International Journal of Research in Medical Sciences
Kaur D et al. Int J Res Med Sci. 2026 Aug;14(8):3250-3256
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012
DOI: https://dx.doi.org/10.18203/2320-6012.ijrms20262355

Original Research Article

Risk factors for cardiovascular diseases among people attending outpatient department of a tertiary care hospital

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Received: 18 June 2026
Revised: 13 July 2026
Accepted: 14 July 2026

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ABSTRACT

Background: The rise in cardiovascular diseases (CVDs) has been particularly alarming in India, with a significant increase in both prevalence and mortality rates over the past few decades. Understanding the risk factors associated with cardiovascular diseases is crucial for developing effective prevention and intervention strategies.
Methods: After ethical approval, this cross-sectional study was conducted in outpatient department of Gian Sagar Medical College and Hospital of district Patiala, Punjab during October 2023 to November 2023. Two hundred patients were selected by non-probability sampling technique. Inclusion criteria were patients who were willing to participate and more than 25 years of age. The patients who were already diagnosed with hypertension and taking anti hypertension medicines were excluded from study. After extensive review, questionnaire was prepared which was divided into two parts: demographic performa and clinical proforma. Socio demo graphic data of patient includes variables that is age, gender, marital status, education, employment, socioeconomic status, history of smoking and alcohol, religion, and past history of heart disease, meal frequency, exercise, type of diet, oil consumption, salt and water consumption. Clinical variables are body mass index (BMI), systolic blood pressure (SBP), diastolic blood pressure (DBP), comorbidity history, history of dyslipidaemia, and waist hip ratio were included. Tool got validated by experts from field of nursing and medicine. Reliability checked by Cronbach's alpha and it was 0.80. Permission for data collection was taken from hospital administration. After obtaining consent from patient, data was collected from patients. Collected data was analysed by using statistical package for the social sciences (SPSS) version 21 for windows by using descriptive and inferential statistics. Findings were presented by tables and figures.
Results: The most significant risk factor identified was a lack of exercise, with 52.0% of the participants reported that they did not engage in regular physical activity. This was closely followed by pre-obesity/obesity, which affected 54.0% of the participants, and a higher waist-to-hip ratio, noted in 51.0% of the population. It was observed that while males are more prone to multiple risk factors, the fraction of females with a high number of risk factors is significant (p value of 0.000).
Conclusions: Particularly physical inactivity and obesity is the risk factor of developing cardiovascular diseases. The age and gender distribution data indicate that these risk factors are present even in younger populations and are more prevalent in females.

Keywords: CVD, BMI, Hypertension, Obesity, Exercise, waist-to-hip ratio

INTRODUCTION

Cardiovascular diseases (CVDs) remain the leading cause of mortality and morbidity worldwide, accounting for approximately 17.9 million deaths each year, which represents 32% of all global deaths.[1] The burden of CVDs continues to grow, particularly in low- and middle-income countries, where more than three-quarters of CVD deaths

occur.[2] In India, the rise in CVDs has been particularly alarming, with a significant increase in both prevalence and mortality rates over the past few decades. Understanding the risk factors associated with cardiovascular diseases is crucial for developing effective prevention and intervention strategies. Several well-established risk factors contribute to the development and progression of CVDs. These include modifiable lifestyle factors such as hypertension, obesity, unhealthy diet, physical inactivity, and tobacco use.[3]

Metabolic risk factors, along with hypertension, dyslipidemia, and diabetes, increase the risk of CVD.[4] Worldwide burden of CVD and premature death is associated with elevated blood pressure. Mortality related to systolic BP ≥140 mmHg was 3.6 million (40.1% of IHD deaths), 1.1 million (38.1% of ischemic stroke deaths) and 1.4 million (42.5% of hemorrhagic stroke deaths) was reported. In young adults' Acute myocardial infarction with worse prognosis is associated with metabolic syndrome.[6]

