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Title: IS THERE A LINK BETWEEN SOCIODEMOGRAPHIC FACTORS AND RHEUMATIC HEART DISEASE (RHD) SEVERITY: AN INSIGHT FROM SINGLE-CENTER RHD REGISTRY

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Background & Aims: It is well known that RHD is a global health concern, particularly in low-income countries. However, the impact of sociodemographic parameters on the severity of RHD remains unknown. The aim of the study is to examine the association between sociodemographic characteristics and RHD severity.

Methods: Between January 2020 - June 2023, 90 subjects over the age of 18 years were enrolled in the registry. We conducted retrospective analysis of the sociodemographic, clinical, and echocardiographic characteristics of all patients confirmed RHD. We then analyzed the association between sociodemographic characteristics (age, gender, educational background, and insurance type) and RHD severity (valve complexity, pulmonary hypertension (PH) , and heart failure). Data analysis was performed using SPSS 29.0.

Results: There were 12 people (13.4%) aged 21-40, 55 people aged 41-60 (61.1%), and 23 people aged > 60 (25.5%). There were 40 males (44.5%) and 50 females (55.6%) in this study. 18 participants (23.4%) have completed elementary school, 53 participants (68.9%) have completed middle school or high school, and 6 participants (7.8%) have undergraduate degree. In terms of economy, 68 participants (86%) have low-cost insurance, while 11 participants (13.9%) have high-cost and middle-cost insurance. We collected data regarding RHD severity based on single valve or mixed valve disease, low-intermediate probability or high probability of pulmonary hypertension, and NYHA functional class of heart failure (I - IV).

At univariate level, there was no significant association between age (p=0.985; p=0.674), gender (p=0.186; p=0.737), last education degree (p=0.354; p=0.399), and insurance type (p=0.095; p=0.508), on the occurrence of single-valve or mixed-valve disease and NYHA functional class of heart failure. Similarly, there was no statistically significant association between age (p=0.671), last education degree (p=0.757), and insurance type (p=0.718), on the occurrence of PH. There was, however, a significant association between gender and the incidence of PH, with women having a higher incidence of high probability PH (p=0.033).

Conclusions: Female gender was associated with the occurrence of high probability PH in RHD patients. Age, gender, last education degree, and insurance type, however, were not related to other RHD severity parameters, including valve complexity and NYHA functional class of heart failure.