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RELATIONSHIP BETWEEN OBESITY AND DIABETES MELLITUS IN INDONESIA (ILFS-5): AFFECTED BY THE TYPE OF PHYSICAL ACTIVITY

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Introduction: The massive increase in T2D rates worldwide is primarily due to population aging, rising obesity levels, and physical inactivity. Physical activity minimizes diabetes-related cardiovascular diseases by delaying prehypertension progression. This study aimed to determine the relationship between obesity factors and diabetes mellitus linked to physical activity in Indonesia.

Methods: This cross-sectional study utilized Indonesian Family Life Survey (IFLS-5) data from 34,241 participants meeting inclusion criteria. Main risk factors were physical activity, obesity, and diabetes mellitus, with age, gender, education, marital status, and cholesterol as confounding variables.

Results: Diabetes mellitus affected 779 respondents while 33,462 were non-diabetic. Non-obese individuals had 59% lower diabetes risk (OR=0.41) than obese individuals. Moderate physical activity reduced diabetes risk by 17% (OR=0.83, 95%CI: 0.672-1.034), while vigorous activity provided 45% risk reduction (OR=0.55). Low physical activity had highest diabetes risk (OR=1.121, 95%CI: 0.948-1.326), while moderate to vigorous activity had significantly lower risk (OR=0.552, 95%CI: 0.443-0.687).

Conclusion: Individuals with low physical activity had highest diabetes risk. Obesity combined with low physical activity significantly increases diabetes mellitus risk in the Indonesian population.

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