

UNIVERSITI TEKNOLOGI MARA

**ADAPTATION, TRANSLATION AND VALIDATION OF THE
DIABETES MELLITUS IN THE OFFSPRING QUESTIONNAIRE
(DMOQ): THE MALAY VERSION**

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MMED (FAM MED)

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Dissertation submitted in partial fulfillment of the requirements for the
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Master of Medicine (Family Medicine)

Faculty of Medicine
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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and regulations for Post Graduates, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

INTRODUCTION

Offspring of T2DM patients have an increased risk of developing T2DM. One of the approaches to prevent their offspring from developing T2DM is to encourage T2DM patients to become the health promoter within the family. The Diabetes mellitus in the offspring questionnaire (DMOQ) assesses the perceptions of T2DM patients on the risk of their first degree relatives in developing T2DM and the possibility of intervention to reduce this risk. The DMOQ English version consisted of 34-items framed within seven concepts based on the Health Belief Model.

OBJECTIVES

This study aimed to adapt and translate the DMOQ from the English language into the Malay language and to subsequently examine the psychometric properties, specifically determining its validity and reliability.

METHODS

This was a cross sectional questionnaire validation study among T2DM patients receiving care from the Non-Communicable Disease Clinic at Klinik Kesihatan Sungai Buloh. It was conducted in three phases: i) adaptation and translation of the DMOQ from the English language into the Malay language, ii) face validation and iii) field testing of the DMOQ Malay version to examine its psychometric properties. During the process of content validation, three items were removed as these were questions pertaining to siblings. Forward and back translations were carried out by credible translators. Face validation was conducted on 20 participants. Based on the participants' feedback, correction and fine tuning was conducted to produce the DMOQ Malay-Harmonised (M-H) version. A

total of 159 T2DM patients were recruited via convenience sampling for the field testing and data was collected via self-administration of the DMOQ M-H version. Construct validity was determined using Exploratory Factor analysis (EFA). Reliability was determined by the internal consistency reliability and test-retest reliability.

RESULTS

A total of 12 items were removed during the whole process of adaptation, translation and validation of the DMOQ which included a further three items being removed due to poor factor loadings of <0.40 following the EFA. Subsequent to rotation of the matrix with a seven factor solution, five items which loaded onto two factors which were not interpretable according to the underlying conceptual framework were also removed. One open ended question was also removed as it did not fit into any of the retained concepts. Therefore, the final DMOQ Malay version consisted of five concepts and 22 items. The Cronbach alpha was 0.714 which meant an acceptable internal consistency and the test-retest analysis was also consistent over time.

CONCLUSION

The DMOQ Malay version is a valid and reliable research tool which can be used to assess the risks perception among T2DM patients in Malaysia. This information is vital to aid health care professionals and policy makers in developing effective training strategies for the T2DM patients to become the 'agent of change' to prevent their offspring from developing T2DM.