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Original Research Article

Knowledge and attitude of university students among risk factors of cardiovascular diseases

Areej Khalid[1*], Muhammad Hussain[2], Muhammad Afzal[3], Prof. Dr Syed Amir Gilani[4]

[1]Lahore School of Nursing, The University of Lahore, Lahore, Pakistan

[2]Assistant professor, Lahore School of Nursing, The University of Lahore, Lahore, Pakistan

[3]Lahore School of Nursing, The University of Lahore, Lahore, Pakistan

[4]Dean, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Pakistan

***Corresponding Author's Email: areejkhalid939@gmail.com**

Abstract

Cardiovascular disorders are illnesses of the heart and blood vessels and are the main cause of death worldwide. (WHO, 2014). Almost seventeen billion people expire due to cardiac diseases. Almost 30% of people globally died due to CVD. The objectives of this study is to assess the knowledge of the medical students on the hazard factors of cardiovascular disease and to assess the attitude of students on the risk factors of cardiovascular diseases. This is a cross-sectional descriptive research. The data were collected from the students of the University of Lahore. The sample size was 150. Survey was used to collect the data. Ethical consent was achieved from the department and statistics was analyzed by SPSS version 21. The results of the research was good with (86%) great response of accurate answer of 'adequate exercise can prevent from CVD'. The attitudes of respondents were negative (45%), they do not maintain their weight according to BMI. The knowledge of the respondent regarding threat factors of cardiovascular diseases was improved but the attitude of the students was questionable. They do not follow the precautionary measures to reduce the hazard factors of cardiovascular diseases. They have bad eating habits and do not perform regular exercise. Most of the participants are involved in bad habits like smoking and can't manage their stress. University Students should maintain their lifestyle to reduce the hazard factors of cardiovascular diseases.

Keywords: KAP, University Students, Cardiovascular disease

INTRODUCTION

Cardiovascular disorders are syndromes of the heart and blood vessels and are the main reason of death worldwide. Almost seventeen million people have died as a result of cardiovascular disease, nearly 30 percent of people worldwide have died as a result of cardiac diseases. It is predictable that about 23.6 billion people will expire from cardiac disease in 2030. Most of the disorders are included in the classification of cardiovascular diseases such as cardiac attacks (the most common form of CVD), cerebrovascular diseases, high plasma compression, peripheral artery disease, inflexible heart disease, genetic heart disease and heart failure are typical forms of cardiovascular disease (Yusuf et al. 2015).

Cardiovascular disorders are more prevalent in small and middle-income kingdoms. Most studies indicate that if the threat factors for cardiac disease are lower, the prevalence of CVD has not been controlled (Mamani-Ortiz, 2019). Cardiovascular disease risk factors are categorised into two categories of modified risk factors and non-modified risk factors. Significant risk factors are those that cannot be transformed, such as increasing age, male gender and inheritance, which cannot be changed. Any of the main risk factors can be changed,

such as cigarette burning, higher plasma cholesterol, high blood compression and physical laziness.

Cardiovascular disorders (CVDs), including heart attack and stroke, account for one-third of all deaths globally, according to a recent systematic report that has been observed in every nation over the last twenty-five years. Concentrating on the well-studied depression phenotype, recent data suggest that there are shared genetic causes that may give rise to both sadness and CVD, and that these genetic threats tend to be gender-specific. Weakening and sometimes fatal symptoms of cardiovascular syndrome (CVD) are frequently found in central-aged or elderly males and females. Though, atherosclerosis – the major inflammatory mechanism contributing to coronary artery disease, cerebral artery disease and peripheral line disease – starts early in life and develops progressively through puberty and primary adulthood (15–17). It typically has no symptoms for a lengthy period of time (Roth et al., 2017).

Women are not only affected with cardiovascular diseases, in fact men are also affected equally. Heart diseases are the same in men and women but women have higher risk of CVD. Some of the risk factors are higher in women such as high blood pressure, high cholesterol level greater than 200mg/dl, obesity and unhealthy lifestyle is very common in women than men. Women are also affected with diabetes and diabetes is also the risk factor of cardiovascular diseases (Mosca et al., 2017).

According to different studies, heredity and gender are the modified able risk factors of CVD. Physical inactivity, obesity and unhealthy diet and addiction of alcohol are the modifiable risk factors. Awareness of the hazard factors of cardiovascular diseases are very necessary to understand for young adults. According to study, if the ratio of young adults in the country increases, the ratio of the risk factors of CVD will also also increase (Gaziano et al., 2017).

