

Behavior of Pregnant Women Toward Environmental Exposure Tobacco Smoke

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Abstract

Because it is responsible for the deaths of approximately 6 million people each year, smoking is one of the most significant challenges confronting the world of health. More than 5 million individuals lost their lives as a direct result of smoking cigarettes, and another 600 thousand lost their lives as a result of being exposed to cigarette smoke. It is possible for pregnant women to give birth to stillborn babies, malnutrition, disrupt the metabolism of fetal growth, have weak fetuses, and have disorders of the fetal nervous system if they are exposed to cigarette smoke. Because of this, the purpose of this study is to determine how pregnant women react to the presence of cigarette smoke in their homes that is produced by other people. Quantitative research is the method of investigation that was utilized in this study. The study also took a cross-sectional approach and utilized an analytic research design. The findings demonstrated that the attitudes of pregnant women and the value systems of pregnant women towards other people's cigarette smoke in the home environment is the most dominant element for the establishment of active smokers' awareness not to smoke in the home environment.

Keywords: Behavior, Pregnant Women, Environment Tobacco Smoke.



A. INTRODUCTION

Smoking is an addictive substance which, when used, is harmful to individual health. Smoking is the behavior of smoking cigarettes that is in demand by many men. Smoking is very detrimental to health for both the smoker as an active smoker and those who are nearby as passive smokers. Passive smokers are people who are exposed to other people's cigarette smoke (Indrajati et al, 2017) . Cigarette smoke is three times more dangerous in passive smokers than active smokers. This passive smoker should not share the same " *health sin* " by cigarette smoke from active smokers. WHO in 2020 gave a statement that smoking can kill an estimated 8 million people every year. More than 7 million of these died were active smokers and more than 1.2 million were passive smokers (WHO, 2021).

It is estimated that men smoke nearly five times as much as women on a global scale, but the smoking prevalence ratio of women to men fluctuates dramatically between nations (Lopez et al, 1994). In countries with a high standard of living, including Australia, Canada, the United States, and the majority of Western Europe, women smoke at rates comparable to males. In many low- and middle-income countries, however, women smoke significantly less than men. In China, for instance, 61 percent of men reported being current smokers, while only 4.2% of women did so. Similarly, in Argentina, 34% of men and 23% of women reported being current smokers (Report & Power, 2008).

Smoking increases the risk of ectopic pregnancy, premature membrane rupture, placental abruption, placenta previa, miscarriage, stillbirth, premature birth, low birth weight, small for gestational age, and congenital anomalies such as cleft lip (Castles et al, 1999). The risk of sudden infant death syndrome (SIDS) increases after birth for females who smoked during or after pregnancy. The dangers of using tobacco products during pregnancy are not limited to smoking. Moreover, maternal exposure to passive smoking during pregnancy is associated with a 22% increased risk of low birth weight (2500 g) (WHO, 2013).

Ward, et al. 2007 which also found that domestic exposure related to *Exposure Tobacco Smoke (ETS)* was strongly associated with the incidence of low birth weight babies. The environmental influence of tobacco smoke and the smoking habits of pregnant women can cause health problems in their children even before the child is born. Babies born to women who smoke during pregnancy and babies who live in secondhand smoke have the same risk of death. In the recommendations of the Center for Disease Control and Prevention (CDC) in 2014, it is stated that the effects of smoking on women such as difficulty getting pregnant, premature labor and KPD. For the fetus, the effects of cigarettes smoked by pregnant women are babies born too small (LBW), SIDS, still birth, infant death or congenital abnormalities (Tarasi et al., 2022; Mcdonnell & Regan, 2019).

Home is one of the places where passive smokers, mothers and children, are exposed most often. Mothers and children are a vulnerable group that will become passive smokers (Oberg et al, 2011). CDC recommendations for women, especially pregnant women, to protect themselves and their immediate family from exposure to cigarette smoke, not only at home, but also in the car. The CDC also recommends that family members who don't smoke can motivate their families who are active smokers to be able to quit smoking (Bell et al, 2009). If there is exposure to secondhand smoke in the house, doors, windows or other ventilation must be open.

According to data, women are the most common passive smokers (second hand smokers). Passive smoking (SHS) was projected to cause 600,000 premature deaths per year in 2004, with youngsters accounting for 28% of these deaths. The WHO cites the impacts of smoking as one of the reasons why women require special attention on the health agenda (WHO, 2010). Women are also more vulnerable to specific health issues and have a higher risk of dying prematurely. Furthermore, many women do not have proper access to health care. Despite the fact that women are critical to the health of their families and children (Flaskerud & Winslow, 1998) Secondhand smoke exposure in the home environment should be a major issue for the government and stakeholders.