Globally, 51% (48–54) of men and 41% (95% CrI 38–45) of women with hypertension did not report a previous diagnosis of hypertension. Obesity is one of the risk factors for hypertension and its incidence increased although hypertension prevalence decreased which implies that hypertension's dietary and environmental determinants must have improved.[7] In India, the prevalence of hypertension has been rising, with recent studies indicating a prevalence rate of 30% among adults. Male gender, age, hypertensive, overweight and obesity, salt consumption, smoking tobacco, smokeless tobacco, and family history are predictors of hypertension in rural India.[8] Elevated blood pressure contributes to the development of atherosclerosis, left ventricular hypertrophy, and ultimately, heart failure.[9] Hypertension was present in one-fifth of this urban south Indian population and isolated systolic hypertension was more common among elderly population. Majority of hypertensive subjects still remain undetected and the control of hypertension is also inadequate.[10] Another critical risk factor is dyslipidemia, characterized by abnormal levels of lipids in the blood. Elevated low-density lipoprotein (LDL) cholesterol and reduced high-density lipoprotein (HDL) cholesterol levels are strongly associated with an increased risk of coronary artery disease.[11] A study conducted in South India found that dyslipidemia have higher percentage in both urban and rural population and have significant association with age and body mass index.[12]

Diabetes mellitus, particularly type 2 diabetes, significantly elevates the risk of developing CVDs. Individuals with diabetes have a two to four times higher risk of developing heart disease or stroke compared to those without diabetes.[13] The underlying mechanisms include hyperglycaemia-induced endothelial dysfunction, increased oxidative stress, and inflammation, all of which contribute to atherogenesis.[14] India has one of the highest diabetes prevalence rates in the world, further exacerbating the country's cardiovascular disease burden.[15] Moreover, non-modifiable risk factors such as age, gender, and genetic predisposition also play a crucial role in the development of CVDs.

The risk of cardiovascular diseases increases with age, and men are generally at higher risk than premenopausal women, although this difference diminishes after menopause.[16] Additionally, a family history of CVD is a significant predictor of an individual's risk, highlighting the importance of genetic factors.[17] Recent studies continue to shed light on these risk factors and their implications. For example, a 2022 study emphasized the significant impact of air pollution as an emerging risk factor for CVDs, suggesting that long-term exposure to fine particulate matter (PM2.5) is associated with increased cardiovascular mortality.[18]

Another 2023 study explored the relationship between socioeconomic status and CVD, finding that lower socioeconomic status is linked to a higher incidence of cardiovascular events due to factors such as limited access to healthcare and unhealthy lifestyle behaviours.[19]

Understanding the multifaceted risk factors of cardiovascular diseases is essential for implementing effective public health strategies aimed at reducing the global burden of these conditions. This paper aims to explore the various risk factors associated with cardiovascular diseases, examining both modifiable and non-modifiable contributors, to provide a comprehensive understanding of their impact as per Indian scenario on global health.

METHODS

Study design and location

This cross-sectional study was conducted in medical outpatient department (OPD) of Gian Sagar Medical College and hospital of district Patiala, Punjab.

This hospital has 680 beds and situated in rural area and patients came from surrounding villages. This study was conducted during October 2023 to November 2023.

Sample size determination

The sample size for the present study was estimated using the formula for prevalence studies. Assuming a 95% confidence level (Z=1.96), an expected prevalence (p) of 30% for cardiovascular disease risk factors based on prior literature, and a 5% margin of error (d=0.05), the calculated minimum sample size was 153 participants.

Keeping in mind sample attrition, 200 subjects were enrolled in the current study. This ensured sufficient statistical power to estimate the prevalence of CVD risk factors with acceptable precision.

Sampling technique

Non-probability sampling technique were used to select sample. Patients who were visiting hospital and came to medical OPD was target population. Inclusion criteria were patients who were willing to participate and more than 25 years of age. The patients who were already diagnosed with hypertension and taking antihypertensive medicines were excluded from the study.

