

EPIDEMIOLOGICAL STUDY OF SMOKING AMONG FEMALE STUDENTS IN BATANGAS CITY

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Abstract

This study assessed the primary reasons for smoking among female students as well as their level of awareness on its health hazard. Specifically, the study discussed the smoking habit, reasons for initiation of smoking, level of awareness on the health hazard and the health risk to women and the major diseases caused by smoking.

Descriptive method was used in this study. Data were collected through a structured questionnaire. A group of 250 smokers were taken as respondents through simple sampling method. Statistical treatments used were percentage distribution and weighted mean.

Based from the findings, the study disclosed that the habit of smoking started as early as adolescence and continued until adulthood. Socio-cultural factors such as peer and parents influence motivated the young female to start smoking. Meanwhile, availability and affordability of cigarettes made easier for the female smokers to start smoking. Likewise, they were fully aware of the hazardous effects of smoking to health although the specific effects to childbearing women were not known to them.

As an educational institution, a community extension program was proposed focusing on the prevention of smoking among women.

Keywords: *Smoking, level of awareness*

Introduction

Smoking in women is a well recognized public health problem. In many developed countries, cigarette smoking is now the most preventable cause of premature death in women (C. Lau 2003).

Few decades ago, people could buy cigarettes and smoke pretty much everywhere- even in schools. Ads for cigarettes were all over the place. Today people are more aware about how bad smoking is for the health. Smoking is restricted or banned in almost all public places. Almost everyone knows that smoking causes cancer, emphysema and heart disease; that it can shorten life by 10 years or more and that the habit can cost a smoker thousands of pesos a year. So how come people are still into the habit of smoking?

Smoking is a hard habit to break because tobacco contains nicotine, which is highly addictive. Like heroin or other addictive drugs, the body and mind quickly become so used to nicotine in cigarettes that a person needs to it just to feel normal. People start smoking for a variety of reasons. Statistics show that about 9 out of 10 tobacco user's start before they're 18 years old. Most adults who started smoking in their teens never expected the habit to be addictive

Realizing the role of women in the family and especially in reproduction, the researchers chose female subject in this study. The recent national Household survey on Drug Abuse in the United States reported that among women of reproductive age, approximately one-third smokes cigarette on a regular basis. There are already 200 million women smokers, and tobacco companies have launched aggressive campaign to recruit women worldwide. By 2025, the number of women smokers is expected to almost triple. It is urgent that we find comprehensive solutions to the danger of tobacco use and address the epidemic among women (WHO Bulletin 2005).

There are few relatively few data on the epidemiology of cigarette smoking among female students; hence, this study would like to examine the prevalence and factors predisposing female students to smoke cigarettes even in the most inappropriate places such as schools and other public places.

This study focused on female students who were smokers whether in high school or college level. According to Kenny (1997), adolescence is a time of trying out different identities, testing limits, coupled with a perception of invulnerability. Although adolescents may have a working knowledge of how the body functions, they have limited abilities to appreciate a cause-effect relationship between behaviors and outcome.

As an advocate of health promotion and disease prevention, the researchers would want to contribute in helping the female smokers quit the habit of smoking as early as possible and encourage them to adhere to healthy lifestyle. Based on the result of the study, interventions for the target group were suggested. Proposed programs focuses on what can be done by an educational institution, as part of the community extension program, to the prevention and cessation of smoking among women. Schools would be most important channels to educate students on the prevention and cessation of smoking.

Methods

The researchers used the descriptive design, the purpose of which is to simply describe the phenomenon or the relationships between variables being investigated (Gregorio 2008).

A territory wide random survey was conducted to identify current female student smokers in Batangas City. Criteria for selection of participants included, female high school or college students who had been smoking for several months and were still into smoking habit. They were presently enrolled in different secondary schools, universities and colleges in Batangas City. An appropriate number of students were selected as participants. The researchers identified 250 respondents. The researchers utilized simple sampling method wherein the respondents were selected on a random basis of elements from a sampling framework that has an equal or probability of being chosen as subject of the study.

