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The relationship between diabetes-related knowledge, and kidney disease knowledge, attitudes, and practices: a cross-sectional study from Palestine

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ABSTRACT

Background: Diabetes mellitus (DM) is one of the major non-communicable diseases that are encountered in primary health care clinics. It is estimated that 15% of Palestinians have DM, and it is expected to be 20.8% for 2020 and 23.4% for 2030.

DM is considered one of the most common causes of chronic kidney disease (CKD), which is usually developed after long-standing poorly controlled DM. In Palestine, there are very few studies about the prevalence of CKD among diabetic patients; one study showed that 23.6% of type 2 DM patients in North West Bank have CKD at different stages. Generally, there is a lack of awareness about possible CKD risk factors, so the majority of CKD cases will not be clinically recognized, so it is recommended to screen for CKD for early detection and treatment.

Methods: We collected data and interviewed 398 patients from 2 of Nablus primary healthcare centers, using a questionnaire that contains three sections: socio-demographic section, questions related to DM, CKD Screening Index, which is formed of three scales. These include the knowledge scale, which contains 24 items; the attitude scale contains 18 items in a 5-point Likert scale; and finally, the practice scale, which contains 12 items in a 4-point Likert scale. Finally, we used Michigan Diabetic Knowledge Test to assess the diabetic patient knowledge. We analyzed these data using the Mann–Whitney U-test or Kruskal–Wallis test. We also determined the relationship between different variables and practices using multiple linear regression analysis.

Results: The study was held among 386 diabetic patients with a mean age of 57.62 ± 12.4 years (ranging from 28-90). The median (interquartile range) was 11 (8-14) for the knowledge scale,, 56 (52-59) for the attitude scale and 30 (26-33) for the practice scale. In the analysis with multiple linear regression, only patients who are less than 55 years old ($p =0.012$), normal BMI ($p =0.030$), high educational level ($p<0.001$), high monthly income ($p=0.020$) and MDKT test score ($p =0.007$) were significantly associated with higher knowledge score. Furthermore, patients who are more than or equal 55 years old ($p=0.007$), high monthly income ($p=0.016$), use of a single oral diabetic drug ($p=0.003$), with the total number of medications less than 4 ($p=0.010$), and high knowledge and MDKT test were significantly associated with higher attitude score. Finally, a patient with normal BMI ($p=0.002$), city residency ($p=0.034$), high educational level ($p=0.003$), less frequent use of tobacco ($p<0.001$), last HbA1c ($p=0.023$) and higher

knowledge, attitude, MDKT score were significantly associated with better practices toward CKD prevention and early detection.

Conclusions: regarding KAP analysis, higher practice scores toward prevention and early detection of CKD were significantly associated with patients with normal BMI, being a city resident, high educational level, less use of tobacco, last HbA1c below 7 and higher knowledge, attitude, MDKT score.

Keywords: Diabetes mellitus; chronic kidney disease; CKD screening index; Palestine.