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How motivated are patients with type 2 diabetes to change their lifestyle? A survey among patients and healthcare professionals

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ABSTRACT

Aim: It is unknown to what extend patients with type 2 diabetes mellitus (T2DM) in primary care are motivated to change their lifestyle. We assessed the level of motivation to change lifestyle and the agreement for that level between patients and healthcare professionals.
Methods: Patients with T2DM (150) filled in a questionnaire to assess the level of motivation to change their lifestyle, using a single question with three answer options. We investigated the agreement for this level between these patients and their healthcare professionals (12 professionals). In addition, we investigated and compared the level of physical activity as indicated by the patients and the healthcare professionals.
Results: A large part of the patients reported to have a deficient physical activity level (35% according to patients, 47% according to healthcare professionals, kappa 0.32) and were not motivated to change their lifestyle level (29% according to patients, 43% according to healthcare professionals, kappa 0.13). Patients tended to overestimate their physical activity and their motivation to change in comparison with their healthcare professionals.
Conclusions: Patients with T2DM in primary care should increase their physical activity level. Healthcare professionals often do not know whether patients are motivated to change their lifestyle, and should therefore assess motivation regularly to optimize lifestyle management.

1. Introduction

An unhealthy lifestyle is one of the most important etiologic factors of type 2 diabetes (T2DM) and for that reason one of the most important targets in therapy [1–3]. Lifestyle programs in controlled settings have been proven effective in reducing the incidence of T2DM in individuals with impaired glucose tolerance [4], but in routine practice achieving similar results seems difficult [5,6]. Meanwhile, the threat of a diabetes pandemic has not decreased [7,8]. Given this pandemic, lifestyle behavior change is crucial in the management of T2DM in primary care.

Success in achieving sustainable behavior change depends on the motivation of the patient [9,10]. It has also been

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shown that patient motivation is a key element for successful self-management [11]. Because of the importance of patient motivation, the level of the motivation should be assessed, for example to be able to target counseling. However, is has been shown that GP's assess the patients' readiness to change their lifestyle with low accuracy [12]. Previous research found that patients were generally not motivated to self-manage their diabetes [13]. In addition, a study showed that patients with T2DM follow exercise recommendations only in 34% of the time and follow diet recommendations in 59% [14]. Another study [15] found that obese patients were only slightly motivated to lose weight (6.6 on 10-point scale), but their physicians were even less optimistic (an average 4.7). Research also suggests that the majority of patients with T2DM were not physically active [16] and were not motivated to become active in the next six months [16,17].

The extent to which patients with T2DM in primary care are motivated to change their lifestyle is a crucial factor in diabetes management. However, we could not find any study on the motivation for lifestyle changes in patients with T2DM in primary care and the agreement between patients and health professionals. Therefore, the aim of this study was to investigate the motivation to change lifestyle in patients with T2DM in primary care and to assess whether patients and health professionals had similar motivation estimates. In addition, we investigated the agreement between patients and health professionals for physical activity and for lifestyle topics discussed during the consultations.

2. Method

2.1. Procedure

We contacted 10 primary healthcare centers in the southern part of the Netherlands based on our existing research network. Diabetes care in the Netherlands is organized according to a diabetes management program (DMP). Within this DMP, the patient has four consultations every year with a diabetes practice nurse (DPN) supervised by the general practitioner. When necessary, extra consultations can be scheduled.

All DPNs were asked to randomly include patients who visited the general practice for a regular diabetes check-up during two successive weeks. To be able to answer our research questions using this observational study, we aimed to included 150 patients. DPNs were provided with coded patients and DPN questionnaire sets. Patients who were willing to participate were asked the fill in a questionnaire after the consultation with the DPN. The DPN was also asked to fill in a questionnaire for each patient after the consultation. Data were collected from December 2013 until June 2014.

The Medical Ethical Committee of Maastricht University Medical Centre has approved this study (number: METC 13-4-093). All patients signed an informed consent form.

2.2. Study population

All patients in primary care with type 2 diabetes who had a regular quarterly consultation with the DPN, who could read Dutch language and were not physically disabled for any reason, could participate.

2.3. Measurements

The questionnaire contained several items. The patient was asked to provide information on a number of individual characteristics (e.g. age, gender, how many years of diabetes, weight, length, type of medication, Dutch Standard for Healthy Physical activity (exercising at moderate intensity at least half an hour for five or more days a week: deficient, sufficient, sportive), following a physical activity programs and/or diet program).

Regarding lifestyle assessment, we are aware that there are several important aspects of lifestyle. However, for pragmatic purposes, in this study we focused on physical activity and diet. The question about the patients' motivation for lifestyle change was derived from the motivation to stop scale: one question with seven answer options of motivation to stop smoking with accurate predictive value [18]. We adapted this question for two reasons. First, to be able to implement the question in usual care, it should be as short, practical and as little time consuming as possible. Second, in future practice we would want to be able to tailor care to the level of motivation of the patient. However, to tailor lifestyle management to seven different levels is unfeasible. Therefore, we developed a three level motivation scale. Participants were asked: 'which of the following describes you best'. The three answer options were: 1—I don't want to improve my lifestyle (healthier diet and/or improve physical activity), 2—I want to improve my lifestyle (healthier diet and/or improve physical activity), but don't know when I will, 3—I really want to improve my lifestyle (healthier diet and/or improve physical activity) and I want to start now. For now, we chose to ask whether patients wanted to change their lifestyle in general and decided not to split lifestyle motivation into more questions. We did this because we believe this is, also in real-world care, the most efficient first step. Later, healthcare professionals could explore in more detail what part of lifestyle patients want to change.

In addition, we asked the patients whether lifestyle was discussed during the consultation and whether the patient received advice on how to improve their physical activity and/or diet.

Biomedical data (blood pressure, BMI, medication usage, cholesterol, kidney function, retinopathy, Dutch Standard for Healthy Physical activity, smoking status, risk of diabetic foot ulcers, abdominal circumference, glucose and HbA1c levels), were derived from the electronic medical records.

To be able to investigate the agreement between the patient and the DPN for the level of motivation of the patient, the DPN was asked to answer the single-item motivation question about the patient directly after the consultation. In addition, DPNs were asked whether they discussed lifestyle during the consultation and whether they gave advice on how to improve physical activity and/or diet.

2.4. Data analyses

We used descriptive statistics to describe the study population of participants. Agreement was quantified using Cohen's kappa coefficient. The nesting of patients within practices