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Relationship between Sanitation Hygiene and Health Care with Healthy Family Security of the Family of Smokers at Berastagi Subdistrict

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Abstract

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Keywords: Hygiene Sanitation; Health Care; Healthy Family Security; Smoker

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BACKGROUND: Healthy family security means the strength and the ability of a family to meet health needs and to be free from health problems. The health problem itself is various and numerous, especially related to sanitation hygiene and health care.

AIM: This research aims at analysing the relationship between sanitation hygiene and health care with healthy family security of the family of smokers.

METHODS: It involved 120 families of smokers living at Berastagi Subdistrict, North Sumatera Province, Indonesia, as the sample of the research. Data collection was done by doing observation and interview with a structured questionnaire instrument. Weight and height of the family members of the smokers were recorded as the measurement of nutrition status as well as health status for the measurement of healthy family security.

RESULTS: The research found that there was a significant relationship between sanitation hygiene and health care with healthy family security.

CONCLUSION: The research concluded that sanitation hygiene and health care performed by the family of smokers could increase healthy family security.

Introduction

Health is one of human's rights, and it has become one of the main issues related to social development. Generally, it deals with the concept of disease prevention and health improvement [1]. Health improvement itself can be made by decreasing the factors leading to health problems, especially in the family. Family health problems developing in society recently are frequently related to family behaviours without ignoring community behaviours. One of the family health problems is a smoking problem. Smoking problem has been worrying and

increasing all the year rapidly. According to the report on the result of National Basic Health Research [2], it is stated that the number of daily smokers in Indonesia reached around 24.3% of the total 10 aged population, meanwhile, in North Sumatera province it reached around 24.2%. It means that evenly a smoker spends around 12.3 cigarettes (around one pack) every day. Smoking can lead to illness and death, but actually, it can be prevented. The impact of smoking further can also destroy the future and the economy of a country as well as a family, especially family security. Authors stated that family security could be assessed through physical security assessment, for examples, morbidity and disease frequency in a family

[3]. Moreover, [4] stated that the components of family security include the component of systematical approach: input (physical and non-physical resources), process (both physical and non-physical problem and solving) and output (physical and non-physical welfare).

Authors further explained that family security covers external and internal factors [4]. External factors include disaster management, rural development, for examples, food security, social security, infrastructure, natural resource management and live hood pattern; meanwhile, internal factors include income, education, health and stress management. Internal factors are used to determine the human development index. Environmental factors which become one of the leading causes of unhealthy children in the family and affect growth disorders on children also determine life quality and human's health [5]. These growth disorders certainly decrease the human's quality and healthy family security. Also, [6] stated that environmental factors affect a child's growth after birth, for instance, race, sex, age, nutrition, health care, and infectious disease.

Family as the smallest unit in a community plays important roles to create qualified generations as a family is a system which involves interaction leading to conflict or vice versa and also gives benefits to support the quality of family members inside. Other has studied the growth of 380 children aged 6-24 months in low-income families [7]. The result indicated that the children of low-income families experienced growing disorders by 18-24 months. These disorders represent the low quality of generations and frequent problems occurring on children under 2 (two) years old, which are also influenced by the factors within the family itself.

It was pointed out that the most frequent family problems occur are financial difficulties (economic problem), agricultural production, food supply, and marketing difficulties of agricultural products [3]. Moreover, [8] stated that family plays important roles for children as they have responsibility for personal socialisation, especially during the growing period. Some authors emphasised that the participation of family members is an important action to prevent disease in the community, and it must be done continually [9].

The quality of human resources becomes more important towards the family's roles. A healthy family will support its members to be positive for health by empowering the available resources and considering healthy living behaviour [10]. Certainly, these families will try to overcome the health problems occurring due to smoking, for examples, reducing the cigarette spending and substituting it with health and education investment as it often ignores another spending, i.e. nutritional food. This situation absolutely will affect children's growth. Thus, enhancing the social awareness that 'not smoking is an investment'

must be implemented, whether for yourself, family, community, or country.

