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Prevalence of Metabolic Syndrome in Specially Challenged Children

Anshoo Agarwal*
Department of Pediatric Endocrinology Consultant at Northern Border University, Saudi Arabia Riphah

***Corresponding author:** Anshoo Agarwal, Pediatric Endocrinology Consultant at Northern Border University, Saudi Arabia Riphah, Saudi Arabia, Email: anshuagarwal0409@gmail.com

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Editorial Note

Obesity has become one of the major risk factors for chronic diseases later in life. It is a reversible predisposing factor for several debilitating diseases including atherosclerosis, hypertension and diabetes mellitus. So our main goal is to raise awareness among the special care centers and to educate the parents and staff about the risks of obesity and associated disorders and measures to be taken to improve their lifestyle and prevent the complications which may occur in the future in such individuals. This study aimed to determine risk factors by assessing the prevalence of obesity, overweight, central obesity, their associated factors and other diseases in specially challenged children and to educate the parents and care takers about the risk of among them. The study was done based on a pre-structured questionnaire comprising the lifestyle data, in particular, age, sex, ethnicity, medical condition, diet, socioeconomic status, education level, family history of obesity and frequency of physical activity in specially challenged people. Variables including height, weight, height/weight ratio, waist circumference, calculation of BMI were also determined as a requirement to study obesity among them. Diagnosis of obesity and central obesity was confirmed by the WHO standard recommended method by determining of Body Mass Index (BMI) and Waist Circumference (WC). We studied the percentage of specially challenged children who are obese, overweight, have central obesity and are at risk. The study provided information about the changes in lifestyle which are required to avoid the complications and reducing the prevalence of obesity among the specially challenged people. It also helped in educating the parents and care takers of these people regarding risk of cardiovascular disorders and the diseases associated with obesity and among these people. The prevalence of obesity was high indicating that these individuals are prone to chronic diseases in the future, if not intervened at early stages. There is a need to educate the parents and care takers of these people. More health programs should be introduced among these centers to fight the prevalence of obesity and make the health care providers aware of the danger of obesity among them.

Materials and Methods

Metabolic syndrome is an important cluster of coronary heart disease risk factors. However, it remains unclear to what extent metabolic syndrome is associated with demographic and potentially modifiable lifestyle factors among Korean persons with physical disabilities. This study aimed to determine the prevalence and influencing factors of metabolic syndrome among persons with physical disabilities using the Korean National Health Insurance Service–National Sample Cohort. The Adult Treatment Panel III criteria were used to define metabolic syndrome influencing factors and prevalence, which were evaluated in a representative sample from the 2013 Korean National Health Insurance Service–National Sample Cohort database. Characteristics were compared based on frequency using the $\chi 2$ test. The associations between metabolic syndrome and its risk factors were estimated using logistic multivariable regression analysis. Metabolic syndrome was detected in 31.5% of the surveyed persons with physical disabilities. Female sex, age of 65 years, smoking, greater alcohol consumption, physical inactivity, higher body mass index, and a family history of diabetes were associated with increased risks of metabolic syndrome. The major risk factors for metabolic syndrome among persons with physical disabilities were obesity and older age. Performing physical activity was associated with a lower risk of metabolic syndrome. Therefore, we recommend using a continuous obesity management program and physical activity to prevent metabolic syndrome among persons with physical disabilities.

This secondary data analysis study investigated the prevalence and influencing factors of metabolic syndrome among persons with physical disabilities using Korean National Health Insurance Service (NHIS) data

The data were used in accordance with the data provision and processing procedures of the NHIS. The NHIS sample cohort was created in 2002 to support academic studies of national health, medical treatments, and diseases. The database includes 1,025,340 persons, who represented 2.2% of the 46,605,433 eligible persons in 2002 and were extracted using proportional distributions. The database includes information regarding eligibility, health-care utilization, national health screening results, and health-care providers. The present study evaluated the eligibility data, which include demographic characteristics, and the national health screening data, which include the results of health behavior surveys and the main results of health screenings for individuals who were eligible for health insurance and medical care. In 2013, 234,428 of the 1,014,730 eligible persons had available national health screening data. Among the 234,428 persons, 13,181 persons were disabled, including 8,246 persons with physical disabilities. The present study evaluated data from 8,237 persons with disabilities, after excluding nine persons with missing data that were required to estimate the metabolic syndrome index.

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