Data collection tool and instrument

After extensive review questionnaire was prepared which have two sections i.e. demographic and clinical variables section. Demgraphic data of patient included the variables like age, gender, marital status, education, employment, socioeconomic status, history of smoking and alcohol, religion, and past history of heart disease, meal frequency, exercise, type of diet, oil consumption, salt and water consumption. Clinical data included the variables like body mass index (BMI), systolic blood pressure (SBP), diastolic blood pressure (DBP), comorbidity history, history of dyslipidaemia, waist hip ratio. Patients were categorized into pre obese (BMI 25-29.9 kg/m^2) and obese (BMI was >30 kg/m^2) category based on BMI,

Waist hip ratio 1.0 or higher in males and 0.86 or higher in females was considered high risk for cardiovascular diseases. Blood pressure >140/90 mm Hg was considered high blood pressure. Higher salt intake was defined as the use of more than 1–2 teaspoons per day, while higher oil consumption was defined as the use of more than 3 teaspoons per day. The tool was validated by experts from the fields of nursing and medicine to ensure its relevance, accuracy, and clarity. Reliability checked by Cronbach's alpha and it was 0.80. This depict data collection instrument was reliable.

Manual sphygmomanometer was used to measure blood pressure, weighing machine was used to check weight of the patient. Height of patient measured by height measuring scale. Calibration of sphygmomanometer and weighing machine done for accuracy.

Data collection procedure

Permission for data collection was obtained from hospital administration and head of medicine department. Investigator taken the written consent from every patient who met inclusion and exclusion criteria. Demographic and clinical variable data was collected from patient. Blood pressure, weight and height of patient checked. BMI calculated and patient was categorized into pre obese and obese category as per criteria.

Data analysis

Collected data was analyzed by using statistical package for the social sciences (SPSS) version 21 for Windows. Both descriptive and inferential statistics were applied, and the results are presented using tables and figures.

RESULTS

Sample characteristics (Table 1), revealed that most (37.5%) were between 25-35 years old, followed by (26.5%) those aged 36-45 years. The gender distribution was equal, with (50.0%) male and (50.0%) female participants. Most participants were married (90.5%). In terms of educational status, a significant portion of the participants were under matric (40.5%), while 20.0% had a diploma or were graduates, and only (5.0%) had a postgraduate degree or above. Regarding employment status, nearly half were unemployed (46.5%), (27.0%) were self-employed, and (18.5%) were retired. Socio-economic status revealed that (72.5%) of participants belonged to the middle class, with (15.5%) in the lower class and (12.0%) in the upper class. The majority religion among the participants was Sikhism (56.5%), followed by Hinduism (39.0%). Most participants lived in joint families (75.0%).

Distribution of patients for presence of risk factors (Figure 1) indicated that (53.5%) of the participants had more than two risk factors, (31.0%) had two risk factors, (12.0%) had one risk factor, and only (3.5%) had none. One participant (0.5%) had all the risk factors. Three, four, five and six risk factors were present in (27.5%), (15%), (8%) and (2.5%) respectively. The most significant risk factor identified (Figure 2) was a lack of exercise, with 52.0% of the participants reporting they did not engage in regular physical activity. This was closely followed by pre-obesity/obesity, which affected 54.0% of the participants, and a higher waist-to-hip ratio, noted in 51.0% of the population.

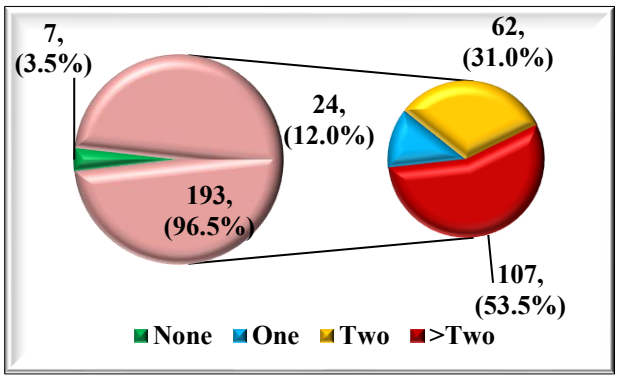

Figure 1: Distribution of patients according to presence of risk factors.

Patient distribution across age groups and the presence of cardiovascular risk factors were categorized as none, one, two, and more than two (Table 2). Across all age groups, there is a noticeable trend of increasing prevalence in risk factors with proceeding age. Proportionately, patients with more than two risk factors were more in older age group

category (46-55 years and 56 years and older). The variations in absolute numbers across age categories had no significant difference (p value 0.746). These findings suggest the cumulative burden of cardiovascular risk factors with age and emphasize the importance of age-specific approaches in managing and reducing cardiovascular risks in clinical settings.