Every family member is at risk to be a smoker; however, the family significantly must try to maintain positive condition, especially for health to create a secured family as [11] defined, "Security means success in life despite being in a high-risk state. Meanwhile, according to [12], the notion of security from the point of behaviour is the pattern of positive behaviour and functional ability of the individual or family to overcome stress and difficulty. Furthermore, [13] stated that security begins in the absence of pathology (disease) to the ability to overcome, find the meaning and continues despite the difficulties occur.

Security is the ability to deal with the significant developmental challenges facing people in their growth process and also added that family security is strengthened by the ability of family members to assume their responsibilities and roles [14]. They have to commit and work together to increase their family health. Support from surroundings is also required to empower the family security. Some authors argued that security is used to describe a process, in which people not only manage the efforts to overcome life difficulties but also create, maintain and contribute meaningful life to the people around them [15]. Moreover, the family's tight relationship and understanding each other also support family security to be healthier. Thus, this research was done to analyse the relationship between sanitation hygiene and health care with healthy family security of the family of smokers.

Methods

This research was observational research with a cross-sectional design. It was done at Berastagi subdistrict, North Sumatera Province, involving 120 families as the sample. The number of samples was determined by using a sample calculation formula for survey research. The simple random technique was used to select families whose one of their family members was a smoker. Data collection was done by doing observation and interview using structured questionnaire instrument toward the variable of hygiene, sanitation and health service. Previously, the instrument was tested to measure validity and reliability.

Measurement of healthy family security was done through physical measurement of the anthropometric index (nutritional status) and disease history of the family. The anthropometric index was seen from data collected by weighing (BB) and measuring the height of the body (TB) and collecting age data (U) of all family members. Anthropometric

index used was different for each family member: for the age group 0-24 months used the index of BB/U, TB/U and BB/TB; for the age group 2-18 years used the index of IMT/U, and for the age group of 18 years up used the body mass index (BMI). Furthermore, the composite value of nutritional status and family health status was given, so that the variable can be categorised into good (secured-healthy) and less (less-secured-healthy). Variable of hygiene sanitation and health cares, each was also categorised into dichotomous, into two levels: good and less. Further, data was analysed and tested by using C-square test.

Results

Healthy family security in the family of smokers was measured physically by the composite size of nutritional and health status of the family. Measurement of healthy family security was done through physical measurement of the anthropometric index (nutritional status) and disease history of the family. The following figure shows the research result related to the proportion of healthy family security, as displayed in Figure 1.

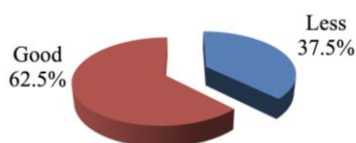


Figure 1: The Proportion of Smoker's Family Based on Healthy Family Security at Berastagi Sub-District

Based on the above figure, it can be seen that there is 37.5% of the family of smokers with less healthy family security and 62.5% with good healthy family security. This healthy family security also has a closed relationship to sanitation and hygiene. Based on the research done, it was found that 71 families (59.2%) have good sanitation and hygiene and the remaining, 49 families (40.8%) has less sanitation and hygiene, as shown in Figure 2.



Figure 2: The Proportion of Smokers' Family Based on Hygiene and Sanitation at Berastagi Sub-District

Also, the description of the proportion of the family of smokers based on hygiene and sanitation at Berastagi Subdistrict can be seen in Table 1.

Table 1: The Proportion of Smokers' Family Based on Hygiene at Berastagi Sub-District

Hygiene	n	%
Washing hands before eating		
Yes	111	92.5
No	9	7.5
Taking a bath every day		
Yes	98	81.7
No	22	18.4
Washing hands with soap after using a toilet		
Yes, always	66	55.0
Sometimes	49	40.8
No	5	4.2
Cutting nails		
Yes, always	85	70.8
Sometimes	31	25.8
No	4	3.3
Changing clothes every day		
Yes	105	87.5
No	15	12.5
Draining the bathtub once a week		
Yes	63	52.5
Sometimes	24	20.0
No	33	27.5
Total	120	100

Health cares also affect the security of the family of smokers, as shown in Table 2 and illustrated in Figure 3.

