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Effect of Lifestyle on the Rate of Cardiovascular Diseases in Women

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ABSTRACT

Aims Many women are uninformed of the factors that put them at risk for cardiovascular diseases or the preventative measures that they can take to lower that risk, which makes the incidence of CVDs among women a serious public health concern. This study aimed to determine the correlation of lifestyle factors and demographic characteristics of women with the incidence rate of cardiovascular diseases.

Instrument & Methods This descriptive correlational study was conducted on women in AL Diwaniyah City, Iraq, from January to March 2023. The purposive sampling was used to select 99 women suffering from cardiovascular disease attending the Diwaniyah Teaching Hospital, Cardiac Catheterization Center, and Primary Health Centers.

Findings Spearman's correlation showed a highly significant correlation between women's age and lifestyle factors, physical activity, and stress management (p=0.0001). There was a statistically significant correlation between women's education level, stress management, and follow-up (p>0.05). Occupation showed a statistically significant correlation with women's health history (p=0.046). The woman's monthly income was correlated with her family history (p=0.003).

Conclusion Low-income families are the most predominant socioeconomically status in AL Diwaniyah City. A noteworthy correlation exists between the age of women and their health history, physical activity, and stress management.

Keywords Incidence Rate; Cardiovascular Diseases; Women; Demographic Characteristics

CITATION LINKS

[1] Sex and circadian periodicity of cardiovascular diseases: are women sufficiently represented ...[2] Prevalence of cardiovascular risk factors in Latin America: A review of ... [3] What is the best anthropometric predictor for identifying higher risk for cardiovascular diseases in afro-descendant Brazilian ... [4] Cardiovascular health in Italy. Ten-year surveillance of cardiovascular diseases and risk factors: Osservatorio Epidemiologico ... [5] Assessment of women's knowledge about health promotion after cesarean delivery at maternity and pediatric ... [6] Assessment types of domestic violence among Iraqi ... [7] Effects of spontaneous abortion upon women's physical ... [8] Evaluation of post-operative nursing care of psychological support and discharge plan for women undergone ... [9] Impact of papanicolaou smear upon physical and psychosocial aspects of ... [10] Prevalence of cardiovascular diseases and associated factors among adults from ... [11] Sex differences in cardiovascular risk factors and ... [12] Cardiovascular medication adherence among patients with cardiac disease: A ... [13]Medication adherence and predictive factors in patients with cardiovascular disease: A cross-sectional ... [14] Knowledge of patients with coronary heart disease about secondary ... [15] Knowledge and protective health behaviors concerning risk factors for coronary heart disease among Baghdad ... [16] Behaviour change interventions to improve medication adherence in patients with cardiac disease: Protocol for a mixed methods study including a pilot ... [17] Assessment of patients' satisfaction toward nursing care at hemodialysis ... [18] Clients' perspective towards family-centered care health services of family-health services ... [19] Effectiveness of an educational program on patients' knowledge concerning care of vascular access of hemodialysis ... [20] Effectiveness of an instructional program on patients with ulcerative colitis adherence for medication and diet ... [21] Evaluation of pregnancy-related health behaviors' change during pregnancy for pregnant women attending ... [22] Cardiovascular diseases among adults in Afghanistan: Prevalence and associated ... [23] Cardiovascular diseases and women: Knowledge, attitudes, and behavior in ... [24] Cardiovascular risks associated with gender ...

Introduction

The incidence of coronary heart disease (CHD) has been found to exhibit significant variation based on factors such as geographic location, ethnicity, and gender. The results of a recent investigation demonstrated that modifications in one's way of life were correlated with the process of acculturation, which could conceivably elucidate the alterations in risks of cardiovascular disease. The study found that Japanese migrants living in America exhibited elevated levels of cholesterol and increased mortality rates due to coronary artery disease (CAD) compared to their counterparts who were native Japanese men residing in Japan [1].

Lifestyle factors are the etiology of cardiovascular disease (CVD), which is multifactorial, with genetic, environmental, and lifestyle factors playing significant roles. Comprehending these risk elements is imperative in the prevention and control of CVD. This section of the response will examine some of the foremost risk factors associated with CVD, such as age, gender, family history, hypertension, hypercholesterolemia, diabetes mellitus, tobacco use, and obesity. By identifying these risk factors, measures can be implemented to mitigate the likelihood of developing CVD and enhance one's cardiovascular well-being [5].

