INTRODUCTION

The connection between physical activity and Body Mass Index (BMI) has drawn considerable attention in an era characterized by sedentary lifestyles and a growing concern for general health. The widely-used metric of BMI acts as a gauge of a person's body composition and offers important health-related information. The interaction between these variables, along with the World Health Organization's (WHO) advice on BMI and physical activity, provides a thorough viewpoint on maintaining a healthy body weight. BMI classifies people into ranges of underweight, normal weight, overweight, and obese by dividing their weight in kilograms by the square of their height in meters. Despite its simplicity, BMI provides a rapid and convenient evaluation of a person's risk for a number of medical disorders, such as cardiovascular disease, diabetes, and several malignancies. WHO has set BMI cutoff points to help both individuals and healthcare professionals recognize their health concerns BMI levels within the 18.5-24.9 range are regarded as normal, while those outside of this range are indicative of underweight or overweight problems, respectively. BMI classifications offer a foundation for developing individualized health strategies and a starting point for discussions on weight management. According to WHO’s recommendations, frequent physical activity can help prevent weight gain and improve general wellbeing. The regulation of energy balance, the preservation of muscle mass, and the enhancement of metabolic health are all aided by physical activity, which includes a spectrum of motions from scheduled exercise routines to daily activities. According to the organization, people should engage in at least 75 minutes of strenuous exercise or 150 minutes of moderate exercise per week, along with muscle-strengthening exercises on two or more days. But to really grasp this intricate link, one must delve into not only the WHO recommendations but also the numerous variables that might affect a person's BMI. For instance, a person's propensity for weight growth or decrease is greatly influenced by genetics, dietary practices, including calorie intake, nutritional composition, and eating patterns, also have a big impact on BMI. An individual's level of physical activity and eating habits, as well as cultural norms and psychological issues, might have an impact on their BMI. In this investigation, the basics of BMI, the WHO's recommendations for BMI and physical activity, and the different intrinsic and extrinsic factors that might affect a person's BMI will be delve into. By doing this, we are better able to understand the value of keeping an active lifestyle and a healthy weight in order to achieve optimal health. We acquire useful insights towards promoting healthier lives and reducing the risks associated with weight-related health issues as we untangle the complex web of factors that affect a person's BMI.

AIM:

The goal of this study is to thoroughly examine the dynamic relationship between physical activity levels and Body Mass Index (BMI), examining how BMI is impacted by different levels and types of physical activity across a range of demographic groups. This research aims to provide a deeper understanding of the factors that contribute to weight management and overall health, contributing to the development of more effective strategies for promoting healthy lifestyles and mitigating the risks associated with weight-related health conditions. It does this by analyzing the complex interplay between physical activity behaviors and BMI outcomes.

SPECIFIC OBJECTIVES:

1. To quantify the relationship between physical activity and BMI.
2. To examine the impact of different types of physical activity on BMI.
3. Assess Socio-Demographic Influences on the Physical Activity-BMI Relationship.
4. Identify Mediating Factors in the Physical Activity-BMI Link.