Table 1: Sample characteristics patients attending outpatient department of a tertiary care hospital (n=200).

Parameters	Frequency (f)	Percentage (%)
Age (years)		
25-35	75	37.5
36-45	53	26.5
46-55	34	17.0
≥56	38	19.0
Gender		
Male	100	50.0
Female	100	50.0
Marital status		
Unmarried	19	9.5
Married	181	90.5
Educational status		
Under matric	81	40.5
Matric	34	17.0
12th class	35	17.5
Diploma/graduate	40	20.0
Post graduate or above	10	5.0
Employment status		
Unemployed	93	46.5
Govt./private employees	16	8.0
Self employed	54	27.0
Retired	37	18.5
Socio-economic status		
Upper class	24	12.0
Middle class	145	72.5
Lower class	31	15.5
Religion		
Sikh	113	56.5
Hindu	78	39.0
Muslim	7	3.5
Christian	2	1.0
Type of family		
Joint	150	75.0
Nuclear	49	24.5
Living alone	1	0.5

Patient distribution by gender and the presence of cardiovascular risk factors (Table 3), showed that prevalence of risk factors was higher in males, with 6 (6.0%) having no risk factors, and rising steadily to 42 (42.0%) having more than two risk factors. Females also showed a similar trend, but with a most 65 (65.0%) having more than two risk factors, indicating a higher risk of heart disease among female patients. A significant difference in the distribution of risk factors between genders was observed (p value 0.000). It was inferred that while males are more prone to multiple risk factors, the fraction of females with a high number of risk factors is significant.

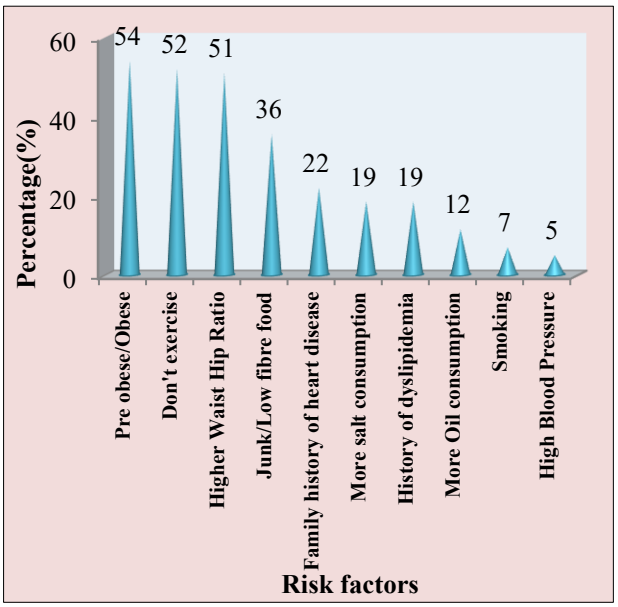

Figure 2: Percentage distribution of patients according to cardiovascular risk factor.

Patient distribution by socio-economic status and the presence of cardiovascular risk factors, Table 4 showed that prevalence in the upper class exhibited a striking concentration of individuals with more than two risk factors (70.8%), indicating a potentially higher burden of cardiovascular risk in this socio-economic class. On the contrary, the middle class showed a more balanced distribution across risk factor categories, with a considerable proportion having one or two risk factors (13.1%) and (34.5%), respectively). The lower class, similar to the upper class, shows a noticeable prevalence of patients with more than two risk factors (64.5%). The p value (0.342), suggests no significant differences in risk factor distribution among socio-economic classes in present study.

Table 2: Patient distribution by age and the presence of cardiovascular risk factors (n=200).

Age (years)	Risk factors				χ^2	df	P value
	None (n=7)	One (n=24)	Two (n=62)	>Two (n=107)			
25–35	3 (4.0)	7 (9.3)	22 (29.3)	43 (57.3)			
36–45	0 (0.0)	9 (17.0)	18 (34.0)	26 (49.1)	5.50	9	0.746^{NS}
46–55	2 (5.9)	4 (11.8)	9 (26.5)	19 (55.9)			

Continued.

