Myopia, a common refractive error, has seen a significant global increase, particularly among young adults. This study aims to investigate the association between genetic factors, short-distance activity, and the incidence of myopia among medical students. A cross-sectional survey design was employed to collect data from medical students in batches 2022 and 2023. Chi-square tests were used to analyze the relationship between the variables. Demographic data revealed a predominantly young female population, with a high proportion of students enrolled in the 2023 academic year. A significant number of students were diagnosed with myopia, ranging from low to high degrees. Risk factor analysis indicated a strong association between reduced short-distance activity and increased myopia risk. Additionally, a family history of myopia emerged as a significant genetic predisposition to the condition. These findings highlight the importance of addressing both environmental and genetic factors to prevent and manage myopia among medical students. Future longitudinal studies with larger sample sizes are needed to further explore the temporal relationship between risk factors and myopia progression.