Because laws do not limit exposure to SHS at home, women and children become people who are exposed to secondhand smoke from husbands, relatives, and guests who smoke in the house (WHO, 2008). In 2008, smoke-free laws helped protect an additional 154 million people around the world from secondhand smoke. However, nearly 90% of the world's population is not protected, and laws do not limit exposure to SHS at home. This proof is found in China, which is responsible for

contributing one-third of the world's smokers. Fewer than 3% of women use cigarettes, but more than half of all women of reproductive age are harmed by secondhand smoking (WHO, 2010).

The World Bank (2000) in its summary report on development with a gender perspective states that the majority of women, including women in Indonesia, still do not have sufficient autonomy over themselves, especially in their reproductive health. McCarthy and Maine (1992)), stated that the underlying factors (underlying factors) of maternal mortality are one of them is gender inequality and the community environment around the mother. Women and children who are victims of passive smoking are the most common (especially in countries with certain cultures) because women and children do not have the power to negotiate to have a smoke-free home (Mayangsari & Mahmood, 2010; Nichter et al. al., 2010).

A preliminary study conducted by midwifery students in 2022, the results of anamnesis on 3 pregnant women whose husbands or families smoked, the three of them did not dare to forbid or reprimand their husbands for fear of anger, fear of not being given spending money. This prompted researchers to seek information about the description of pregnant women's behavior and factors related to pregnant women's behavior towards other people's cigarette smoke in the home environment in one of the areas in Jakarta.

B. LITERATURE REVIEWS

1. Behavior

Behavior encompasses all actions or actions observed directly or indirectly from the exterior. Human behavior is the collection of human behaviors that are influenced by customs, attitudes, emotions, values, ethics, power, persuasion, or heredity (1965). The categories of a person's behavior are reasonable behavior, acceptable behavior, odd behavior, and deviant behavior. In sociology, behavior is viewed as something that is not directed toward other people and, as such, is considered a fundamental human social action.

According to Skinner (1938) as cited in Notoatmodjo (2003), behavior is a person's response or reaction to an external stimulus. This behavior occurs as a result of a stimulus to the organism, which is why Skinner's theory is known as the organism-response stimulus theory (Notoatmodjo, 2003). According to Lawrence Green 1980 in Notoatmodjo, 2003, behavior analysis departs from the level of health. Two factors influence the health of an individual or society: behavioral factors (behavior causes) and non-behavioral factors (non-behavioral causes).

2. Pregnant mother

Pregnant women are people who are in the process of conception to continue their offspring. In the body of a pregnant woman there is a fetus that grows in the uterus. Pregnancy is an important period of life. A pregnant woman must prepare herself as well as possible so as not to cause problems for the health of the mother, baby, and during the birth process (Kasdu, 2005).

A pregnant woman will experience an increase in blood volume; consequently, her iron requirements will also rise. Iron is required to satisfy the needs of increased red blood cells during pregnancy, which necessitate an intake of approximately 800 to 1,000 mg. 300-400 mg of iron until 32 weeks of gestation to meet the fetus's requirements. 100-200 mg of iron to meet the fetus's needs. 100-200 mg of iron are required for placental development. Approximately 190 mg of iron is eliminated during childbirth (Ibrahim et al., 2010).

3. Passive smoker

Passive smokers are a person or group of people who inhale cigarette smoke from active smokers who are in a closed room or are close to active smokers in open spaces (Berridge, 1999). Passive smoking or what is also called Involuntary Smoking is a term given to people who do not smoke but also inhale cigarette smoke from people who smoke around them. Passive smokers do not have the habit of smoking, but are forced to inhale cigarette smoke exhaled by other people who are nearby. This type of smoker is often found at bus stops, on trains or at meeting places where there are smokers nearby. Passive smokers are also called victims of active smokers (Lee, 1982).