Many women are uninformed of the factors that put them at risk for CVDs or the preventative measures that they can take to lower that risk, which makes the incidence of CVDs among women a serious public health concern. It is essential for women to be aware of the warning signs and symptoms of CVDs and to seek medical assistance if they encounter any symptoms that are out of the ordinary [20]. Research has found that a woman's risk of CVDs may be increased by some different factors in addition to the classic risk factors such as high blood pressure and high cholesterol. A history of depression, an absence of social support, and having been subjected to physical or sexual abuse are some of the risk factors [1, 2]. According to the findings of a study that was carried out on the population of Latin America, there is a high frequency of cardiovascular risk factors. However, there are no significant variations between the sexes [2].

Women who have gone through menopause or are pregnant have an increased risk of cardiovascular diseases. Diseases of the cardiovascular system that are associated with pregnancy, such as pre-eclampsia and gestational diabetes, can have severe repercussions for both the mother and the baby. Changes that occur in a woman's hormones after menopause may potentially raise her risk of cardiovascular diseases [3]. Women can lower their risk of CVDs through different methods, some of which include adopting a nutritious diet, engaging in regular physical activity, and refraining from using tobacco. In addition to this, it is essential for women to learn how to effectively manage their stress and to get medical treatment for any underlying health concerns, like diabetes and high blood pressure [3].

This study aimed to determine the correlation of lifestyle factors and demographic characteristics of women with the incidence rate of cardiovascular diseases.

Instrument and Methods

This descriptive correlational study was conducted on women in AL Diwaniyah City, Iraq, from January to March 2023. The purposive sampling was used to select 99 women suffering from cardiovascular disease attending the Diwaniyah Teaching Hospital, Cardiac Catheterization Center, and Primary Health Centers. Eleven patients were excluded from the study sample as part of a pilot study.

Data were collected by 5-10min face-to-face interviews with each participant in the morning about factors associated with cardiovascular disease. The data were analyzed using the SPSS 26 software.

Findings

The mean age of the participants was 54.51±8.24 years, with the majority above 55 years. 58.6% of the participants were elementary school graduates, 5.1% were high school graduates, 80.8% were housewives, 76.7% were overweight, and 53.5% were in low-income families (301,000-600,000 Iraqi dinars monthly). 85.9% of women lived in nuclear families, most from rural areas (Table 1).

Table 1. Distribution of women with cardiovascular diseases according to their socio-demographic characteristics

Demographic Characteristics	Frequency	Percentage
Age (years)		
37-47	24	24.24
48-57	30	30.30
58-65	45	45.45
Education		
Illiterate	11	11.1
Elementary school	58	58.6
High school	5	5.1
Institute	18	18.2
College	7	7.1
Occupation		
Employment	14	14.1
Free business	0	0
Housewife	80	80.8
Retired	5	5.1
Income		
Less than 300,000 Iraqi dinars	17	17.2
301,000-600,000 Iraqi dinars	53	53.5
601,000-900,000 Iraqi dinars	22	22.2
901,000-1 million Iraqi dinars	4	4.0
1,201,000-1,500,000 Iraqi dinars	3	3.0
Body mass index (BMI)		
Under Weight (18.5)	0	
Healthy Weight (18.5-25)	5	5.0
Overweight (25-30)	76	76.7
Obesity (30 and higher)	18	18.1
Type of family		
Nuclear	85	85.9
Extended	10	10.1
Single Parent	4	4
Residents		
Urban	33	33.3
Rural	66	66.7

Spearman's correlation showed a highly significant correlation between women's age and lifestyle factors, physical activity, and stress management (p=0.0001). There was a statistically significant correlation between women's education level, stress management, and follow-up (p>0.05). Occupation showed a statistically significant correlation with women's health history (p=0.046). The woman's monthly income was correlated with her family history (p=0.003; Table 2).

Table 2. Correlation between women's demographics and lifestyle factors to the incidence of cardiovascular diseases

Parameter	Age	Education level	Occupation	Monthly income
Diet	0.046	0.084	-0.102	-0.084
Physical	-0.520**	0.061	-0.104	-0.084
Sleep	0.055	0.081	-0.024	0.041
Body	-0.035	-0.066	-0.097	-0.083
Stress	-0.374**	0.234*	-0.123	-0.07
Social	-0.171	0.13	-0.17	0.077
Smoking	-0.027	0.073	0.042	0.019
Health follow up	0.118	-0.217*	-0.026	0.129

*Significant at 0.05; **Significant at 0.01

Discussion

The result of the current study contrasts with that of a study conducted in Iraq, which discovered that the most predominant women's age in his study was 24 years old. Most of the women were rural residents, and this attribute agrees with our results. In the same study, the most predominant level of education was primary school graduates, which contrasts with our results [4, 12]. Also, in contrast with our study, another research that took place in Iraq found that most of the women were within the age (of 30-34) years. And in contrast to our findings, the residency was mostly in urban areas. The educational level contradicts our findings, as most hold primary school degrees. With regard to socioeconomic status, most of the women were from low-level income, and this attribute agrees with that of the present study [5, 13].

