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Research on Impact of Smoking, Lack of Exercises, Weight on Medical Cost of Patients

Abstract

The research is all about researching about the impacts of smoking on people's health, level of exercises on one's health and also the weight on medical cost. Smoking has been an issue that has been pivotal all over the world. Many measures have been taken to curb smoking of tobacco and using tobacco related products. The measures that at least tried to reduce cigarette smoking was reducing the number of manufactured tobacco related products. The measure reduced the number of tobacco products that were being bought at that time but most tobacco addicts died.

Level of exercises on someone's health is pivotal. We will conduct a research on the level of exercise on someone health and the effects of not exercising. We will also get to know the required amount of exercise on someone health. The weight on medical cost will also be discussed in the research paper.

Keywords: smoking, exercise, weight, medical

Code and data supporting this analysis is available at: <https://github.com/yaolinwei/>

Final-paper.git

Introduction

The number of sick people increases daily. Furthermore, the number of illnesses continues to occur and increase in apparently high rates. Most of these illnesses occur due to the normal said facts. These facts have been raised by various scientists but people do not heed to them. The obvious reasons are poor lifestyle habits such as smoking, using drugs inappropriately, poor weight maintenance, lack of exercise or enough exercises, poor diet, lack of sleep and so many other reasons.

Most smokers die at really young ages. They tend to think its normal and ignore the said and proven facts about smoking. They take no effort to change their lifestyles hence they get affected easily by illnesses especially respiratory diseases. On the other hand, lack of exercises has been proven to be as deadly as smoking. Study shows that people across the world are now dying due to lack of exercises. This has been brought about by the improvement of technology hence some people rarely do anything manual like for example walking.

Lack of exercises lead to diseases that are physical inactivity related. These diseases include, high blood pressure, heart and heart related diseases, obesity, stroke, abnormal blood cholesterol levels, depression, breast and colon cancer etc. all these diseases may lead to death. High chances all these diseases will lead to death and if not, they will be chronic and eventually lead to death.

It is said that exercises i.e. Regular exercises aid in controlling your weight, reducing the rate at which you get ill, improving your mental health, improving one's mood, increasing the chances of living longer, improving one's ability to do daily activities, etc. there is a link

between the weight of a human being and the rate at which they will get ill. This study helps to know those relationships to get as healthy as possible to curb the rate at which illnesses are increasing.

Aims of the study

1. To study if there is a link between smokers and their respective weights.
2. To study the effect of smoking and lack of exercises on the health conditions of patients.
3. To discover the link connection between weight, smoking, level of exercises on the medical cost of patients.
4. To study the relationship between weight and health care cost of patients.

Significance of the study

The most pivotal significance of this study is to discover the effect of smoking, exercises, and weight on medical cost of patients in United States. Once we come up with the hypothesis we will advise the nation against these constraints with proven facts. The study will also depict the relationship between smoking, the patient's weight, the level of exercises and the total medical cost. This study will aid all smokers and all those who rarely do exercises.

Scope of the study

The main core business here is researching on the effect of smoking, not exercising on the total medical cost used in health center specifically "Toronto General Hospital" as the case of the study.

Limitations of the study

1. The disadvantages of this study are that it took a lot of time as the research team could not find time to research on all the patients.
2. The team lack adequate finances in printing adequate questionnaires for the patients and the medical providers. They also lacked sufficient funds to interview the patients and the medical providers.

Research questions

1. Is smoking dangerous to one's health?
2. Is there a connection between poor exercising and poor health conditions?
3. Is there a link between smoking and poor health conditions?
4. Does smoking and lack of enough exercises affect the weight of someone?
5. Ways in which smokers can quit smoking.

Research Hypothesis

❖ Hypothesis 1

- There is no link between smoking and increased rates of medical cost on sick people.
- There is a link between smoking and high health cost on sick people.