C. METHODS

This study employs quantitative research, using an analytic research design and a cross-sectional technique, in which the dependent and independent variables are monitored concurrently. The study's design or design was chosen to look at the behavior of pregnant women as passive smokers towards the behavior of their husbands, other family members, or guests who smoke in the home environment, and to discover the factors related to pregnant women's behavior towards cigarette smoke in the home environment. This study included pregnant women who had a pregnancy check-up at a health clinic. This study's sample size is 96 persons. This study's inclusion criteria were pregnant women whose husbands smoked. Pregnant women who smoked and pregnant women with chronic conditions were excluded from this study. The data collection process in this study was a primary questionnaire given to respondents. The questionnaire contains the characteristic components of pregnant women, current pregnancy health status, knowledge of pregnant women about the effect of cigarette smoke on health, especially pregnancy, pregnant women's attitudes towards cigarette smoke in the home, history of exposure to value systems owned by pregnant women and pregnant women's behavior if there is husband or partner or other family member who smokes in the house.

D. RESULTS AND DISCUSSION

The results of this study obtained data on the characteristics of the sample in this study, namely:

Table 1 Characteristics of respondents

Characteristics of pregnant women	n	%
Age		
<20	14	14.6
>20	82	85.4
Education		
Intermediate base	90	93.8
Tall	6	6.2
Work		
Housewife	83	86.5
Work	13	13.5
Attitudes towards secondhand smoke in the home		
Take it as a problem	82	85.4
No problem	14	14.6
knowledge about cigarette smoke in the house		
Not enough	23	24
Good	73	76
The value system adopted by pregnant women regarding cigarette smoke in the home		
Nothing related	15	15.6
There is something related to the ban	81	84.4
Exposure of pregnant women to secondhand smoke in the home		
Exposed	25	26
not exposed	71	74

From table 1 it can be seen that there are still pregnant women who are pregnant at the age of less than 20 years, the majority of pregnant women have primary and secondary education as many as 90 people (93.8%), most of them work as housewives as many as 83 people (86.5%), most people think that cigarette smoke in the house is a problem as many as 82 people (85.4), most of the mothers already have good knowledge about cigarette smoke and the impact of cigarette smoke in the house on health as many as 73 people (76%), most of them stated that there is a value system that prohibiting smoking in the house as many as 81 people (84.4), most pregnant women feel that they are not exposed to cigarette smoke in the house as many as 71 people (74%).

Table 2. Behavior towards cigarette smoke in the house

variables	N	%
Let	27	28.1
Rebuke/forbid	69	71.9

From table 2 it can be seen that most pregnant women engage in behavior to rebuke and prohibit cigarette smoke in the house, but there are still as many as 27 people who do not have the courage to prohibit reprimanding someone who smokes in the house. The results of Lin's research in 2020, the degree of avoiding cigarette smoke in the house has several gradations (Lin et al., 2010).

Table 3 The relationship between the characteristics of the respondents and the behavior of the mother against cigarette smoke in the house

Variables	Behavior towards cigarette smoke in the home				N	%	P Value	95% CI
	Let		Rebuke/forbid					
	n	%	n	%				
Knowledge								
Less	14	14.6	9	9.4	23	24	0.000	7.179 (2.563 – 20.109)
good	13	13.5	60	62.5	73	76		
Total	27	28.1	69	71.9	96	100		
mother's attitude								
Take it as a problem	13	13.5	1	1.0	14	14.6	0.000	63.143 (7,627 – 522,762)
No problem	14	14.6	68	70.8	82	85.4		
Total	27	28.1	69	71.9	96	100		
System of values regarding cigarette smoke in the home								
No rules	12	12.5	3	3.1	15	15.6	0.000	63.143 (7,627 – 522,762)
Forbid	15	15.6	66	68.8	81	84.4		
Total	27	28.1	69	71.9	96	100		
Exposure to cigarette smoke								
Feel exposed	15	15.6	10	10.4	25	26	0.000	7,375 (2,679 – 20,303)
Not exposed	12	12.5	59	61.5	71	74		
Total	27	28.1	69	71.9	96	100		

Based on table 3, it can be seen that there are 4 variables that are significantly related to the mother's behavior towards cigarette smoke in the home, namely knowledge, attitude, value system, and history of exposure to cigarette smoke with a P Value <0.000. To obtain the most dominant variable that related to the behavior of pregnant women towards their husbands, family members or guests who smoke in the home environment using multivariate analysis including the selection of multivariate candidate variables and modeling the determinants of pregnant women's behavior towards cigarette smoke in the home.

