Translation and Evaluation of the Thai Version of the Simplified Diabetes Knowledge Scale

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Purpose: The purpose of this study was to translate and evaluate the psychometric properties of the Thai Version of Simplified Diabetes Knowledge Scale (T-SDKS).

Methods: A cross-sectional study was undertaken between September and November 2016. A convenience sample of people attending the outpatient diabetes clinic at a large tertiary hospital in northern Thailand were recruited to participate in the study. People who were diagnosed with T2DM, aged more than 18 years old, attending the outpatient diabetes clinic and willing to participate were invited to participate. The 20-item T-SDKS was linguistically adapted using the standard back translation process (Van Nes, Abma, Jonsson, & Deeg, 2010; WHO, 2016). Statistical analysis was then undertaken to test for internal consistency and construct validity.

Results: A total of 502 people with T2DM were recruited. The majority of participants were female (n = 305 (60.75%)). The mean age was 60.17 years, the average duration of diabetes was 9.87 years (± 8.13 years), the mean glycosylated haemoglobin 7.78 (±1.77), and body mass index was 26.96 (±5.57). During the forward-backward translation process, jargon and technical terms were eliminated. Some concepts also needed to be adapted to the Thai culture. For example: the word potato was changed to rice, as rice is the staple food of Thai people; and pound was changed to grams as grams are the metric unit for measurement in Thailand. The Cronbach’s alpha coefficient for the total T-SDKS was 0.79 and greater than 0.70 for each of the items. The inter-item correlation matrix ranged between 0.03-0.49, and the item-total correlation gave a value greater than 0.20 for each item. The results provided evidence of the reliability and validity of the T-SDKS as well as its suitability for use in the Thai culture. In addition, the T-SDKS took participants less than 10 minutes to complete. This means that the T-SDKS could be used routinely in busy clinical settings to help clinicians determine the diabetes knowledge of people with T2DM so that targeted health education interventions can be delivered.

Conclusion: The T-SDKS was translated for use with the Thai population. The T-SDKS has acceptable psychometric properties and is a brief and simple survey with acceptable reliability for assessing diabetes knowledge among Thai people with T2DM. The T-SDKS helps clinicians to assess a person’s general diabetes knowledge. The T-SDKS can be used in clinical settings in Thailand to improve targeted health education programs and therefore improve self-care and clinical outcomes for people with T2DM.

Title:
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Keywords:
Thai population, diabetes knowledge and validation studies

References:


**Abstract Summary:**

The T-SDKS was linguistically and psychometrically validated for assessing the diabetes knowledge of Thai people with T2DM. This study has demonstrated that it can be used in busy clinical settings to provide data to clinicians. The data from the T-SDKS can be used to improve health education interventions.

**Content Outline:**

The prevalence of Type 2 Diabetes Mellitus (T2DM) has risen from 4.7% in 1980 to 8.5% in 2014 (WHO, 2017). Effective management of T2DM involves significant changes in lifestyle such as diet, healthy behavior, and exercise (Selvin, Parrinello, Sacks, & Coresh, 2014; Taiwo, Green, & Raghupathi, 2014). The Simplified Diabetes Knowledge Scale is an instrument used to measure diabetes knowledge in many clinical settings in western countries (Collins, Mughal, Barnett, Fitzgerald, & Lloyd, 2011). In Thailand, there are no validated scales for assessing diabetes knowledge.

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**Author Summary**: Saneh Khunkaew has completed his master degree from Malardaren University,
Sweden. At the moment, he is doing a doctoral degree at the University of Wollongong, School of Nursing, NSW, Australia. He is an expert on diabetic foot care. His passion is to develop the quality of life and patient outcome among people with diabetes type 2 and its complications. Also he is interested in the mixed methods design in nursing research.