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## ОСВЕДОМЛЕННОСТЬ ОБЩЕСТВА О СЕРДЕЧНО-СОСУДИСТЫХ ЗАБОЛЕВАНИЯХ У ЖЕНЩИН

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### АННОТАЦИЯ

Известно, что сердечно-сосудистые заболевания являются основной причиной смерти мужчин и женщин. Даже если у женщин сердечно-сосудистые заболевания развиваются в более старшем возрасте, чем у мужчин, это увеличивает уровень смертности в 1,5 раза выше, чем все совокупные показатели смертности от рака. В последних исследованиях считается, что патофизиология женщины отличается от патофизиологии мужчины. Понимание различий, обнаруживаемых во всех областях сердечно-сосудистых заболеваний, менопауза и т. д., могут увеличить риск сердечно-сосудистых заболеваний у женщин.

**Ключевые слова:** Сердечно-сосудистые заболевания, половые различия, исследования, патофизиология, сердечно-сосудистое здоровье женщин, риск, образ жизни, атипичные симптомы.

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## PUBLIC AWARENESS ABOUT CARDIOVASCULAR DISEASE IN WOMEN

### ANNOTATION

Cardiovascular disease is known to be the leading cause of death in men and women. Even if women develop cardiovascular disease when they are older than men, it has increased the mortality rate to 1.5 times higher than all the combined cancer mortality rates. In recent studies, it is regarded that the pathophysiology of a woman differs from that of a man. The understanding of the difference that is found in all the domains of cardiovascular disease is crucial to improve and maintain a healthy population in the community.

**Keywords:** Cardiovascular disease, sex differences, research, pathophysiology, women cardiovascular health, risk, lifestyle, atypical symptoms

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## AYOLLARDA YURAK-QON TOMIR KASALLIKLARI HAQIDA XALQNI OGOHLANTIRISH

### ANNOTATSIYA

Ma'lumki, yurak-qon tomir kasalliklari erkaklar va ayollar o'limining asosiy sababidir. Ayollarda yurak-qon tomir kasalliklari erkaklarnikidan kattaroq bo'lsa ham, bu o'lim ko'rsatkichini saraton kasalligidan o'limning barcha umumiy ko'rsatkichlaridan 1,5 baravar yuqoriga ko'tardi. So'nggi tadqiqotlarda ayolning patofiziologiyasi erkaknikidan farq qiladi, deb hisoblanmoqda. Yurak-qon tomir kasalliklarining barcha sohalarida mavjud bo'lgan farqni tushunish jamiyatda sog'lom aholini yaxshilash va saqlash uchun juda muhimdir.

**Kalit so'zlar:** Yurak-qon tomir kasalliklari, jinsiy farqlar, tadqiqotlar, patofiziologiya, ayollarning yurak-qon tomir salomatligi, xavf, turmush tarzi, atipik aloqatlar.

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## INTRODUCTION

In the previous studies, the ideas of cardiovascular health used to come from the clinical research done on men rather than on women. Women and men share many resemblances in the pathophysiology and manifestations of heart disease. However, as research advances with the continued inclusion of more women, knowledge about gender differences between the female and male heart, both on a physiological and pathophysiological basis, grows.[1,8] The pathophysiology of cardiovascular disease has female specific aspects such as fragile coronary artery and microvascular ischaemia. [3]

And yet, until recently, women with heart disease have been diagnosed and treated like men—with the same tests, same procedures, and same medications. A heart attack occurs when cholesterol plaque builds up inside the walls of arteries and causes damage in the major blood vessels. Men typically develop this plaque build-up in the largest arteries that supply blood to the heart. Women are more likely to develop this build-up in the heart's smallest blood vessels, known as the microvasculature.[6] Research is recognizing gender differences in heart disease that may help fine-tune prevention, diagnosis, and treatment in women. Here are some examples. [2]

**Blood lipids:** Before menopause, a woman's own oestrogen helps protect her from heart disease by increasing HDL (good) cholesterol and decreasing LDL (bad) cholesterol. After menopause, women have higher concentrations of total cholesterol than men do. But this alone doesn't explain the sudden rise in heart disease risk after menopause. Elevated triglycerides are an important contributor to cardiovascular risk in women.

