit smoking, but have not succeeded.

In Indonesian adolescents, the tendency to smoke in junior high school is increasing. On the other hand, it is relatively stable in high school and there was a decline from 2009 to 2016 in college [8]. Based on the results of Riskesdas (2018), the proportion of smokers over 10 years of age in Indonesia is still relatively high. In East Java and Tuban Regency itself, the percentage almost

reaches 30%, where this is considered high as it is close to the national figure[9].

In Indramayu Fisherman Village, the highest health risk behaviors that appear among adolescents are smoking, physical fighting and alcohol consumption[10]. Early initiation of smoking is associated with the desire to be called a 'real man' or 'manly' and this behavior is supported by the family[11]. Several factors that influence risk behaviors among adolescents in mining areas include family, peers and school transition[12]. According to Sadzaglishvili (2017), there are several factors that have the greatest influence on adolescents in doing various risk behaviors, including: the intention of adolescents to carry out these behaviors and this is influenced by attitude, social norms, adolescent beliefs and expectations, self-esteem, affect and emotion and self-efficacy (individual feelings about the adequacy, efficiency and ability of individuals in coping with life). Apart from intention, gender and environment also greatly influence adolescents in engaging in risk behaviors[13].

The high number of adolescents who smoke and the fact that smoking is the highest-risk behavior among other risk behaviors is not solely the fault of the adolescents, but also many parties who should be responsible and take part in minimizing or even stopping adolescents who smoke. Among all the factors that influence adolescents to smoke, intention is the biggest factor, as any action or behavior with weak intention will not occur or be carried out. Thereby increasing the understanding of adolescents about the dangers of smoking, as well as taking a spiritual approach to convey a message that smoking causes more harm than good should be done. By doing this, adolescents will realize the negative aspects of smoking and will want to change for the better. In addition, an adolescent starts to develop social responsibility necessary to enter adulthood, so they should be responsible for the positive and negative impacts that come along with whatever action they do.

Researches state that experience affects smoking behavior in adolescents[13][14]. This experience can be obtained from friends and peers. The experience of being forced to smoke or not being considered a friend if not smoking affects the smoking behavior of adolescents. Adolescents have the need to be accepted by their peers, which causes many teenagers to follow their friends and start smoking.

This is consistent with the adolescent development task which states that in adolescence, teenagers want to be accepted by their peer groups and begin to escape emotional dependence on adults, and learn to make their own decisions.

The serious smoking behavior among adolescents corresponds to Pender's Health Promotion Model, health promotion behavior is influenced by interpersonal and situational influences. Research shows that there are 85.4% of adolescent passive smokers in Indonesia[15]. Parents who smoke strongly influence the behavior of teenagers who smoke.

Conclusion

Adolescent health risk behaviors in Tuban Regency include smoking, alcohol consumption, use of sharp weapons, bullying, sex, driving, health consultation, suicide attempt, drugs, nutritional fulfillment, physical activity and fighting. Smoking is the highest health risk behavior for adolescents and it is 996 times more likely for a teenager to engage in this behavior. Further research on the factors that influence adolescent smoking behavior should be conducted, support from family, environment and school, so that the right solution can be given to reduce or even stop smoking among adolescents.

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