Results and Discussion

Table 1
Percentage Distribution of the Respondents' Profile

Profile Variables	Frequency	Percentage (%)
Age		
14 – 15 years old	22	8.80
16 – 17 years old	48	19.20
18 – 19 years old	64	25.60
20 – 21 years old	66	26.40
22 – 23 years old	38	15.20
24 years old and above	12	4.80
Age started smoking		
13 – 15 years old	138	55.20
16 – 18 years old	102	40.40
19 years old and above	10	4.40
Weekly Allowance		
P 500	2	0.80
P 750	8	3.20
P 1000	53	21.20
P 1250 and above	187	74.80
Course / Program		
High School	22	8.80
College Level	228	91.20

Table 1 presents the demographic profile of the respondents, the table shows that 26.40 percent belong to the age bracket of 20-21 years old. Sixty four of the respondents or 25.60 percent have the age of 18-19 years old; 19.20 percent are aged 16-17 years old; for the age bracket of 21-22 got a 15.20 percent; another 8.80 percent belongs to age bracket of 14-15 years old; and only twelve or 4.80 percent are 23-24 years old. Most of the respondents are aged 21-22

years old, these results are a clear indication that younger age women have strong liking for smoking.

The table also shows that even teenagers as young as 14 years old are already smokers. Miller (2002), stated that younger adolescents were also found to be 3 times more susceptible to smoking compared to older ones.

In terms of age when the respondents started smoking, 55.2 percent or 138 started smoking at the age of 13-15 years; 40.4 percent at the age of 16-18 years old; while only 4.4 percent started smoking at the age of 19. This means that younger people are trying to experience smoking at their early age. This could be attributed to curiosity of adolescence, peer influence or just simply socializing with friends.

The 1991 survey on smoking, revealed that 28 percent of the country's young population started smoking between the ages of 14 and 17 (Philippine Daily Inquirer, 2000).

Table 2
Pattern of Smoking Habits

Items	Frequency	Percentage (%)
Frequency of smoking		
1 – 2 times	-	-
3 – 4 times	23	9.20
Everyday	227	90.80
Hours of smoking after 1 stick of cigarette		
No more	-	-
After 30 minutes – 1 hour	129	51.60
After 2 hours and above	121	48.40
Consumption of cigarette in a day		
1 – 5 sticks	23	9.20
6 – 10 sticks	223	89.20
1 pack and above	4	1.60

Table 2 shows how frequent respondents smoke, majority of the respondents smoke everyday with a frequency of 227 or 90.80 percent; they usually consume 6-10 sticks a day with an interval of 30-1 hour. Form the table, it can be noted that although at the young age, female smokers consume a great deal of cigarettes per day.

These women who smoke are ignoring the very real health risk of even one cigarette. And the risk of persons who smokes a pack of cigarette or less per day is not at the lower end of the spectrum. Risks of those who smoke more than a pack per day are at the higher end.

Table 3.1
Reasons for the Initiation of Cigarette Smoking in terms of
Socio-cultural Factors

Reasons	Yes		No		Rank (based on Yes response)
	F	%	f	%	
1. influence by peers	220	88.00	30	12.00	3
2. influence by parents / family / significant others	238	95.20	12	4.80	2
3. sense of rebellion	212	84.80	38	15.20	5
4. independence to cultural conformity	205	82.00	45	18.00	7
5. it looks cool	242	96.80	8	3.20	1
6. positive image of women who smokes	210	84.00	40	16.00	6
7. out of curiosity	218	87.20	32	12.80	4

In table 3.1, the data revealed that majority of the respondents believed that it looks cool for a female to smoke (96.8%). Some respondents agreed that smoking is influenced by their parents or significant others (95.20%). While others agreed that they are influenced by peers. Some respondents smoke because they rebel against their parents. Most of the respondents claimed that advertisement played a major role in influencing them to smoke. But not all of them agreed that smoking created a positive image of women, neither has it showed independence to cultural conformity.

People start smoking for a variety of different reasons. Some think it looks cool. Others start because their family members or friends smoke. Statistics show that about 9 out of 10 tobacco users start before they're 18 years old. Most adults who started smoking in their teens never expected to become addicted.