**Diabetes:** Diabetes increases the risk of heart disease in women more than it does in men, perhaps because women with diabetes more often have added risk factors, such as obesity, hypertension, and high cholesterol. Large-scale observational studies suggest that type 2 diabetes confers 25-50% greater excess risk of incident CVD in women compared with men. [5]

**Metabolic syndrome:** In Women, metabolic syndrome increases the risk factor for having cardiac arrest at an unusually early stage. Metabolic Syndrome is generally a group of health risks such as – obesity, low HDL cholesterol, hypertension, glucose intolerance, high triglycerides increase the risk of stroke, diabetes, and cardiovascular disease. During a bypass surgery, it is observed that the women with metabolic syndrome are less likely to survive than men having the same.

**Smoking:** A pre-menopausal woman who smokes is at a significantly increased risk for a heart attack. Moreover, women may not find nicotine replacement as effective, and — because the menstrual cycle affects tobacco withdrawal symptoms — they may get inconsistent results with anti-smoking medications. Thus, it is more likely that a woman who smoke develops cardiovascular disease sooner. [2]

### Symptoms:

A heart attack does not always look or feel the same in women compared to men. Men typically present to health-care providers with chest pressure. Women also experience chest pressure (it's still the leading complaint), but they are more likely than men to also report: [6]

Nausea  
Sweating  
Vomiting

Pain in the neck, jaw, throat, abdomen or back.

The symptoms of acute myocardial infarction and coronary syndromes differ in both sexes. From the clinical extract, we can extract the idea that women don't tend to develop the excruciating chest pain like men. Some of them experience fatigue or shortness of breath. But the cardiovascular symptoms in women are most likely to be atypical such as nausea, disturbed sleep, chest pain like aching, abdominal, jaw, neck, and shoulder pain.

### Diagnosis:

Women are more likely than men to suffer from diseases that mimic a heart attack. For instance, women are more likely to experience:

A coronary spasm: a blood vessel clamps down and mimics a heart attack.

A coronary dissection: the wall of a blood vessel tears.

Takotsubo cardiomyopathy: an inflammatory response that causes the heart to enlarge after an emotional stressor (also called broken heart syndrome).

It's still under-recognized among clinicians that heart disease isn't identical across the sexes. It's usually an 'aha' moment when a provider realizes how many alternate diagnoses they should consider when diagnosing a female patient. [6] Women are less likely to experience chest pain and may have non-specific symptoms. Normal or non-obstructive coronary disease, as detected by angiography, is more common in women.[4] With regard to diagnostic tests in women, exercise ECG can be difficult to interpret and a normal coronary angiogram does not exclude coronary heart disease. Myocardial perfusion scintigraphy may be considered for high-risk women who are clinically suspected of having coronary heart disease and have a normal or inconclusive exercise ECG and angiogram. Women are less likely to be treated according to guidelines than men, and their prognosis after a myocardial infarction or a coronary intervention is worse.[5]

For instance, if a heart attack is suspected, both men and women receive a cardiac troponin (cTn) test, which measures circulating levels of troponin. This protein is released in the blood when a heart attack has damaged heart muscle. Higher levels of troponin indicate higher levels of heart damage. But the clinical threshold that signals a heart attack may differ across the sexes. Some women may be having a heart attack but are falling below the level of detection. Another diagnostic test, cardiac catheterization, has long been the gold standard for diagnosing a heart attack, but this test looks for blockages in large arteries. Since women are more likely than men to experience more plaque build-up in the smallest arteries, this test may not be the most appropriate to diagnose heart disease in women.

