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Association Between Economic Status and the Common Noncommunicable Diseases in Shahrekord

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ABSTRACT

Introduction: Association between economic status and the occurrence of a wide range of diseases has received increasing attention. This study aimed to assess the association between economic status and common noncommunicable diseases in Shahrekord.

Methods and Materials: This cross-sectional study was conducted in 2023, utilizing data from the first phase of the Shahrekord Health and Noncommunicable Disease Cohort Study, which included a sample size of 7,034 participants. In this study, cardiovascular disease, heart attack, stroke, chronic lung disease, cancer, hypertension, diabetes, depression, and obesity were investigated. Chronic disease was defined as the presence of a past medical record validated by a specialist doctor or the regular use of disease-related medications. In the case of high blood pressure, diabetes, and obesity, the relevant measurements (systolic and diastolic blood pressure, fasting blood sugar, height, and weight) were taken to identify new instances. The latent class clustering approach was utilized to determine the economic status, which permits qualitative variables to be included alongside quantitative variables. The criteria for assessing economic standing were house size, number of rooms, foreign and domestic trips, freezer access, a computer, and private automobile. The cluster package from R version 4.2.1 was used to conduct latent class clustering.

Results: The participants had an average age of 49.36 ± 9.27 years. The optimal number of clusters identified through the latent class clustering approach was seven. Condequently, based on the frequency distribution of the eight economic variables, cluster one exhibited significantly better economic status compared to the other clusters. Clusters six and seven demonstrated good economic conditions. In contrast, individuals in clusters three and five had an average economic position, while clusters two and four experienced relatively poor economic status. The first cluster reported the most significant percentage of cardiovascular disease (14.3%), followed by the fifth cluster (10.1%). In addition, the fourth cluster showed a lower prevalence of cardiovascular disease (4.4%) than the other clusters. The trend test indicated a significant relationship between the relative frequency of heart attacks and individual's economic status. Clusters with moderate and relatively unfavorable economic conditions exhibited a higher relative frequency of heart attacks compared to those in very favorable and favorable economic clusters. Additionally, the trend test demonstrated a significant association between the relative frequency of being overweight and economic status, with clusters in more favorable economic conditions showing a higher prevalence of being overweight (83.3% in the first cluster, 78.4% in the sixth cluster, and 79.5% in another cluster) than those in medium or relatively unfavorable economic conditions.

Conclusion and Discussion: Individuals in a higher socioeconomic position are more likely to have a heart attack and be overweight.

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