

Use of Questionnaires in Assessing Knowledge and Behavior of Patients with Type 2 Diabetes Mellitus (T2DM) to Prevent Diabetic Foot Ulcers

The use of questionnaires is rising in medical research, as they apply to assessing knowledge and behavior. As tool, questionnaire designs may be qualitative, quantitative or a combination (mixed methods). As platform, both traditional paper and new online applications enhance questionnaire accessibility. Through questionnaires, patient information is elicited, resulting in identification of patient characteristics and risk factors for a disease condition and determination of appropriate interventions. We are well reminded that information obtained through a questionnaire is dependent on how the questionnaire has been designed, used, and validated.¹

Knowledge and behavior of patients are crucial in the management of their condition, both individually and as a group. We can take the example of prevention of diabetic foot ulcers among patients with Type 2 Diabetes Mellitus (T2DM) through education. T2DM is a chronic disease where education is integral to its control and management. For example, in a cross-sectional analytic study carried out among participants in a rural agricultural town in the Philippines, investigator-administered questionnaires followed by focused group discussions determined the knowledge, attitude, and practice concerning foot care, among other matters.² As a result of diabetes self-management education (DSME) as an intervention delivered not by health professionals but by peer educators with T2DM, and without simultaneous pharmacologic treatment, it was shown in that pilot study that the DSME group had more participants who reached glycemic goals of HbA1C <7% after six months. By the third month, there were more participants in the DSME group performing foot examinations.³

In another study among patients in an urban tertiary hospital in the Philippines, self-administered questionnaires were answered by 330 patients; the questionnaires were Filipino translations of the knowledge questionnaire developed by Hasnain et al. and the Nottingham Assessment of Functional Foot Care (NAFFC).⁴ It was learned that 83% had good foot care knowledge; those who attended the diabetes education clinic were nearly three times as likely to have good knowledge scores. Only 22% had good foot self-care practice.

In a more recent study, Manalo et al. worked on the translation from English to Filipino of two other questionnaires: Diabetic Foot Knowledge Subscale (DFKS) and Foot Self-Care Behavior Scale (FSCBS). Indeed, it would be imperative to use Philippine-language questionnaires among the actual population.⁵

By going through the option of translating pre-existing validated questionnaires, at least two challenges arise: (1) choice of source questionnaires; and (2) translation with cross-cultural adaptation. Manalo et al. stated their criteria for choosing their source questionnaires thus: “[they have] been translated [from English] and culturally adapted into several languages (e.g., Spanish and Turkish).” After testing and retesting the Filipino version questionnaires among 30 participants, the authors concluded thus: “The translation and cultural adaptation were carried out not just by focusing on a literal translation of the items, but also by prioritizing clarity to enhance understanding for both the healthcare providers and the clients. The content validity of the two questionnaires was acceptable and the test-retest reliability of the whole questionnaires showed strong positive correlation among the items. A full testing of the psychometric properties of the two questionnaires should still be done to ensure its validity and reliability in determining the foot self-care knowledge and behavior of Filipinos with T2DM.”⁵

We encourage more studies of a similar objective, toward the development of Philippine-language questionnaires for assessing patient knowledge and behavior, to lead to interventions that focus more on enhancing lifestyle modification.

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