The other kind of Diagnosis that Doctor might suggest if they suspect the cardiovascular disease are listed below:

Electrocardiogram (EKG)  
Cardiac MRI  
Computed Tomography Angiography  
Intracoronary Imaging

## MATERIALS AND METHODS

For this article, the survey was conducted through Google Forms in a Questionnaire pattern. The public was invited to this survey through various popular social media platforms such as Instagram, Telegram, and WhatsApp. Since, many people used online platforms in this modern era, approaching them, in the same way, seems more appropriate

than other methods.

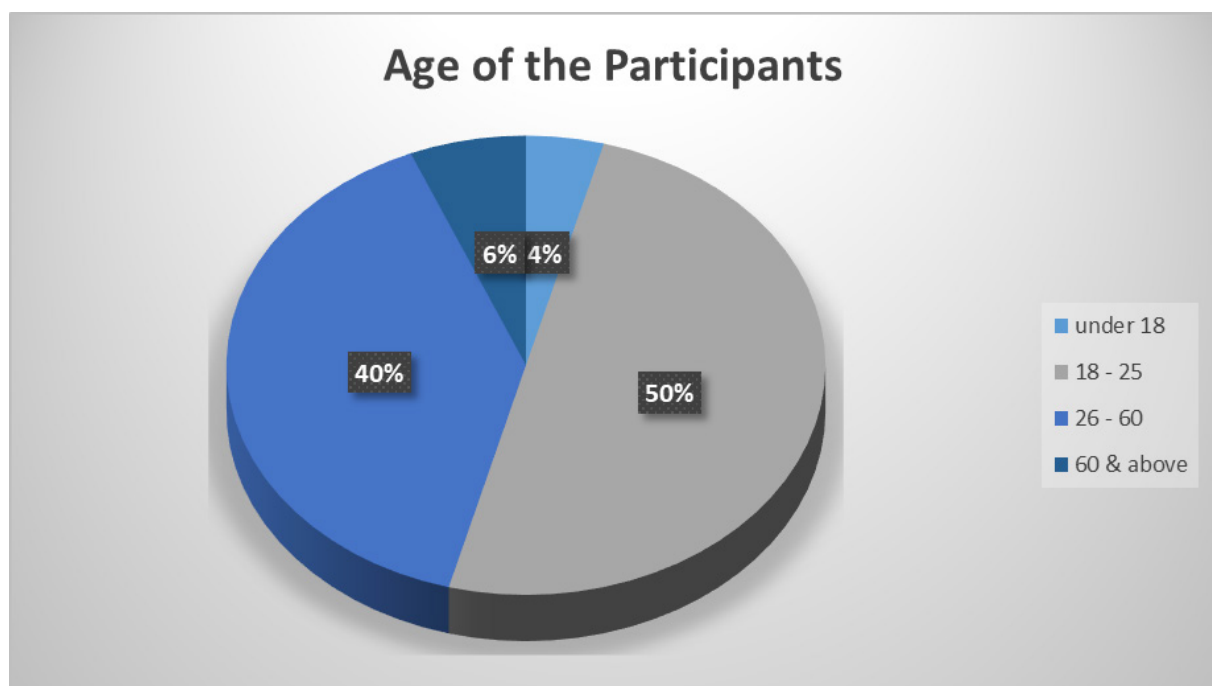
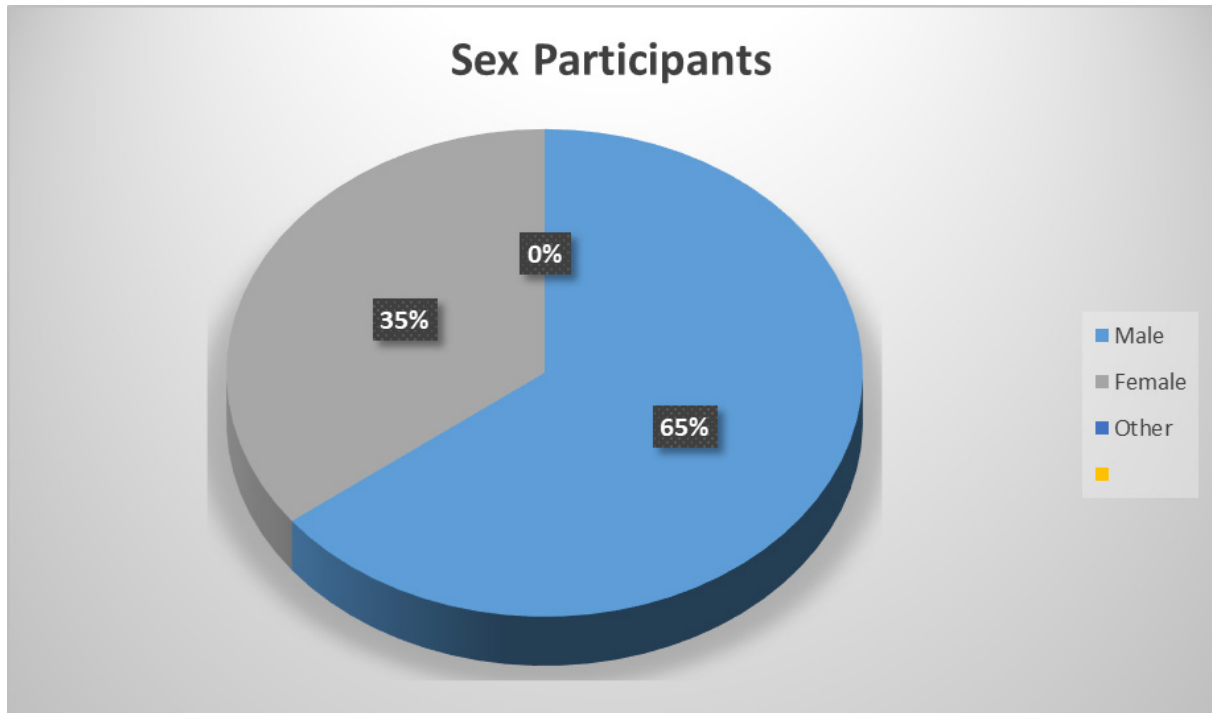
The public who did this respective survey was the participant of two countries: Tashkent, Uzbekistan, and India. These two countries were selected as they are still in a developing phase due to their large population. The target for this survey was both men and women but it was mostly directed toward women. Thus, this questionnaire was distributed to check their awareness of Cardiovascular Health. Among the 53 response, 3 set of response was incomplete. The survey was done due to the increased mortality rate of cardiovascular disease to cancer. **The search for literary sources** was carried out using the bibliographic databases Web of Science, Scopus, DBLP, and PubMed. When selecting sources, they