According to research conducted in Peshawar, Pakistan it stated that less awareness about the risk factors of CVD in adults increases the risk of young adults. Students are highly involved in unhealthy lifestyle, high sugar intake, obesity, family history and stress and theses are very common risk of CVD and these risk factors are also very common in young adults. Increasing the knowledge of the risk factors in young adults can decrease the risk of cardiovascular diseases. Young adults also have a high ratio of shisha smoking and having much use of carbonated drinks and eating junk foods which happens to be bad habits of adults. (Zuhaid et al., 2016).

Stress is also a risk factor for cardiovascular diseases. Stress can cause anxiety and depression that leads to severe heart attacks. According to studies, people can be prevented from the risk factors of cardiovascular diseases by eating fruits and vegetables which helps to lower the cholesterol level and reduces the stress (Piazza et al., 2015).

Cardiovascular diseases are the most common worldwide diseases because most of the peoples are not aware of the risk factors of cardiovascular diseases and have unhealthy or negative attitude and practices towards risk factors of the heart disease. In fact most of the medical students are also unaware of the risk factors of cardiovascular diseases and have poor attitudes and practices or unhealthy lifestyle.

Purpose

The study was designed to assess the awareness of the medical students about the hazard factors of the cardiovascular diseases. It was also helpful to assess the attitude of the young adults about risk factors of CVD and to investigate the prevalence of the disease and to decrease the modifiable risk factors of cardiac disease in campus.

Significance

The importance of the research is to increase the knowledge of the students about the risk factors of cardiovascular diseases. This study was also helpful to reduce the prevalence of the diseases in young adults. The result of this study will be helpful for further research work. It might increase the knowledge of medical students regarding controllable risk factors of cardio-vascular diseases.

Literature Review

Heart diseases are some of the main reasons of death every year worldwide. Most people die yearly due to the serious attacks of cardiovascular diseases. Furthermore, in 2015, almost 31% of deaths are due to CVD or millions of peoples in most developing countries expired because of cardiac diseases (WHO 2017). The population of Kazakh states that the awareness of people regarding cardiovascular diseases is low and the ratio of the diseases is high (Kulkayeva et al., 2016). Most of the countries at International level have many risk factors of CVD and these risk factors may increase the morbidity and mortality of heart diseases. However in Malaysia, many of the losses occur because of coronary heart diseases and heart failures. The percentage of women is higher than men (Ibrahim et al., 2016). All the affected persons are associated with unhealthy lifestyle habits, physical inactivity, junk foods and anxiety. These reasons are challenges for people to maintain their lifestyle (Kulkayeva et al., 2015).

In Kuwait and other Middle East regions, the prevalence of cardiovascular diseases is high due to the

quick change in lifestyle of peoples. Smoking, obesity and diabetes are very common in these countries and that is why it increases the risk of CVD in the Middle East (Awad and Al-Nafisi, 2014).

Asian countries also have increased ratio of cardiovascular diseases. Indian populations are also affected with cardiovascular diseases because of their sedentary lifestyle and tobacco smoking (Bhagyalaxmi et al., 2016). In Rural areas of the community, people have a negative attitude towards cardiovascular diseases because they are unaware of the risk factors of cardiovascular diseases. According to comparison with North East countries in 2012, people of these countries have positive attitude towards CVD and their awareness regarding risk factors of cardiovascular syndromes is high (Muhamad and Yusoff, 2018). According to the National Academy Press Council, adults have high risk factors of heart diseases because adult's addiction to smoking and tobacco use is very high. About 25-30% of adults are affected with cardiovascular diseases because of tobacco and smoking (Council, 2017).

According to indications, Malaysia is also at risk of cardiovascular diseases and the people of Malaysia are also expiring due to the cardiac diseases. The ratio of the disease can be decreased by aggregating the level of knowledge about the modifiable threat factors of cardiac diseases. Research in Malaysia indicates that all the family members are at high risk of CVD. Most of the fathers of families are highly affected also mother siblings and grandparents are at risk of CVD because of the genetic history of CVD such as heart failure, hypertension, and stroke as well. Males are three times higher than the females at the risk of cardiovascular diseases (Chin et al., 2018).

METHODS

Setting

Study was conducted at the University of Lahore. The Lahore School of Nursing.

Study Design

This is a cross-section descriptive analysis designed to assess the knowledge and attitude of university students regarding risk factors of cardiovascular diseases.

Sample Size

The population for this study was selected from the students of the University of Lahore. The target population was 150 participants.

Study population

Undergraduate University Students were selected for the study population.

Research tool

An approved questionnaire was used to gather data and to answer the research questions.

Ethical Consideration

In this research, ethical consideration was preferred. For this purpose, the permission was obtained from the ethical committee of the health care institution, before data collection. Permission was to acquire a written approval from the head of the department in the form of consent. Furthermore, informed written and verbal consent was taken before data collection from participants. Students were given the right of autonomy and the nature and the purpose of the study was informed prior to the implementation of any action. The risk related to this study was discussed before participants were allowed to leave the commitment in the research at any time. Participants felt confident that all the details and documents gathered remained secret.