Age (years)	Risk factors				χ^2	df	P value
	None (n=7)	One (n=24)	Two (n=62)	>Two (n=107)			
≥56	2 (5.3)	4 (10.5)	13 (34.2)	19 (50.0)			

χ^2: Chi-square test, NS: not significant

Table 3: Patient distribution by gender and the presence of cardiovascular risk factors (n=200).

Gender	Risk factors				χ^2	df	P value
	None (n=7)	One (n=24)	Two (n=62)	>Two (n=107)			
Male	6 (6.0)	19 (19.0)	33 (33.0)	42 (42.0)	16.94	93	0.000*
Female	1 (1.0)	5 (5.0)	29 (29.0)	65 (65.0)			

χ^2: Chi-square test, *significant

Table 4: Patient distribution by socio -economic status and the presence of cardiovascular risk factors (n=200).

Socio-economic status	Risk factors				χ^2	df	P value
	None (n=7)	One (n=24)	Two (n=62)	>Two (n=107)			
Upper class	1 (4.2)	2 (8.3)	4 (16.7)	17 (70.8)	7.06	6	0.342^{NS}
Middle class	6 (4.1)	19 (13.1)	50 (34.5)	70 (48.3)			
Lower class	0 (0.0)	3 (9.7)	8 (25.8)	20 (64.5)			

χ^2: Chi-square test, NS: not significant

DISCUSSION

The present study was conducted for a risk assessment of CVDs based on various factors in a given population The prevalence of physical inactivity as a major risk factor aligns with existing literature, which consistently highlights the role of regular exercise in mitigating cardiovascular risk. Every second individual is physically inactive, and <10% of the studied population was involved in doing regular physical activity as reported by Indian Council of Medical Research India Diabetes (ICMReINDIAB) study.[20] According to the American Heart Association, physical inactivity significantly increases the risk of CVD, as it contributes to other risk factors such as obesity, high blood pressure, and dyslipidemia (American Heart Association, 2023).[21] A recent review emphasized that physical inactivity significantly increases the risk of CVD, as it contributes to other risk factors such as obesity, high blood pressure, and dyslipidaemia.[22] A study reported that reiterated that central obesity and diabetes are very important risk factor among women for CVD diseases in a longitudinal cohort.[23] Obesity and a high waist-to-hip ratio were also prevalent in our study, supporting findings from previous research that indicate abdominal obesity is a strong predictor of cardiovascular events. Studies have shown that visceral fat is particularly harmful, releasing adipokines that can lead to insulin resistance and inflammation, both of which are critical in the pathogenesis of CVD.[24,25]

The age distribution findings show that younger age groups (25-35 years) already exhibit high prevalence of multiple risk factors, which is concerning. This early onset of risk factors is in line with findings from other studies suggesting that lifestyle factors contributing to CVD start accumulating early in life.[26] This emphasizes the need for early intervention strategies to mitigate long-term cardiovascular risk. Gender distribution findings are noteworthy, with females exhibiting a higher prevalence of multiple risk factors. This is consistent with other studies that have shown gender differences in CVD risk profiles. Women are often found to have higher rates of certain risk factors, such as obesity and physical inactivity, which contribute to their overall cardiovascular risk.[27] Obesity, dyslipidemia and hypertension prevalence among women was associated with an increased likelihood of a CVD diseases with adjusted odds ratio (aOR)=2.6 [95% CI: 1.5, 4.5]. Screening for detection of these cardiometabolic risk factors should get priority.[28]

The socio-economic status distribution findings suggest that middle-class individuals have a slightly higher prevalence of multiple risk factors, though the differences are not statistically significant. Previous studies have shown that lower socio-economic status is often associated with higher CVD risk due to factors such as limited access to healthcare, healthy foods, and opportunities for physical activity.[29] Researchers recommended that holistic multifaceted approach should be used by while considering both population level and biological risk factors to control cardiovascular epidemic in India.[30] This study highlights the significant role of lifestyle factors, particularly physical inactivity and obesity, in the risk of developing cardiovascular diseases. The age and gender distribution data indicate that these risk factors which are present even in younger populations and are more prevalent in females, highlights the need for early prevention of CVD. Health policies of country should focus on most prominent risk factors to avert cardiovascular diseases and global deaths.[4] Addressing these modifiable risk factors through public health interventions and individual lifestyle changes is crucial in reducing the burden of CVD in rural India. Public health strategies should focus on early education and intervention

to promote heart-healthy lifestyles starting from a young age by involving schools and community health programs. This could play a pivotal role in prevention of cardiovascular diseases.