Table 4 Regression analysis of variables related to behavior of pregnant women towards cigarette smoke in the home

Variable	Conclusion	P Value
Knowledge	Not related	0.128
Attitude	relate	0.003
Value system	relate	0.049
Exposure history	Not related	0.658

From table 4 it can be seen that if multivariate analysis is carried out, the variable is the attitude of the mother and the value system that exists in the mother's family about cigarette smoke in the house. (Lin et al., 2010) . The results of this study are in accordance with Allport's statement (1954) in Notoatmodjo stating that attitudes are seen as learning outcomes, always associated with objects such as humans, insights, events and ideas. The behavior of pregnant women towards people who smoke in the home environment is the result of learning from events caused by humans, namely smoking behavior that affects women who are pregnant will interfere with the health of both the woman herself and the fetus she contains. This

research is different from Lin's research which states that self-efficacy and knowledge are the dominant factors that encourage mothers to avoid second-hand smoke at home (Lin et al., 2010).

Skinner (1983), a behavioral specialist, explains in Notoatmojo's book that behavior is the product of the interaction between stimuli (stimulus) and response. Behavior can be interpreted operationally as an organism's or a person's response to stimuli (stimuli) from outside the subject. There are two types of this response: passive and active. The passive kind (covert behavior) is an internal response that occurs within humans but is not directly evident to others. Consider thought, response, mental attitude, and knowledge. Active form (overt conduct), i.e. when the activity is readily seen.

When it is related to the research results, respondents with passive or covert responses/responses (covert behavior) have a tendency not to rebuke if their husbands smoke in the home environment. Conversely, respondents whose stimulus response is active (overt behavior) will reprimand their husband or family members for smoking in the home environment. Reprimanding behavior is an active stimulus response, namely in the form of the respondent's actions to maintain health. The findings of this study are consistent with Notoatmodjo's (2003) theory that knowledge is a critical cognitive area for the development of action. The activity in question is behavior to prevent sickness by responding to one's physical surroundings in such a way that one's health is not harmed. In other words, how does a person regulate his environment such that it does not harm his personal health, the health of his family, or the health of the community?

Allport went on to say that attitude is also a willingness to act in a certain way and has a high or weak level of intensity. If the husband smokes in the house, pregnant ladies with strong views will criticize. In contrast, if the intensity is low, it will not chastise the husband or family members for smoking in the home. When connected with the results of the study, namely the behavior of pregnant women towards cigarette smoke in the home environment is very relevant because husbands who smoke do not pollute the environment in the home because they smoke outside the home, they even make the decision to stop smoking. In order for this behavior to last, it must be based on the intense attitude of family members so that the home environment is free from cigarette smoke which affects the health of pregnant women and the fetus they contain does not fail to thrive.

If the husband or family members and the community have a strong agreement then he will comply with it and the values of behavior that are adopted are not to smoke in the home environment and make Indonesian people healthier and the air in the home environment is fresher with no cigarette smoke pollution. in the home environment. This is supported by the success of the City of Yogyakarta in implementing a smoke-free home program which has been implemented since 2010 in collaboration with Quit Tobacco Indonesia and the Faculty of Medicine, Gadjah Mada University. This program is a joint agreement between all Yogyakarta residents aimed at protecting passive smokers and also supporting a Clean and Healthy

Lifestyle (PHBS). Another study conducted by Soltani et al in 2019 recommended family counseling to reduce exposure passive smoking at home among pregnant women in Iran . (Soltani et al., 2019)

A smoke-free home is an activity to encourage smokers not to smoke in the house. This movement also accustoms active smokers not to smoke at home, in meetings, in front of pregnant women, or in front of children. U for the success of the mission with a persuasive and personal approach , distribution of stickers, teaching with smoking danger boards, visits to each resident's house. In fact, on every door of the house, living room, meeting room of residents, all smoking prohibition stickers affixed. Gradually people realize that smoking is harmful to health. The awareness not to smoke actually comes from passive smokers consisting of mothers. They always remind their husbands when they are going to smoke in the house. This culture is successful, even the husbands reduce their smoking habit.

E. CONCLUSION

From the results of the study it can be seen that most of the education of pregnant women is classified as primary and secondary with most of them working as housewives. However, the awareness of these pregnant women about the dangers of smoking in the house is very high by considering the presence of cigarette smoke in the house as a problem. The knowledge of pregnant women about the dangers of cigarette smoke is so good that they think there is a value system that prohibits smoking in the house. However, most pregnant women feel that they are not exposed to cigarette smoke at home. The most dominant factors with the mother's behavior towards cigarette smoke in the home are knowledge, attitude, value system, and history of exposure to cigarette smoke with p value < 0.000.

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