RESULTS

This section represents the outcomes of the study.

Socio-demographics

In demographics, most of the participants are females 64% (96) and males 36% (54) respectively with mean and standard deviation 1.64±0.48. The mean age of the participants was 2.54 years. 90% (136) participants were single and 9% (14) participants were married. Most of the participants are 4th year undergraduate students and some other respectively (Table1).

Knowledge related to cardiovascular risk factors

The items with higher results of correct answers were 'Eating fruits and vegetables is able to prevent cardiovascular diseases'' (92%, 138) with mean and standard deviation 1.10±0.36. It is followed by 'Cardiovascular disease is the leading cause of death in Pakistan' (86%, 129) with mean and standard deviation 1.16±0.41. (Table 2)

Table 1. Demographics related to age, Gender, Marital status and Education.

Age	n (%)
18-20	21 (14%)
20-22	39 (26%)
23-25	78 (52%)
26 or above	12 (8%)
Gender	
Male	54 (36%)
Female	96 (64%)
Marital status	
Single	136 (90%)
Married	14 (9%)
Educational year	
1st year	33 (22%)
2nd year	18 (12%)
3rd year	48 (32%)
4th year	51 (34%)

Table 2. Knowledge regarding cardiovascular diseases.

S.N	Statement	True n (%)	False n (%)	Don't know n (%)
1	Cardiovascular disease (CVD) is the leading cause of death in Pakistan.	129(86%)	6(4.0%)	15(10%)
2	Light walking is a preventive factor for CVD	123(82%)	21(14%)	6(4%)
3	Adequate exercise can prevent CVD	129(86%)	18(12%)	3(2.0%)
4	Eating fruits or vegetable is able to prevent from CVD	138(92%)	9(6%)	3(25%)
5	Most CVD cases are hereditary	111(74%)	27(18%)	12(8%)
6	Controlling high fat food consumption is essential	12(8%)	24(16%)	15(10%)
7	Cardiovascular disease is a disease that is related to heart	15(10%)	12(18%)	6(9%)
8	Cardiovascular disease is a disease that is related to blood vessels.	117(78%)	18(12%)	15(10%)
9	Tobacco cessation programs are available in your hometown.	45(30%)	60(40%)	45(30%)
10	Irregular eating patterns has no harm to your health	39(26%)	105(70%)	6(4%)
11	Cardiovascular disease is a disease of women only	12(8%)	129(86%)	9(6%)
12	Doing housework as an exercise is enough for a day	45(30%)	102(68%)	12(8%)
13	If you have a slim body, you don't need to exercise	18(12%)	120(80%)	12(8%)
14	Cardiovascular disease can occur to young people	60(40%)	72(48%)	18(12%)
15	High density lipoprotein (HDL) is a good type of cholesterol	78(52%)	30(20%)	42(28%)
16	BMI of more than 30 is considered as obese	102(68%)	15(10%)	33(22%)
17	Prayer can help to reduce stress	132(88%)	9(6%)	9(6%)

Table 3. Attitude regarding cardiovascular diseases

S.N	Statement	SD	D	U	A	SA
1	I should be doing exercise to maintain a healthy lifestyle	72(48%)	9(6%)	15(10%)	30(20%)	24(16%)
2	If I need to go to places somewhere near, I choose to walk rather than Taking any other mean of transportation. E.g. Going to class or café	45(30%)	30(20%)	30(20%)	27(18%)	18(12%)
3	I know smoking is bad for health	57(38%)	12(8%)	6(4%)	33(22%)	42(28%)
4	I should maintain my weight according to my body mass index (BMI).	45(30%)	9(6%)	21(14%)	45(30%)	30(20%)
5	I should take less oily food for healthy lifestyle	33(22%)	15(10%)	18(12%)	60(40%)	24(16%)
6	I prefer to play with my laptop instead of doing exercise	42(28%)	42(28%)	30(20%)	27(18%)	9(6%)
7	I read the nutrition information of each product that I intended to buy.	42(28%)	30(20%)	36(24%)	42(28%)	40(28%0
8	I choose to eat or buy fast food when going out with friends	15(10%)	36(24%)	27(18%)	48(32%)	24(16%)
9	I can manage my stress	33(22%)	45(24%)	24(18%)	39(32%)	9(16%)
10	I should avoid drinking carbonated drinks	36(24%)	13(10%)	33(22%)	42(28%)	24(16%)
11	Sometimes I eat supper late at night before sleep	24(16%)	18(12%)	30(20%)	63(42%)	15(10%)
12	I believe walking a lot can give benefits to my health	27(18%)	12(8%)	18(12%)	66(44%)	27(18%)
13	I should take fruit or vegetable in my diet for maintaining my health	30(20%)	12(8%)	9(6%)	57(38%)	42(28%)
14	I should control my stress to avoid from getting any disease	42(28%)	12(8%)	12(8%)	51(34%)	33(22%)

Attitude regarding risk factors of cardiovascular diseases

The answers with a positive attitude are not correct. The attitude of the participants regarding risk factors of cardiovascular diseases are negative as shown in the (Table 3).