Further research is necessary to build on these findings and develop targeted strategies for prevention and management of cardiovascular diseases among Indian population. Researchers recommended that longitudinal studies should be done to establish a cause-effect relationship between the identified risk factors and the development of CVD including a more diverse range of variables. Interventions aimed at increasing physical activity and promoting healthy eating habits could be implemented and evaluated for their effectiveness in reducing CVD risk. While the study offers valuable insights but several limitations must be acknowledged. Firstly, the self-reported data was collected, which might introduce biases such as underreporting or over reporting certain behaviours. Additionally, the cross-sectional design of the study limits the ability to infer causation.

CONCLUSION

Modifiable risk factor physical inactivity, pre obesity/ obesity and a higher waist-to-hip ratio is the major reported risk factor of developing cardiovascular diseases. Multiple risk factors are more prominent in males as compared to female. Age-specific approaches for prevention of risk factors and management of CVD should be more emphasized in community setting.

ACKNOWLEDGEMENTS

Authors would like to thank all the participants for providing the information regarding their health.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. World Health Organization. Cardiovascular diseases (CVDs) fact sheet. Available at: https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds). Accessed on 12 March 2026.
2. Mensah GA, Roth GA, Fuster V. The Global Burden of Cardiovascular Diseases and Risk Factors: 2020 and beyond. J Am Coll Cardiol. 2019;74(20):2529-32.
3. India State-Level Disease Burden Initiative CVD Collaborators. The changing patterns of cardiovascular diseases and their risk factors in the states of India: the Global Burden of Disease Study 1990-2016. Lancet Glob Health. 2018;6(12):e1339-51.
4. Yusuf S, Joseph P, Rangarajan S, Islam S, Mente A, Hystad P, et al. Modifiable risk factors, cardiovascular disease, and mortality in 155,722 individuals from 21 high-income, middle-income, and low-income countries (PURE): a prospective cohort study. Lancet. 2020;395(10226):795-808.
5. Mills KT, Stefanescu A, He J. The global epidemiology of hypertension. Nat Rev Nephrol. 2020;16(4):223-37.
6. Mente A, Yusuf S, Islam S, McQueen M, Tanomsup S, Lonen C, et al. Metabolic syndrome and risk of acute myocardial infarction: a case-control study of 26,903 subjects from 52 countries. J Am Coll Cardiol. 2010;55(21):2390-8.
7. NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants. Lancet. 2021;398(10304):957-80.
8. Gupta R, Xavier D. Hypertension: The most important non communicable disease risk factor in India. Indian Heart J. 2018;70(4):565-72.
9. Williams B, Mancia G, Spiering W, Agabiti Rosei E, Azizi M, Burnier M, et al. 2018 ESC/ESH Guidelines for the management of arterial hypertension. Eur Heart J. 2018;39(33):3021-104.
10. Mohan V, Deepa M, Farooq S, Datta M, Deepa R. Prevalence, awareness and control of hypertension in Chennai--The Chennai Urban Rural Epidemiology Study (CURES-52). J Assoc Physicians India. 2007;55:326-32.
11. Raj SA, Sivakumar K, Sujatha K. Prevalence of dyslipidemia in South Indian adults: an urban-rural comparison. Int J Community Med Public Health. 2016;3:2201-10.
12. Mohanraj S, Velmurugan G, Swaminathan K, Ramakrishnan A. Prevalence and risk factors for dyslipidemia among South Indian adults: A community based-NCD study. Int J Diabetes Dev Ctries. 2023;43(6):936-45.
13. Rawshani A, Rawshani A, Gudbjörnsdottir S. Mortality and Cardiovascular Disease in Type 1 and Type 2 Diabetes. N Engl J Med. 2017;377(3):300-1.
14. Forbes JM, Cooper ME. Mechanisms of diabetic complications. Physiol Rev. 2013;93(1):137-88.
15. Anjana RM, Deepa M, Pradeepa R, Mahanta J, Narain K, Das HK, et al. Prevalence of diabetes and prediabetes in 15 states of India: results from the ICMR-INDIAB population-based cross-sectional study. Lancet Diabetes Endocrinol. 2017;5(8):585-96.
16. Du R, Zheng R, Xu Y, Zhu Y, Yu X, Li M, et al. Early-Life Famine Exposure and Risk of Cardiovascular Diseases in Later Life: Findings from the REACTION Study. J Am Heart Assoc. 2020;9(7):e014175.
17. Moonesinghe R, Yang Q, Zhang Z, Khoury MJ. Prevalence and Cardiovascular Health Impact of Family History of Premature Heart Disease in the United States: Analysis of the National Health and Nutrition Examination Survey, 2007-2014. J Am Heart Assoc. 2019;8(14):e012364.
18. Liu C, Chan KH, Lv J, Lam H, Newell K, Meng X, et al. Long-Term Exposure to Ambient Fine Particulate