Table 2: The proportion of Smokers' Family Based on Sanitation at Berastagi Sub-District

Sanitation	n	%
Family water supply for drinking		
Local Water Supply (PDAM)	98	81.7
Shallow/dug well	5	4.2
Drilled-well	4	3.3
Spring	6	5.0
Others	7	5.9
Construction of opened-household sewerage (SPAL)		
Opened	71	54.1
Closed	49	40.8
Trash bin availability		
Yes	83	69.2
No	37	30.8
Trash bin condition		
Opened	73	60.8
Closed	47	39.1
Latrine meets health conditions		
Yes	104	86.7
No	16	13.3
The distance between livestock and water supply		
No livestock	93	77.5
≤ 11 metre	22	18.5
> 11 metre	5	4.2
Total	120	100.0

Figure 3 describes health cares in the family of smokers in which 85 families (70.8%) are in the less category, and 35 families (29.2%) are in a good category.

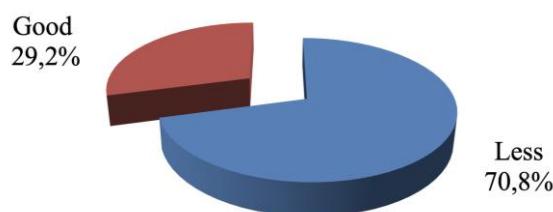


Figure 3: The proportion of Smoker's Family-Based Health Care at Berastagi Sub-District

Thus, there must be more intensive efforts to support the implementation of health care for healthy living, specifically toward the family of smokers, as shown in Table 3.

Table 3: The Efforts of Smoker's Family in Health Care for Healthy Living

The Efforts in Health Care	No		Sometimes		Yes	
	N	%	N	%	N	%
Keeping the environment cleanliness	2	1.7	27	22.5	91	75.8
Maintaining a clean and healthy life every day	2	1.7	29	24.2	89	74.2
Doing exercises regularly	85	70.8	19	15.8	16	13.3
Maintaining personal health	3	2.5	16	13.3	101	84.2
Avoiding consuming excessive fats	47	39.2	30	25.0	43	35.8
Having a balanced diet	6	5	36	30.0	78	65.0
Reducing/avoiding smoking or drinking alcohol	59	49.2	18	15.0	43	35.8
Seeing/consulting a doctor immediately whenever getting ill.	13	10.8	24	20.0	83	69.2
Breastfeeding the baby	71	59.2	19	15.8	30	25.0
Consuming iodized salt	11	9.2	2	1.7	107	89.2
Weighing regularly	72	60.0	25	20.8	23	19.2
Asking health staff whenever having a problem	20	16.7	30	25.0	70	58.3

The efforts done by the family of smokers mostly related to health cares are: consuming iodised salt (89.2%), maintaining personal health (84.2%), keeping the environment cleanliness (75.8%) and maintaining clean and healthy life every day (74.2%). In contrast, the least efforts done by the smoker's families are: reducing smoking (35.8%), weighing regularly (19.2%) and doing exercise regularly (13.3%). Despite, the smoker's families have been trying to implement health care, i.e. having a balanced diet (65%) and seeing/consulting a doctor immediately whenever getting ill.

The result of the C-square test indicated that sanitation hygiene and health cares have a relationship with healthy family security. The value of p showed a significant relationship, as illustrated in Table 4.

Table 4: The Relationship between Sanitation Hygiene and Health Cares with the Healthy Family Security of Family of Smokers at Berastagi Sub-District

Variable	Healthy Family Security				P
	Less		Good		
	n	%	n	%	
Sanitation Hygiene					
Less	25	51.0	24	49.0	0.011
Good	20	28.2	51	71.8	
Health Care					
Less	37	43.5	48	56.5	0.033
Good	8	22.9	27	77.1	

Table 4 shows that there is a significant relationship between sanitation hygiene with healthy family security with p -value = 0.011, and also there is a significant relationship between health cares with healthy family security with p = 0.033. It means that good sanitation hygiene and health care contribute to the healthy family security of the family of smokers. It is shown in Table 4 that if sanitation hygiene is in less category, so the healthy family security will be less, too. Also, if health care is categorised good, healthy family security will be categorised well. These conditions make families tend to be infected by disease easily and give impact to the health and nutrition status of the family members. The proportion of family of smokers for less health service implementation is high. Therefore, the family of smokers trying to implement health care better will be categorised as a secured, healthy family.