❖ Hypothesis 2

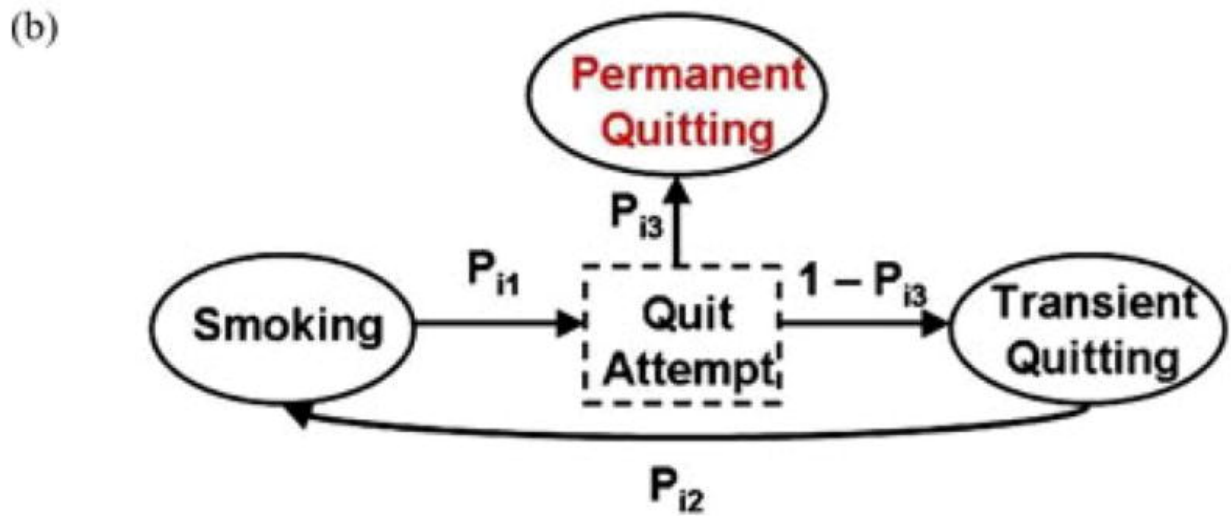
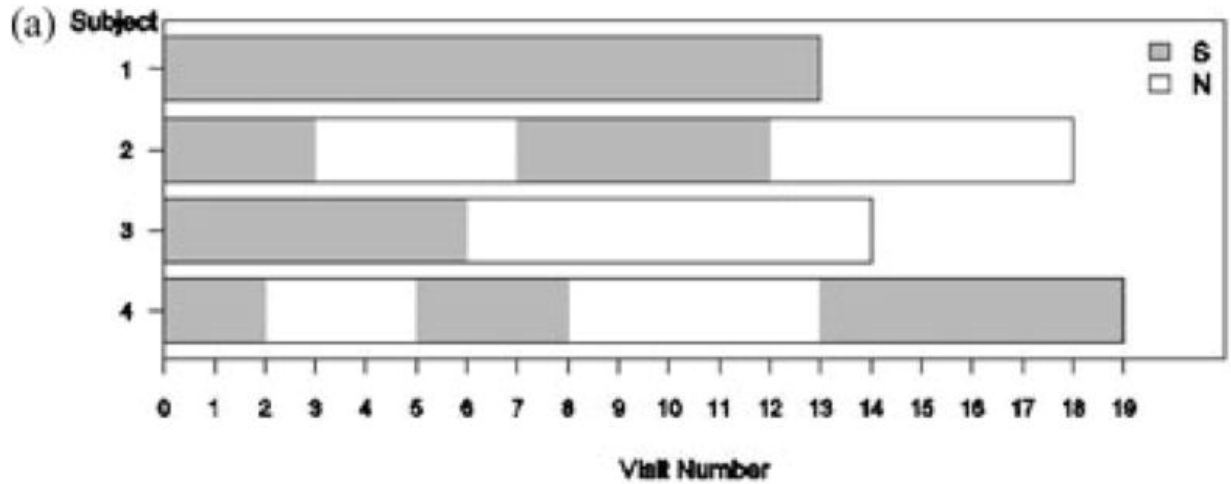
- There is no connection between inadequate exercises and high medical cost on patients.
- There is connection between inadequate exercises and high medical cost on patients.

❖ Hypothesis 3

- There is no connection between smoking, lack of exercises, weight and medical cost of patients.
- There is a relationship between smoking, lack of exercises, weight and the medical cost on patients.

Prediction model

To illustrate the complexity of the dataset, **Figure 1a** displays the smoking patterns of 4 individuals within the Toronto General Hospital study. The follow-up visit numbers are shown on the x -axis and therefore the individuals' IDs are on the y -axis. Within the interval between two consecutive visits (i.e., 4 months), the individuals either smoked (indicated by a shaded area) or didn't smoke (indicated by an unshaded area). Some individuals experienced smoking and nonsmoking periods in an alternating fashion (e.g., individuals 2, 3, and 4), while others never made quit attempts (e.g., individual 1). Although the smoking patterns are unknown after censoring, the long trailing nonsmoking intervals of some individuals (e.g., individuals 2 and 3) suggest the existence of a possible “cured” subpopulation (i.e., individuals who successfully quit smoking). These sorts of data arise frequently in medical studies like infectious diseases (e.g., ear infection, bacteria carriage, Hib infection, chronic diseases (e.g., epilepsy, soft tissue sarcoma, and substance addiction. Altogether, all these cases patients make transitions among several disease states or between the presence and absence of symptoms. After the administration of treatments, some patients are cured and they do not experience disease states or symptoms.



Method of collecting data

Participants

The participants included 50 undergraduate students. 30 were females and 20 males.

They arranged themselves in groups of 5 i.e. 10 groups to make the study easier and cheaper.

Each group catered for different hypothesis as it saved time. Some members were excluded as they had hospital-based phobias. Others were also excluded as they had respiratory disorders.