In comparison with another Iraqi study, the most predominant age group was (25-30) years; this contradicts our results concerning the age; in the same manner, the level of education was also found to be primary school; this attribute also disagrees with our findings as the most participants were elementary school graduates. In comparison, most women were from rural areas, which agrees with our results [6, 7, 14]. In the same context, a local study took place in the medical city in Baghdad found that the most predominant age group was (30-40) years; this contradicts our results concerning the age; in the same manner, the level of education was also found to be a primary school, this attribute also disagrees with our findings as the most participants were elementary school graduates [8, 15].

According to the findings of an Iranian study, the incidence of cardiovascular diseases is more common in women than in men. There was a correlation between the incidence of cardiovascular diseases and factors such as age, gender, marital status, lifestyle, anthropometric measurements, cholesterol, high-density lipoprotein, hypertension, and fasting plasma glucose. According to the findings of this study, the biggest risk factors for cardiovascular diseases are getting older age, being married, using a mobile phone, having poor PA, smoking, being obese, and having abnormal FPG and SBP. Participants who had normal cholesterol levels were found to have a lower risk of developing cardiovascular diseases [9, 16, 21]. In light of this, a recent study came to the conclusion that the effects of high blood pressure, being overweight or obese, and having high cholesterol on the outcomes of cardiovascular disease are comparable between women and men. However, a long history of smoking was found to be much more dangerous for women than it was for males [10, 17, 20].

With regard to female-specific RF, only relationships (and no absolute risk data) were able to be discovered between preeclampsia, gestational diabetes, the beginning of menopause, and the development of CVD. When determining the cardiovascular risk profile, it is important to remember that different major cardiovascular risk factors have different impacts, with some having a more negative outcome in women. More thought should be given to the importance of lifestyle interventions and awareness in women [11, 18, 19].

According to the researcher, age was a significant predictor of health history, physical activity, and stress management. This suggests that as women age, they may be more likely to experience health problems and may find it more difficult to maintain an active lifestyle or manage stress effectively. Additionally, women's surgical and medication history were also found to be significantly related to age, which may reflect the higher likelihood of experiencing health issues as one gets older.

Education level was significantly associated with family history, stress management, and follow-up. This may be because individuals with higher education levels are more likely to have access to information and resources related to health and wellness. Additionally, occupation was significantly related to health history, indicating that certain occupations may put women at higher risk for health problems. Women's income was found to be significantly associated with family history. This may reflect that individuals with higher incomes may have access to better healthcare and be more likely to receive regular check-ups and screenings, leading to a better understanding of their family's health history. The findings of a study carried out in Afghanistan corroborate our findings. This study discovered that nearly one in ten adults in the country suffered from CVD, and several risk factors associated with CVD were identified. These risk factors included older age (45-65 years), current tobacco use, raised total cholesterol, and inadequate consumption of fruit and vegetables [22].

In contrast to our findings, a study that was carried out in Italy indicated that almost all of the participants reported having heard of CVDs. Among those individuals, 89.4% and 74.7%, respectively, identified high cholesterol levels and smoking as risk factors. Only 26.5% of people could identify the primary risk factors for CVDs. Women who had a greater knowledge base were more likely to be married, have a higher education level, and report having a poorer health state. Only 23% of people knew the primary cardiovascular disease prevention strategies. Still, this level of awareness was significantly higher in women who did not have jobs, who had higher levels of education, who had received information about cardiovascular diseases from their physicians, and who knew the primary risk factors [23].

Those respondents who had a lesser education, those respondents who had at least three children, those respondents who self-reported a worse health condition, and those respondents who needed knowledge were most likely to have a favorable attitude toward the perceived risk of having CVDs. Women who had two or three children or more had high-risk profiles that were 49 and 56 percent lower, respectively, than women who only had one child [23]. Given that older women are said to be at a greater risk for cardiovascular disease than men of the same age, gender is an additional possible risk factor in adults who are getting older. However, the risks associated with CVD increase with age in both men and women and these correspond to an overall decline in sex hormones, primarily estrogen and testosterone.

This is true for both men and women. Despite this, there is a considerable body of evidence suggesting that hormone replacement therapies do not enhance outcomes in older patients, and there is also evidence suggesting that these medicines may raise the risks of cardiac events in older persons [24]. More attention is recommended toward women at menopause age and after in Iraq as this age is found to be the most vulnerable age group.

Conclusion

Low-income families are the most predominant socioeconomically status in AL Diwaniyah City. A noteworthy correlation exists between the age of women and their health history, physical activity, and stress management.

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