Discussion

The higher level of good healthy family security (62.5%) compared with less healthy family security (37.5%) indicates that there are still smoker's families who are less trying to improve their health. It is caused by the fact that smoking becomes a part of custom activities for Karonese, predominantly tribes living at Berastagi subdistrict. Cigarette and betel are always served and must be consumed on family occasions, family meeting, family gathering, etc. It will be an honour for the family if their guests or relatives consume the cigarette or betel served. Therefore, it contributed to the level of healthy family security.

It is stated previously that family security has closed relationship to sanitation and hygiene. Healthy family security related to hygiene and sanitation includes the absence of environment-based diseases, for examples, diarrhoea, helminthiasis, Upper Respiratory Infection (ARI), pneumonia, etc. According to the result of the research, it was found that there is a relationship between sanitation cleanliness and healthy family safety (p = 0.011). Further, the result of the research found that 71 families (59.2%) have good sanitation and hygiene and the remaining, 49 families (40.8%) has less sanitation and hygiene as shown in Figure 2. The worrisome circumstances related to the hygiene of smokers' family are washing hands with soap after using a toilet and draining the bathtub once a week, while for sanitation; the worrisome circumstances are opened-household sewerage (SPAL) and opened-trash bin.

The wastes pass through opened-household sewerage (SPAL) will build up and make it being stopped up and stagnant. Opened-trash bin will cause bad smell and invite the vector of diseases, such as flies, cockroaches, or mosquitoes. Both can help the spreading of the disease rapidly. These conditions will affect the health status of smokers' family. Therefore, they must be improved and well-managed. It is supported by the research conducted by [16] finding that physical sanitation of the house (lighting, ventilation, smoking behaviour) that does not meet the requirements becomes a risk factor for the incidence of ARI in infants. This research also proved that there is a relationship between basic sanitation facilities (clean water facilities, garbage disposal, wastewater disposal facilities and family latrines) and personal hygiene with the incidence of diarrhoea.

Moreover, correlated to health cares in the family of smokers in which 85 families (70.8%) is in the less category and 35 families (29.2%) is in a good category, the main problem is caused by their ignorance of the importance of implementing healthy living. The most common effort done by the families is only consuming iodised salt as it is the easiest to be obtained, even in the small shops. They use it every day in their cooked food. This situation can also

represent the good performance of local government in providing and promoting the iodised salt. However, the local government must be more intensive to promote other activities supporting health security, for instance, doing physical exercise regularly. This situation represents that hygiene sanitation and health care are related to healthy family security, for example, growth in infants and overall quality of life. Based on the results of the study, it was also found that there is a relationship between health care and healthy family security ($p = 0.033$). It is strengthened by the research conducted by [17] stating that the variable feeding practices and hygiene practices are significantly related to the incidence of stunting. The results of this study explained that the practice of feeding and good hygiene practice could prevent stunting. The incidence of stunting during the growth of children can reduce the quality of life until they are adults. Consequently, the impacts that occur can reduce the quality of health.

In conclusion, there are more healthy-secured families in case of smoker's families (62.5%), but for sanitation hygiene and health cares, both are less. The correlation between sanitation hygiene and health cares with healthy family security shows significantly; bad sanitation hygiene and health cares in the smoker's families tend to create an unhealthy family.

It is expected that there will be training or coaching for smoker's families to increase sanitation hygiene and health cares through health promotion activity, which will change the way of thinking of the smoker's families to do many activities for preventing disease as well as improving and empowering healthy family security.

The community support and cross-sectoral activities from Karo District Government, Health Department, Social Department, or Education Department are expected to implement health promotion activity and prevent disease-related to sanitation hygiene and health cares in the smoker's families. Moreover, the cooperation and participation among the parts involved in the health community, for examples, regional government, department of health, social department, or educational department are required to support health promotion and disease prevention related to sanitation hygiene and health cares of smokers' family.

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