Materials

Questionnaires, notes, pens

Methods used

1. Prospective observational
2. Administering questionnaires
3. Interviewing
4. Viewing documents and records
5. Surveying

Procedure

The team members started with a meeting. They were each allocated to their groups and given the required materials. The instructions were written on a sheet and each student was given a sheet. The instructions were read loud and the uncomprehend able points were explained. The participants were given the rules to be followed during the field trip. Two days after the initial meeting, participants were informed of their group assignment and its condition and reminded that, if they were in a food-deprived group, they should not eat anything after 10 a.m. the next day. Participants from the control group were tested at 7:30 p.m. in a designated computer lab on the day the deprivation started. Those in the 12-hour group were tested at 10 p.m. on that same day. Those in the 24-hour group were tested at 10:40 a.m. on the following day.

The team that were to case study patients gave the patients the available questionnaires. The medical practitioners were interviewed by different team members. Some of the team

members went through the clinical records. The other team members observed the handling of patients as they were being treated asking the medical practitioners questions. Members took notes on each detail learnt and observed. While conducting interviews the members took notes on what they did learn. In addition, they were told that they would have an unlimited amount of time to complete the task, and they were not to tell any other participant whether they had completed the puzzle or simply given up. This procedure was followed to prevent the group influence of some participants seeing others give up. Any participant still working on the puzzle after 40 minutes was stopped to keep the time of the study manageable. Immediately after each participant stopped working on the puzzle, he/she gave demographic information and completed a few manipulation-check items.

Results

The team that was dealing with patients found out that most of the patients who had respiratory related diseases were either smokers or former smokers. They also found out that most people who had heart related problems rarely do exercises. Each team members compared their answers and came up with one clean answer sheet.

The information gathered was recorded and the team members came up with tables to support their evidences. The tables are as shown below:

Table showing the relationship between smoking and medical cost

			Medical costs (\$)		
	Mortality (HR)	(95% CI)	Never smokers (A)	Smokers (B)	Ratio (B/A)
Adjusted for confounding factors.					
Per capita per month costs adjusted for Medical Outcome Study scores.					
Males					

All ages	1.47	(1.18–1.83)	153	170	1.11
40–49	1.16	(0.44–3.05)	95	81	0.85
50–59	1.69	(0.86–3.31)	119	129	1.08
60–69	1.98	(1.31–3.00)	158	200	1.27
70–79	1.21	(0.90, 1.62)	263	267	1.02

Table showing the relationship between lack of exercises and medical costs in TGH

	People who rarely exercise	People who exercise
People diagnosed of coronary diseases	133	12
People diagnosed of other immune illnesses	156	2

Discussion

There are several behavioral risk factors in human beings. These factors include: smoking, heavy-drinking and obesity. They lead to chronic health conditions such as blood pressure, lung cancers and other chronic illnesses.

Smoking, lack of exercises and not watching over weight leads to chronic illnesses, study shows that they drive into healthcare spending hence medical costs. If they exceed they lead to disability cases and death. Study shows that there is a relationship between cigarette smoking

and the increased medical cost of patients. This is because most cigarette smokers either way or the other get eventually sick. Smoking cigarettes on a daily basis leads to respiratory related diseases hence increase more medical cost on patients because they definitely increase in number.

Study also shows not getting enough physical activity i.e. lack of enough exercises leads to heart related problems. Hence it is true that lack of enough exercises increases medical cost on patients. Lack of enough exercises leads to diseases such as heart disease, diabetes and cancer. Not getting enough physical activity can cause heart disease even for people that have no any other risk factors. It also can increase the likelihood of developing other heart condition risk factors, including obesity, high vital sign, high blood cholesterol, and sort 2 diabetes. This in return increases the medical cost on patients.

Research shows that 1 in 4 Canadian adults and 1 out of 5 high school students get the required amount of physical exercises which is alarming. Lack of recommended exercises also lead to type 2 diabetes. Physical activity helps control blood sugar (glucose), weight, and blood pressure and helps raise “good” cholesterol and lower “bad” cholesterol. Adequate physical activity also can help reduce the danger of heart condition and nerve damage, which are often problems for people with diabetes.

Not only that lack of recommended physical activity leads to cardiac related problems and diabetes but also leads to different types of cancers including cancer of the stomach, lung, kidney, esophagus, uterus, colon, breast and bladder. This obviously leads to high medical cost on patients as they are chronic and expensive to treat worldwide.

Study also shows that there is a connection between smoking, lack of exercises, weight and medical cost on patients. All these three are connected as they all lead to diseases and if still not taken to heed they lead to chronic diseases. These hence increase the number of patients and also the cost per patient.

Conclusion

Every human being should strive to achieve a healthy life. Smokers should stop smoking or reduce the rate at which they smoke until they completely stop. People should also be fond of exercising to reduce obesity and heart related diseases. People should actually watch on their weight as it is very important. Ignorant people may end up dying at young ages due to diseases.

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