Matter and Incidence of Major Cardiovascular Diseases: A Prospective Study of 0.5 million Adults in China. Environ Sci Technol. 2022;56(18):13200-11.
19. Wang T, Li Y, Zheng X. Association of socioeconomic status with cardiovascular disease and cardiovascular risk factors: a systematic review and meta-analysis. Z Gesundh Wiss. 2023;21:1-15.
20. Sreeniwas Kumar A, Sinha N. Cardiovascular disease in India: A 360-degree overview. Med J Armed Forces India. 2020;76(1):1-3.
21. Polyak A, Lee A, Gulati M. Physical Activity and Cardiovascular Health. J Diabetes Res. 2026;2026(1):e3341765.
22. Piercy KL, Troiano RP, Ballard RM, Carlson SA, Fulton JE, Galuska DA, et al. The Physical Activity Guidelines for Americans. JAMA. 2018;320(19):2020-8.
23. Kaur P, Ramachandra Rao S, Venkatachalam R, Kangusamy B, Radhakrishnan E, Kaliaperumal K, et al. Risk factors for cardiovascular disease in rural South India: cohort study. BMJ Open. 2019;9(10):e029759.
24. Després JP. Body fat distribution and risk of cardiovascular disease: an update. Circulation. 2012;126(10):1301-13.
25. Larsson SC, Bäck M, Rees JMB, Mason AM, Burgess S. Body mass index and body composition in relation to 14 cardiovascular conditions in UK Biobank: a Mendelian randomization study. Eur Heart J. 2020;41(2):221-6.
26. Keijzer AR, Kauling RM, Jorstad HT, Roos-Hesselink JW. Physical activity for cardiovascular prevention. Available at: https://www.escardio.org/Councils/Council-for-Cardiology-Practice-(CCP)/Cardiopractice/physical-activity-for-cardiovascular-prevention. Accessed on 12 March 2026.
27. Nguyen AH, Hurwitz M, Sullivan SA, Saad A, Kennedy JLW, Sharma G. Update on sex specific risk factors in cardiovascular disease. Front Cardiovasc Med. 2024;11:1352675.
28. Flores-Luna L, Escamilla-Núñez C, Cruz-Bautista I, Rojas-Martínez R, Hernández-Cadena L, Castro-Porras L, et al. Gender Differences in MajorRisk Factors for Cardiovascular Disease in Mexican Adults. Global Heart. 2026;21(1):21.
29. Schultz WM, Kelli HM, Lisko JC, Varghese T, Shen J, Sandesara P, et al. Socioeconomic Status and Cardiovascular Outcomes: Challenges and Interventions. Circulation. 2018;137(20):2166-78.
30. Kalra A, Jose AP, Prabhakaran P, Kumar A, Agrawal A, Rpy A, et al. The burgeoning cardiovascular disease epidemic in Indians - perspectives on contextual factors and potential solutions. Lancet Reg Health Southeast Asia. 2023;12:100156.

Cite this article as: Kaur D, Mujahid I. Risk factors for cardiovascular diseases among people attending outpatient department of a tertiary care hospital. Int J Res Med Sci 2026;14:3250-6.