INVESTIGATION OF THE ROLE OF THE CLINICAL PHARMACIST IN PREDIABETES AND DIABETES PATIENTS

SUMMARY

Introduction: Introduction: Prediabetes and diabetes are chronic diseases that are increasingly prevalent worldwide. It is important for patients to self-manage their current conditions, in conjunction with health professionals. While the traditional role of the pharmacist is to provide medication and patient counseling, there is increasing evidence that pharmacists can make a positive contribution to the clinical outcomes of prediabetic and diabetic diseases through expanded services. These services can be provided through the effective provision of cost-effective patient education and pharmacotherapy. The aim of this thesis is to review the current arguments that support the roles of clinical pharmacists in the disease perceptions, knowledge levels, adherence to treatment, and clinical outcomes of prediabetic and diabetic patients.

Materials and Methods: Our study is a non-interventional, prospective, and observational research that aims to examine the pharmacotherapy needs, current disease perception, knowledge level, and adherence level of prediabetic and diabetic patients. The study was conducted at the Department of Internal Medicine, Bezmialem Vakif University Hospital, Istanbul, between July 27, 2021 and April 30, 2022. Patients with a diagnosis of prediabetes or type 2 diabetes, aged 18 years and above, who gave their consent to participate in the study after being informed were included in the study. The disease short perception scale and a knowledge measurement questionnaire developed by the researchers were administered to the patients during their first and second visits, with a 90-day interval, and routine laboratory values were recorded and evaluated. After the first visit, patients were given patient education by the clinical pharmacist. A brochure developed by the researchers was distributed to the patients after the training. The education included information on the definition and types of diabetes and prediabetes, symptoms, conditions that may occur in the body due to the disease, routine tests to be performed, and risk groups. The data obtained were evaluated for changes in disease perception, routine laboratory tests, and knowledge levels before and after education.

Results: A total of 145 patients, including 79 with diabetes and 66 with prediabetes, were included in the study. 77.27% of the prediabetic patients were female, while 51.89% of the diabetic patients were male. The mean age of the prediabetic patients was 45.79±1.40, while the mean age of the diabetic patients was 49.24±1.08. When the family history of diabetes was examined, it was found that 72.73% of the prediabetic patients and 67.1% of the diabetic patients had a family history of diabetes. When asked "Who/where do you get your disease education from?" at the first visit, 71.21% of the prediabetic patients and 75.9% of the diabetic patients answered "doctor". When the responses to this question at the first and second visits were compared, an increase in the pharmacist response rate was observed. An improvement in knowledge level about the current disease and adherence to treatment was observed

after education in the participating patients. Statistically significant differences were detected in weight, waist circumference, blood glucose, cholesterol, HbA1c, Homa-IR, and urea levels recorded before and after the 90-day interval. Statistically significant differences were also obtained between the responses given by the participants at the first and second visits using the Short Disease Perception Scale. In the findings obtained within the scope of the study, a relationship was found between the disease perceptions, knowledge levels, attitudes, and behaviors of the participants after clinical pharmacist intervention.

Conclusion: It was determined that the patient education and follow-up services provided by clinical pharmacists to prediabetic and diabetic patients have positive effects on the disease prognosis, knowledge levels, and disease perceptions of patients. It is considered appropriate to target patients with HbA1c> 9%, as they seem to benefit the most from clinical pharmacist interventions. Receiving education about their disease will contribute to the identification of their pharmaceutical care needs and will guide healthcare practitioners. Educating patients with the help of clinical pharmacists will prevent prediabetic disease from progressing to type-2 diabetes and will ensure that complications arising from uncontrolled treatment of diabetic patients are brought under control as soon as possible, increasing the likelihood of successful treatment. This will lead to an increase in the quality of life of patients.

Keywords: Clinical pharmacy, pharmaceutical care, prediabetes, diabetes, patient education