Validation of FINDRISK as a screening tool for diabetes in the community in Cyprus

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Diabetes prevention and early diagnosis improved but still suboptimal: results from the DI.S.C.O-Cy trial

Diabetes continues to affect millions across Europe, leading countries governments to adopt new programs according diabetes. Its Member States, in accordance with the International Federation for diabetes, spend 10% to 20% of overall health costs for treatments concerning diabetes and its complications. To address this disease in Cyprus, it is necessary to assess the needs of diabetic people stemming from the disease itself and the reliability of available prevention tools for Diabetes. The DISCO-CY (Diabetes Screening in the Community Outcomes – Cyprus) trial was implemented to collect data on disease prevalence and currently applied diagnostic and treatment algorithms and validate the use of uniform screening practices based on tools already endorsed by IDF, EASD and NICE.

The **aim of the study** was to determine whether minimum requirements for diagnosis and follow up of diabetic subjects relating to the management of their disease are currently applied in Cyprus and to what extent, and to investigate whether the use of the translated FINDRISK diabetes prevention tool can help detect undiagnosed diabetics. The **methodology** followed was based on a large cross sectional, door to door (census) study covering a representative sample population of 2413 adults from a combination of industrial, urban and rural settings out of a total 13.325 total inhabitants within the study area, with a final participation rate of 2100 individuals / 87%. The study was performed following approval by the Ministry of Health and the Cyprus National Bioethics Committee and was based on volunteer participation from both field workers and participants. Following consent provision all adults' inhabitants of the sampling sites were invited to participate in the study. Those with pre-existent diagnosis of diabetes were assessed via a questionnaire that was already validated via a prior study to measure the degree of satisfaction of their needs and attitudes / beliefs regarding their disease comparable to currently proposed NICE standards. Participants who weren't known diabetics were asked to complete the validated Greek version of the FINDRISK questionnaire. In this questionnaire, those who were classified as high risk and very high risk were referred to a clinical laboratory where they were subjected to fasting glucose testing and a glucose curve.

Based on study results, diabetes prevalence in Cyprus in 2018 reaches 11.4% of the population, i.e., 240 individuals out of 2100. Of these individuals, 52 (2.7% of the total population) were undiagnosed prior to the study, i.e., about one person in every fifty. Among the already diagnosed diabetic inhabitants, compliance to NICE standards was suboptimal, ranging between 12% for annual screening for diabetic ulcers by podiatrists to 77% for annual screening for arterial hypertension and dyslipidemia and their organ damage relevant to these conditions. The results were published in major congresses and journals (CEDA, EPH, ECIM) as well as in a major dissemination event for the general public, in collaboration with the European University Cyprus and the Municipality of Aradippou.

Keywords: diabetics needs, diabetes prevention tools, Find risk, Diabetes guidelines,and Diabetes Mellitus.