DISCUSSION

Research has revealed that cardiovascular disease is the foremost reason for loss in Malaysia. The disease risk factors can be reduced by growing the awareness measure of the peoples about modifiable hazard factors. Disease can be increased by low level of knowledge and poor attitude regarding factors. In this study knowledge of the people was somehow better but the attitude regarding risk factors was poor. The gender composition of severe coronary disorder patients indicates that male ratios are three times higher than women.

The incidence of high blood pressure in Malaysia was very high, as it was one of the top hazard elements for death and the outcome of this research confirmed this statistic, with nearly half of the defendants' families suffering from high blood pressure. These results were similar to studies undertaken by females on the North East Coast of Malaysia where high blood pressure was the major risk component identified in the defendants' families. As this research campus contains health-related programs, majority of respondents understood and heard approximately CVD from their lecture rooms, while single one curriculum did not nonstop receive official CVD teaching which was the calculating and ideological technique program of the faculty of science. Knowledge could however be conveniently accessed from albums in the public library and from the social media. Diabetes has become some of the most significant hazard factors that affect CVD, but the outcome indicates that fairly a quantity of defendants were unaware of this fact. This has been very similar to the research of young African American adults. This may be attributed to a lack of awareness. In addition, sedentary lifestyles are also one of the contributing factors for CVD. 68 percent responded accurately when asked about CVD-related scenarios. The results were consistent with the findings of another report. Here was an unfortunate answer for 'Wrong' to the question of genetics as one of the hazard factors for CVD. Related research in the United States of America has also been published (USA).

There was a strong likelihood that early CVD would be inherited, but much of the prevalence of CVD was attributed to behavioural modifications and routines. Campus students are very expected to lead an inactive

routine and they have invested a lot of time on projects and research. 12 percent of the participants did not walk, but took further ways of travel, even in very close areas.

This can be shown by the fact that most Pakistanis have at least a car or a bike. The ranking for active exercise was poor (45%) and this result carries the deficiency of workout of the respondents in their everyday lives. In comparison, 10-72 percent of respondents seldom or not ever conduct somatic activity. This indicates that our respondents were not involved in engaging in the exercise. These conditions are likely to result in lower calorie costs, inducing fatness, and later, CVD. The consumption of fruit was comparatively modest (20 percent), but the intake of vegetables was more regular (32 percent) such that a balanced dietary intake was achieved. Unluckily, more members have taken deep-fried food as their chief course. Extra oil and fat substance taking can enhance other risk factors for CVD. The 54% of respondents were in the routine of snacking among foods. This routine has its own pros and cons, since it can relieve starvation and avoid over-consumption during the main food, but it can increase the desire for snacks and candy that can contribute to fatness and other syndromes. The appetizers must be compatible with the recommended intake idea to minimize the consumption lipids. The propensity to consume fast food has grown as urbanization has risen and in the long term, it will influence people's eating habits, contributing to elevated lipids levels and obesity.

The analysis also indicate that some of the defendant's belief that they could not regulate their tension. Stress organisation plays such a significant role in regulating the hazard factor of CVD that is probable to be the cause of heart disease. The research stated that 86 percent of topics believed that lowering anxiety was one means of preventing or decreasing the occurrence of heart disorder. Our respondents also hold comparable views on tension. The comeback to the tobacco control program was also very short. This may be attributed to the fact that the mass media did not pay any attention to bringing the program to the press.

In the other way, there was a substantial gap between the overall total information marks of the various abilities. This demonstrates the distinct degree of expertise gained by each capability. Other research reported that there were gaps between gender and schooling in the awareness of heart disease. However this research showed that there was little difference in information between the sexes. It indicates that women have a stronger mind-set than men. This result is linked to another analysis comparison, the practice outcome has also shown that the gender gap is important as compared to a research performed on new grownup people in the USA. This may be due to the difference between the number of males and females in this sample.

Limitations

- This study was conducted in a short period of time.
- Sample size was small.
- Large sample size will improve the accuracy of the results.

CONCLUSION

The respondent's understanding of changed risk factors for cardiovascular disease was much higher, but the students' outlook was pessimistic. They do not follow the precautionary measures to reduce the threat reasons of cardiac diseases. They have bad eating habits and do not perform regular exercise. Most of the participants are involved in bad habits like smoking and can't manage their stress. University Students should maintain their lifestyle to reduce the risk causes of cardiac diseases.

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