paid attention to experimental articles, literary reviews, and the number of their citations over the past year.

### RESULTS

The seminars were conducted using information and communication technologies, booklets, brochures, presentations, etc. The public was asked to answer the question through specially designed questionnaire on Cardiovascular awareness. In the result of the survey of 53 respondents, Male (64.6%), Female (35.4%) and Others (0%) were participated.

The age range of participants in the following survey was - under 18 (4.2%), 18 -25 age were (50%), age range of 26 to 60 years were (39.6%) and the participants above 60 & above years were (6.3%).



**AWARENESS OF PUBLIC ON CARDIOVASCULAR DISEASE**  
(Results were collected from the survey done by the Public of Uzbekistan and India)

No.	Question	Yes, I do know	I know a little bit of it	Not at all
1.	Do you have any awareness about the cardiovascular health?	31.3%	50%	18.8%

From the above table, we can conclude that the participants of my survey have a little bit of awareness of Cardiovascular health (50%), only a few people are not aware of the above topic (18.8%) and the rest have the idea on the Cardiovascular Health (31.3%).

No.	Question	I don't have anything mentioned	I don't know	I have diabetes	I have metabolic syndrome
1.	Do u have any other disease factor such as diabetes, metabolic syndrome?	81.3%	14.6%	4.2%	0%

The respondent of my survey about (81.3 %) doesn't have any disorder of either diabetes or metabolic syndrome. Around (4.2%) respondent have Diabetes, no respondent is having metabolic syndrome and (14.6%) don't whether they consist either of them.

No.	Questions	Yes	No	Maybe
1.	For the women who had their menopause, do you experience any of symptoms below: 1. Unusual fatigue 2. Shortness of Breath 3. Weakness 4. Sleep Disturbance	17.1%	54.3%	28.6%

This was the question in the form that was directed toward the women who had menopause. The symptoms that were mentioned such as unusual fatigue, shortness of breath, weakness, and sleep disturbance were faced by (17.1%), and about (28.6%) are unsure of these following symptoms. And (54.3%) of females don't face any of these.

No.	Question	Cardiovascular Disease	All Combined form of Cancer
1.	What do you think is the major cause of death worldwide?	54.3%	45.7%

This question in form was to survey what the public think is the major leading cause of death worldwide. While more than half of the survey respondents (54.3%) think it is Cardiovascular Disease the other public (45.7%) thinks it is a combined form of cancer.

No.	Question	Yes, I do exercise	Yes, I focus more on the balance diet	Yes, I take some of the preventive measure	Yes, but I don't take any preventive measure.	No
1.	Do you think that lifestyle impact the cardiovascular health? If yes, what preventive measures do you take?	21.3%	23.4%	25.5%	19.1%	10.6%

The respondent in my survey enquired about if they think that lifestyle impact Cardiovascular Health and whether they take some steps for the same. 89.4% of respondent thinks that lifestyle impact Cardiovascular Health, 21.3% of the public do exercise and 23.4% focus on a balanced diet. While 25.5% of the public take some other preventive measure the other 19.1% of the public don't take any measure even though they think that lifestyle does affect them. Around 10.6% of respondents think that lifestyle doesn't impact Cardiovascular Health at all.

#### DISCUSSION

The response rate is almost close to what was expected from this survey, but there were several points of debate. Although many people are aware of cardiovascular disease, the individuals in my survey might have hesitated on some given questions as they were challenging at some given points which might have led to the incomplete response. Due to the poor or delayed internet connection of the respondents, the given result might have some unidentical errors. The women in my survey who experienced the symptoms might have been uncertain or unfamiliar with the symptoms that was mentioned in the questionnaire. Moreover, as we take in all the reason mentioned above we can assume that the result might not have been precise toward the goal of this article.

#### CONCLUSION

The purpose of this survey was raising more awareness about the Cardiovascular Health mainly to the women re-

spondents of my survey. The result that we composed from the survey is that many people still thinks that the leading cause of death is Cancer. It is very vital to raise and educate the women's especially the one in menopause by a medical adviser about the atypical symptoms of cardiovascular disease and being advised to take more test as per needed. According to the Experts, most of the Cardiovascular death in women is due to lack of recognizing the symptoms by the devices and a medical practitioner. One more reason that can be added is the ignorant of the healthy lifestyle from the young age and more at the vulnerable age. Eliminating gender disparities in selected cardiovascular disease preventive quality of care measures has the potential to reduce major cardiac events including death. Health plans should be encouraged to collect and monitor quality of care data for cardiovascular disease for men and women separately as a focus for quality improvement.[7] Regarding solving this problem, a preventive approach can be effective.

#### **ACKNOWLEDGEMENT**

Thus, the improvement in the Cardiovascular Health can be done by the following points taken into consideration:

Improving lifestyle

Improving the diagnostic care of the women

Quitting smoke

Having a balanced diet

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