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**ASSOCIATIONS BETWEEN PHYSICAL ACTIVITY AND RISK FACTORS FOR TYPE II DIABETES IN PREDIABETIC ADULTS**

Rukia Yosuf

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Diabetes is a national healthcare crisis related to both macrovascular and microvascular complications. We hypothesized that higher levels of physical activity are associated with lower total and visceral fat mass, lower systolic blood pressure, and increased insulin sensitivity. Participant inclusion criteria: 21-50 years old, BMI  $\geq$  30 kg/m<sup>2</sup>, hemoglobin A1C 5.7-6.4, fasting glucose 100-125 mg/dL, and HOMA IR  $\geq$  2.5. Exclusion criteria: history of diabetes, hypertension, HIV, renal disease, hearing loss, alcoholic intake over four drinks daily, use of organic nitrates or PDE5 inhibitors, and decreased cardiac function. Total physical activity was measured using accelerometers, body composition using DXA, and insulin resistance via fsIVGTT. Clinical and biochemical cardiometabolic risk factors, blood pressure and heart rate obtained using a calibrated sphygmomanometer. Anthropometric measures, fasting glucose, insulin, lipid profile, C-reactive protein, and BMP analyzed using standard procedures. Within our study, we found correlations between levels of physical activity in a heterogenous group of prediabetic adults. Patients with more physical activity had a higher degree of insulin sensitivity, lower blood pressure, total visceral adipose tissue, and overall lower total mass. Total physical activity levels showed small, but significant correlations with systolic blood pressure, visceral fat, lean mass and insulin sensitivity. After normalizing for race, age, and gender using multiple regression, these associations were no longer significant considering our small sample size. More research into prediabetes will decrease the population of diabetics overall. In the future we could increase sample size and conduct cross sectional and longitudinal studies in various populations with prediabetes.

**Keywords:** diabetes, endocrine, insulin, prediabetes**Funding and Conflicts of Interest**

None

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**Impact of COVID-19 outbreak in health care of people with type 2 diabetes: evidence from a cross-sectional study in Albania**Fatjona Kamberi<sup>a</sup>, Jerina Jaho<sup>a</sup>, Enkeleda Sinaj<sup>b</sup>, Vjollca Ndreu<sup>b</sup>, Ilirjana Zekja<sup>b</sup><sup>a</sup>Research Centre of Public Health, Faculty of Health, University of Vlore "Ismail Qemali", Vlore, Albania<sup>b</sup>Faculty of Technical Medical Sciences, University of Medicine Tirana, Tirana, Albania**Abstract**

All over the world, even in Albania, adults living with type 2 diabetes are constantly increasing. Albania, nationally and locally, has a lack of evidence regarding type 2 diabetes patients' health care and management both before and during the COVID-19 pandemic. The aim was to assess the impact of the pandemic in the health care of type 2 diabetes patients and the factors correlated. A cross-sectional study was carried out from November 2020 to February 2021

including 400 adults with type 2 diabetes age 40-65 years with at least one other chronic illness. A questionnaire-based on literature taking into account the situation of the COVID-19 pandemic was used for the data collection. Pearson correlation, 2-tailed p, and linear regression were used to test the correlations. Among 400 patients with type 2 diabetes in the study, 53.0% were female and 47.0% were men. Most of the participants were married (n = 303) with a high level of education (54.3%). Treatment was mainly with oral medications (58.0%). Based on Body Mass Index, 63.0% of participants were overweight. Employment status (p=, 003), the type of treatment, oral medication vs insulin (p=, 001), Body Mass Index (p=, 001), and living alone (p=, 008) were the more factors correlated. Health care of type 2 diabetic patients due to the COVID-19 pandemic is closely associated with social determinates of health and the resources of health care settings. The need to address innovative approaches of care including self-care, social support, and e-health is recommended.

**Keywords:** Type 2 diabetes 2, health care, impact, COVID-19, Albania.**Funding and Conflicts of Interest**

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**Psoriasis in childhood and metabolic syndrome : a systematic review**

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Pediatric psoriasis corresponds to approximately one-third of all cases of psoriasis. In adults this condition is associated with a strong risk of metabolic syndrome (MetS) but the association between pediatric psoriasis and MetS is not well established. The aim of this study was to evaluate the association between psoriasis and metabolic syndrome in children. A systematic literature review was conducted following the PRISMA guidelines. Papers were selected searching PubMed/Medline, SciELO and LILACS databases in October 2021 using the terms [Psoriasis] AND [metabolic syndrome] AND [Children]. The inclusion criterion was limited to observational studies that evaluated the association between psoriasis and metabolic syndrome in children. There were no language or publication date restrictions. Among the 58 studies initially found, 6 were included in this systematic review. Epidemiological studies have shown an increased hazard of co-morbidities in psoriasis. Patients with pediatric psoriasis have stronger atherogenic cardiometabolic risk profile, with signs of lipoprotein dysfunction and insulin resistance. The severity of skin conditions like psoriasis has been linked with MetS, also therapeutic treatment on MetS might lead to improvement on the severity of skin conditions. HOMA-IR (Homeostasis Model Assessment - Insulin Resistance) can be a useful tool for an early assessment of cardiometabolic risk, regardless of MetS' definition. Early diagnosis and appropriate disease monitoring of children affected has the potential to facilitate disease's control and reduce future cardiovascular disease (CVD). Thus, it may be beneficial to evaluate children with psoriasis for components of MetS to avoid future CVD morbidity and mortality.

**Keywords:** Psoriasis; metabolic syndrome, insulin resistance; children