Table 3.2
Reasons for the Initiation of Cigarette Smoking in terms of Psychological Factors

Reasons	Yes		No		Rank (based on Yes response)
	F	%	F	%	
1. smoking helps me cope up with stress	243	97.20	7	2.80	1
2. helps me fight depression and reduce my anxiety	238	95.20	12	4.80	3.5
3. a need for increased mental clarity	232	92.80	18	7.20	5
4. it feels good because of the euphoric effect of nicotine	212	84.80	38	15.20	6
5. to habitually satisfy an addiction to nicotine	207	82.80	43	17.20	7
6. feeling bored or being idle	240	96.00	10	4.00	2
7. helps me deal with personal problems	238	95.20	12	4.80	3.5

Table 3.2. shows that the reason for the initiation of cigarette smoking in terms of psychological factors. The data revealed that smoking helps the respondents cope up with stress with a frequency of 240 or 96 percent, adolescence is a stressful stage, they are trying to established their own identity and are somewhat confused, so they turn into something that could somehow alleviate the stress and anxious feelings, more often than not they turn into their peers.

Other respondents claimed that they smoke when they feel bored or being idle at home or in school (96%). This gave them time to smoke to pass time.

Most of the respondents also believed that smoking helps in their personal problems and lessen their depression (95.2%).

Psychological factors play a major role in people's susceptibility to smoking. Depression is a well-known risk factor for smoking and increases the danger of starting young. Indeed, nicotine may stimulate receptors in the brain that improve mood in certain people with genetically induced depression. People with low self-esteem and adolescent with behavioral problem have a higher risk for smoking. Experts are divided on whether or not there are also an association between smoking in adolescent and young adult and an increased risk for some anxiety disorders.

According to Santrock (2002), the primary reason people continue to use tobacco or to smoke cigarette despite the health risk is that they become addicted to powerful psychoactive

drug nicotine. Many researchers consider nicotine to be the most physically addictive of all psychoactive drugs.

Table 3.3
Reasons for the Initiation of Cigarette Smoking in terms of Environmental Factors

Reasons	Yes		No		Rank (based on Yes response)
	F	%	F	%	
1. availability of cigarette everywhere	250	100.00	-	-	2
2. media and television advertisement	243	97.20	7	2.80	5
3. cigarette smoking is accepted by the society	232	92.80	18	7.20	7
4. more and more people are smoking	250	100.00	-	-	2
5. I will be left behind if I will not smoking	242	96.80	8	3.20	6
6. to follow social trend	248	99.20	2	0.80	4
7. cigarette is affordable	250	100.00	-	-	2

In terms of environmental factors, all of the respondents agreed that they smoke because of availability of cigarette everywhere (100%) and it is affordable. The health hazard brought about by smoking are not evident for the respondents because they see that more and more people are into the habit of smoking (100%). Media and television advertisement is also a big factor that influences women to start smoking (97%), however some of them agreed that cigarette smoking among women is not accepted by the society (7.2%).

This means that environmental factors greatly influenced the female youth to start smoking. According to Arnould et al, (2002), there is an existence of a social environment that encourages the youth to think that life in the West is a paradise and that smoking is about a lifetime freedom, independence and sophistication. The youth are among the popular target of marketers because they are numerous and they have self expressions and self- realization needs. They consume products either to fit or to differentiate themselves from their peers.

Furthermore, Bero et.al (2000), stated that a number of foreign and local studies also upholds that cigarette consumption are affected by factors involving different forms of advertising as well as pressures in the youth environment. The unregulated promotion of cigars on the internet also has the potential to attract the young people and these are few barriers to Internet tobacco purchase by minors.

The adolescents' belief and intensions about cigarette consumption are more enhanced by the joint effects of advertising and peers (Knight and Pecnhmann, 2002). Studies on cigarette companies in the Philippines showed that radio and television advertisements were among the very commonly used promotional tools. (Priwan,1994)

Table 4.1
Awareness on the Health Hazard of Smoking with Regards to the Effects on Human Body

Items	Weighted Mean	Verbal Interpretation	Rank
1. Nicotine and cyanide are actually poisons that can kill in high enough doses	2.79	Aware	10
2. The consequences of poisoning happen gradually	3.06	Aware	8.5
3. Nicotine is physically and mentally addictive	3.16	Aware	7
4. First time smokers will experienced negative effects of carbon monoxide poisoning such as nausea and dizziness	3.06	Aware	8.5
5. Smoking raises blood pressure and increases heart rate	3.76	Very Much Aware	5
6. Smoking can shorten life by 10 long years	3.77	Very Much Aware	4
7. Smoking can cause bad breath or halitosis and teeth to fall out	3.96	Very Much Aware	1
8. Smoker's develop wrinkles and stains teeth and gums	3.95	Very Much Aware	2
9. Smokers tend to be less active than non smokers because smoking affects lung power	3.84	Very Much Aware	3
10. Teen smokers experience problems such as bad skin because smoking reduces blood supply to the skin, bad smelling hair, greater risk of injury and slower healing time.	3.73	Very Much Aware	6
Composite Mean	3.51	Very Much Aware	

