

High Prevalence of Prediabetes and Associated Risk Factors in Urban Areas of Pontianak, Indonesia: A Cross-Sectional Study



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Abstract

Uncontrolled prediabetes can develop into Type 2 Diabetes mellitus (T2DM). The incidence of T2DM among adults in Pontianak, Indonesia was reported remarkably high. Therefore, this study aimed to investigate the risk factors for prediabetes in adults living in urban areas of Pontianak, Indonesia. A cross-sectional study was conducted in 5 subdistricts of Pontianak. A total of 506 adults underwent screening to obtain subjects with fasting blood glucose (FBS) of ≤124 mg/dL and aged >30 years. Blood pressure and body mass index (BMI) were measured. Interview using a structured questionnaire were performed to obtain data on predictor variables (age, sex, education, income, health insurance, tobacco use, history of hypertension, gout, high cholesterol level, frequency of exercise per week, and diabetic education). The prevalence of prediabetes among subjects was significantly high (76.4%). Subjects were predominantly above 40 years, female, had low income, low education level, and had health insurance. About a third of the subjects had a history of hypertension,

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Research Article

Gender Difference in Food Choice and Eating Practice and Their Association with Health among Students of Kathmandu, Nepal

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Background. Our eating practice is generally based on the food we choose to eat. The selection of unhealthy food, high cost of healthy food items, and easy availability of fast food may have negative impact on our health and eating behaviour. This study aims to access the gender difference in food choice and eating practice and their association with health among students in Kathmandu, Nepal. Methods. A cross-sectional descriptive study was conducted among 385 randomly selected undergraduate BBA (Bachelor in Business Administration) students of Tribhuvan University in Kathmandu by using semistructured self-administered questionnaire. The questionnaire included sociodemographic characters, health status, behaviour factors, eating practice, and food choice which were measured using Food Choice Questionnaire (FCQ). The data was analysed in SPSS. Frequency, percentage, mean, and standard deviation were calculated, and chi-square test and logistic regression were used to measure the association between two variables. Results. The study is comprised of 50.4% female and 49.6% male with mean ages of 20.04 and 20.75, respectively. A gender difference was observed in food choice but no gender difference was observed in eating practice. There was no significant association of food choice and eating practice with health. However, food choice and eating practice showed an association with the current living status of the respondents. Sensory appeal and health were the most important food choice motives among males and females, respectively. Conclusion. The study concluded that no gender difference was observed in food choice. However, gender difference was observed in eating practice. There was no association of food choice and eating practice with health.

1. Introduction

Food choice refers to the process of deciding what to eat, which varies from person to person and is influenced by a variety of factors such as health, price, and mood. The choice we make on food determines which nutrient enters our body [1]. The food choices are made every day, every time, from what vegetables we prefer with our meal to what food we choose to eat in canteen or in restaurant [2]. We make choices according to our mood, preference, taste, quality, quantity, income, situation, cravings, or eating behaviours [2]. Food choice is important because it may represent the motive for the usual purchase of a food or preparation of a meal [2].

Eating practice is the way of how persons eat and what types of food they eat and when. Our eating practice is usually based on the food we choose to eat. It differs from person to person. The type of food we choose and buy, the way we prepare food, and the way we eat food define how well we live [3]. Eating practices are influenced by a variety of factors, including lifestyle factors and mental health state [3]. Our eating practice determines our health status. Many health conditions are caused by the food we eat such as obesity, high cholesterol, gastritis, and heart disease [4]. Eating practices have been identified as one of the factors influencing the global overweight and obesity epidemic [3].

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Research Article

Physical Activity Knowledge, Attitude, and Behaviours Among Adolescents in the Kingdom of Saudi Arabia Prior to and during COVID-19 Restrictions

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Background. The prevalence of childhood and adolescent obesity has increased dramatically and poses a major public health threat globally. In the Kingdom of Saudi Arabia (KSA), the main cause of adolescent obesity is an increase in physical inactivity and unhealthy eating habits due to lifestyle changes. This study reports on factors associated with physical activity (PA) prior to and during the coronavirus disease of 2019 (COVID-19) among middle school students in Jeddah, KSA. Method. A cross-sectional online survey was conducted in Jeddah, KSA among 1500 middle school students aged 11 to 15 years. Sociodemographic characteristics; PA knowledge, attitude, and behaviours; and information about the impact of COVID-19 on PA were collected. Knowledge, attitude, and behaviours of PA before and during COVID-19 restrictions and between gender were compared. Regression analyses were conducted to assess the determinants of PA. Results. Female students were significantly more likely to report better knowledge of PA compared to males (p < 0.001). However, males were significantly more likely to participate in PA compared to females (p < 0.001). Approximately 60% of students reported their PA decreased during COVID-19 isolations. Most students did not participate in the recommended levels of daily PA during COVID-19 lockdowns and school closures. After adjusting for demographics, knowledge, and attitude, students who did not usually participate in school sports (p = 0.017) and as members of clubs (p = 0.002) were less likely to be active during COVID-19 lockdown. Conclusions. Efforts to enhance PA should be implemented through coordinated school and community-based programs to achieve the recommended PA among adolescents at home and in schools. Policy to ensure students receive PA opportunities at school is recommended.