Table shows the awareness of the respondents on the physical effects of smoking to human body. In summary, the respondents have the knowledge on the hazardous effects of smoking to the human body as well as the major diseases caused by the chemicals from cigarette. However, smoking cessation is not being initiated by the smoker because of some personal reasons and psychological and physical dependency of the smoker.

Table 4.2
Awareness on the Health Hazard of Smoking with Regards to the Health Risk of Smoking to Women

Items	Weighted Mean	Verbal Interpretation	Rank
1. Smoking can cause primary and secondary infertility	2.76	Aware	2
2. Smoking can cause delay in becoming pregnant	2.13	Moderately Aware	4
3. Smoking can cause adverse pregnancy outcomes such as abruptio placenta and pre-term delivery	1.81	Moderately Aware	10
4. Smoking during pregnancy cause low birth weight	2.18	Moderately Aware	3
5. Smoking during pregnancy can cause still born infant	1.88	Moderately Aware	9
6. Smoking can cause death of infant in perinatal period	3.08	Aware	1
7. Smoking can cause severe child behavior problems: Attention Deficit Disorder, Hyperactivity Disorder	2.10	Moderately Aware	5.5
8. Nicotine damages brain cell quality resulting to learning and memory deficits in children of smoking mother	2.02	Moderately Aware	7
9. Smoking women are more likely to develop incontinence and urinary infection	1.94	Moderately Aware	8
10. Nicotine reaches the brain within 10 seconds after smoke is inhaled and it has been found in every part of the body and in breast milk	2.10	Moderately Aware	5.5
Composite Mean	2.20	Moderately Aware	

The data on the table are reflections that the respondents are moderately aware on the health hazards in smoking.. This was evidently shown by the average weighted mean of 2.20, indicating respondents' awareness on all the health hazards raised in the study.

The respondents prioritized that smoking can cause death of infant in perinatal period. They showed their awareness through a weighted mean of 3.08, ranked highest. The respondents are also aware that smoking can cause primary and secondary infertility, weighted mean of 2.76. Smoking can also cause fertility problems and can impact sexual health in both men and women. Girls who are on the pill or other hormone-based methods of birth control (like the patch or the ring) increase their risk of serious health problems, such as heart attacks.

While most of the items on the table, respondents are mostly moderately aware on the health hazards of smoking on the following items; smoking can cause delay in becoming pregnant (2.13), it can cause low birth weight (2.18), and that it can adversely pregnancy outcome (1.81), fetus are also affected by smoking. This means that the respondents need the help of the health team members and other organizations in order to have additional knowledge on the health hazards of smoking for them to become more aware and thus, cessation could be initiated.

Smoking in women has important implications because the relationship between the consequences of maternal smoking and effects on the offspring appears to be closely related. Pregnant women who are smoking are at risk of having low birth weight babies. According to study, cigarettes smoking during pregnancy increases conduct disorders and links to learning disabilities. Smoking mothers are more likely to have hyperactive children and children with severe behavior problem. Smoking can also cause fertility problems and can impact sexual health in both men and women. Girls who are on the pill or other hormone-based methods of birth control (like the patch or the ring) increase their risk of serious health problems, such as heart attacks, if they smoke.

Table 4.3
Awareness on the Health Hazard of Smoking with Regards to the Major Diseases Caused

Items	Weighted Mean	Verbal Interpretation	Rank
1. Ninety percent (90%) of lung cancer is due to smoking	3.05	Aware	3
2. Smoking can cause throat and mouth cancer	3.18	Aware	1
3. Smoking can cause cardiovascular disorders such as atherosclerosis cholesterol and fat deposits in the artery) which can lead to stroke	2.51	Aware	10
4. Coronary thrombosis (blood clot in arteries) which can lead to heart attack	2.72	Aware	8
5. Smoking causes blockage to the vascular supply of the legs which may lead to gangrene and amputation	2.76	Aware	7
6. Smoking is the most common cause of COPD (emphysema, chronic bronchitis and asthma)	2.79	Aware	6
7. Smoking causes hypertension – a risk for heart attack and stroke	3.12	Aware	2
8. Smokers run an increased risk of eye problem such as cataracts and gradual loss of eyesight	2.80	Aware	5
9. Heavy cigarette smoking is intimately associated with	2.71	Aware	9

schizophrenia (mental illness)

10. Smoking affects the function of the immune system and may increase the risk for infections 2.88 Aware 4

Composite Mean 2.85 Aware

As can be gleaned from table 4.3, the respondents are aware on the health hazard of smoking with regards to the major diseases caused. This was evidently shown by the average weighted mean of 2.85, indicating respondents' awareness on all the major diseases caused by smoking. Items such as smoking can cause throat and mouth cancer (3.81), smoking causes hypertension- a risk for heart attack and stroke (3.12), ninety percent of lung cancer is due to smoking (3.05), smoking affects the function of the immune system and may increase the risk of infections (2.88), smokers run an increased risk of eye problem such as cataracts and gradual loss of eyesight (2.80), smoking is the most common cause of COPD (2.79), smoking causes blockage to the vascular supply of the legs which may lead to gangrene and amputation (2.76), Coronary thrombosis (blood clot in arteries) which can lead to heart attack (2.72), Heavy cigarette smoking is intimately associated with schizophrenia (mental illness) (2.71), and smoking can cause cardiovascular disorders such as atherosclerosis cholesterol and fat deposits in the artery) which can lead to stroke (2.51).

These women who smoke are ignoring the very real health risk of even one cigarette. Even if the respondents are aware on the effects of cigarette smoking, still they are enjoying the habit of smoking. They seem not to bother about the effect of cigarette smoking in their health because of their personal reasons.

5. Proposed Program to help in the prevention and cessation of smoking

Based on the presentation of data and discussion, the proposed program is focused on the importance of creating awareness on the health hazard brought about by smoking as well as helping the youth on diverting their attention from cigarette consumption.

Proposed Program on Smoking Prevention and Cessation

Objectives	Program	Strategies	Person Responsible	Expected Outcome
1. To improve the level of knowledge and awareness on the health effects of smoking among female students.	1. Information Dissemination * Health education	1. Seminars/ or a very strong campaign against smoking 2. Posting of warning signs all around the province 3. Media advertisement on the bad effects of smoking	School management Barangay officials Barangay health workers	Smokers and non smokers will become aware of the bad effects of smoking

<p>2. To minimize or totally eradicate selling of cigarettes to minors</p>	<p>Implementation of the laws and Policies on Smoking</p>	<p>Strict monitoring on the Implementation of the selling of cigarettes to minor policy</p> <p>Posting of these policies and regulations in public places such as schools, malls, etc. Give sanctions to violators to serve as example.</p> <p>Provision of seminars to smokers and parents about the hazard of smoking.</p>	<p>City mayor Public Health officials School management Barangay officials</p>	<p>Total ban of cigarette vendors within the school premises or near all schools</p>
<p>To provide support group</p>	<p>Provision of Counseling program to smokers who wants to quit</p>	<p>Identify and establish a Counseling group in the schools and in government offices specifically Social Service.</p>	<p>1. School management may provide one inside the school</p> <p>2. Health and public officials should establish a center for counseling</p>	<p>Smokers will be motivated to quit</p> <p>Parents will be involved in the effort of their adolescent to quit smoking.</p>
<p>To give alternatives activities to the youth</p>		<p>Create a strong youth organization in the barangay</p> <p>Provide seminar on healthy lifestyle</p> <p>Involve these youth in the activities of the barangay.</p>	<p>Public Health Officials NGOs</p>	<p>less</p>

	Provision of activities in sports and performing arts in each barangay		School Management Student Organization	numbers of teenage female smokers
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Conclusion

Based on the aforementioned findings, the following conclusions were drawn:

1. The habit of smoking started as early as adolescence and continued until adulthood.
2. Socio-cultural factors such as peer and parents influence motivated the young female to start smoking.
3. Availability and affordability of cigarettes made it easier for the female smokers to start smoking.
4. The female smokers were fully aware of the hazardous effects of smoking to health although the specific effects to childbearing women are not well known to them.

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