1. Introduction

A preprint has previously been published.

Physical inactivity represents the fourth highest cause of premature and preventable death globally [1]. The risk of all causes of mortality increases by 20% to 30% for inactive compared to active people [2]. Inactive people are at increased risk of noncommunicable diseases [3] such as obesity [4], ischemic heart disease, diabetes [5], stroke [6], and numerous types of cancer [7].

Childhood and adolescent obesity is considered to be a major public health crisis globally. Globally, the prevalence of overweight among adolescents increased from 4% in 1975 to more than 18% in 2016 [3]. In 2019, it was estimated around 38 million children under the age of 5 were overweight or obese, and half of these children lived in Asia [8]. Overweight and obese children are at least two times more likely to be obese during adolescence and adulthood [9–11].

One cause of overweight and obesity among all age groups is the imbalance of calories consumed and expended [8]. This is primarily associated with decreased physical activity (PA) and increased intake of energy-dense foods [12]. A global WHO-led study of 1.6 million school-aged adolescents found more than 80% do not meet the minimum

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Research Article

Influence of Overweight and Obesity on Morbidity and Mortality among Hospitalized Patients in Sri Lanka: A Single-Center Analysis

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Background. Current evidence regarding the association between overweight and obesity and in-hospital morbidity and mortality is inconsistent and South Asian populations are underrepresented. *Methods*. Data relevant to anthropometry, hospital outcomes, complications, and medical diagnoses of all acute medical admissions to the National Hospital of Sri Lanka were collected over a period of 3 months. Analysis was performed with WHO international (ICs) and Asian obesity cut-offs (ACs). *Results*. Sample size was 2,128 (median age: 57 years [IQR: 42, 67], males: 49.7%). High prevalence of overweight (23.5%), generalized obesity (10.4%), central obesity (28.5%), and underweight (15.4%) was observed (ICs). Patients with either generalized or central obesity had significantly higher in-hospital mortality (4.8% versus 2.5%, p = 0.031) and acute kidney injury (AKI) (3.9% versus 1.2%) (p = 0.001) compared to normal weight. With ACs, overweight and obesity prevalence increased, without any significant increment in morbidity and mortality, but median length of hospital stay was significantly reduced in patients with generalized obesity compared to normal (3 [IQR: 2, 5] versus 4 [IQR: 2, 6], p = 0.014). Infections (44.4%) and cardiovascular diseases (CVDs) (25.9%) were the most common causes of admission. Overweight and generalized obesity or central obesity were associated with increased prevalence of acute CVDs and CVD risk factors and lower prevalence of acute infections, whilst underweight showed an inverse association. *Conclusion*. A double burden of malnutrition and diseases were noted among hospital admissions, with obesity being a risk factor for in-hospital all-cause mortality and AKI. Overweight and obesity were associated with increased CVDs and reduced infections. Larger prospective studies are required to characterize these associations among South Asians.

1. Introduction

Obesity is characterized by excessive or abnormal accumulation of body fat leading to adverse health outcomes. Different morbidities associated with overweight or obesity include diseases with increased cardiovascular disease (CVD) risk (e.g., type-2 diabetes mellitus [T2DM] and dyslipidemia), functional difficulties (e.g., osteoarthritis [OA]), and psychological disturbances [1], whilst CVDs and cancers appear to drive the excess mortality [2]. Given the

above, it can be expected that overweight and obesity could adversely affect hospital outcomes, morbidity, and mortality. However, existing evidence is inconsistent. For example, outcomes of a regional database [3] of patients undergoing coronary artery bypass grafting (CABG) (n=13,637) and a large nationwide hospital survey ($n=800,\ 417;\ 74.5\%$ with body mass index (BMI) >30 kg/m²) [4] showed that overweight, obesity, and morbid obesity (BMI >40 kg/m²) are associated with increased risk of in-hospital mortality and morbidity. However, a multinational survey (n=97,344) of

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Principle Investigator

<u>Nama Institusi</u> : Universitas Diponegoro

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Semarang, 30 September 2020 Professor and Chairperson,

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