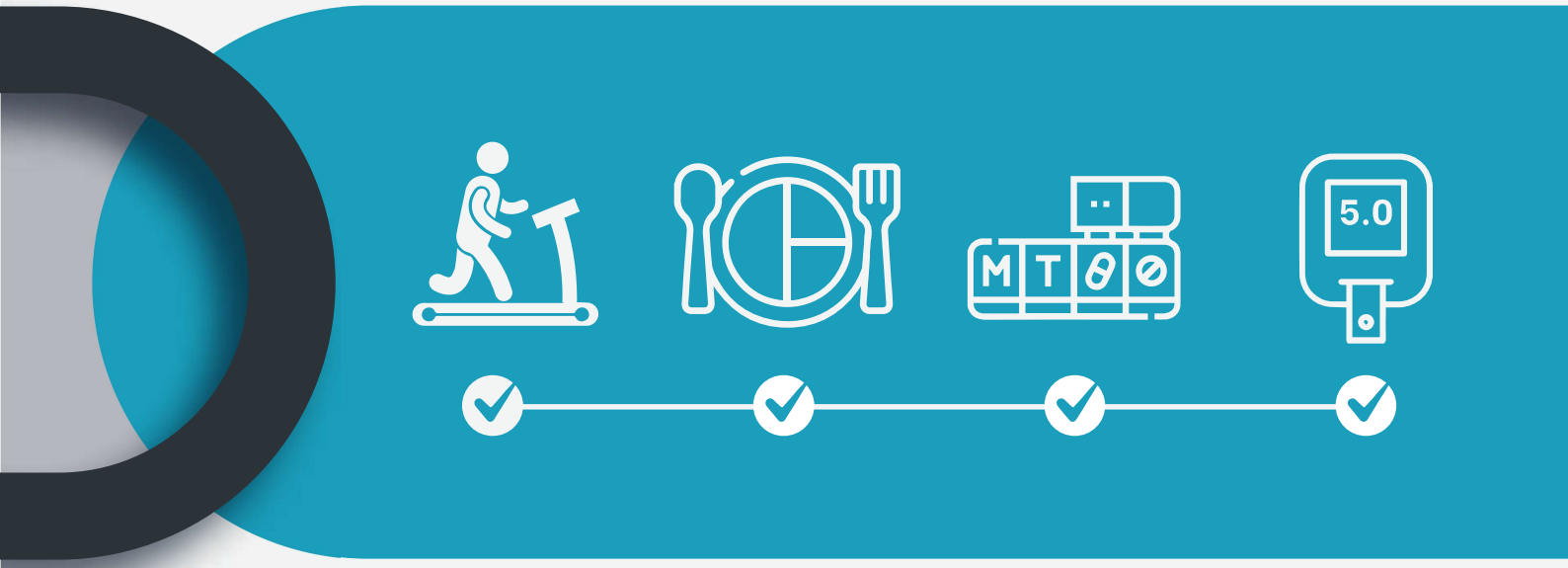
MOH/S/IPTK/36.23(RR)

TECHNICAL
REPORT

THE DIABETES BEHAVIOURAL DIAGNOSIS INSTRUMENT (DBDI):

Development Of An Instrument In Enhancing Healthy Lifestyles Among Type 2 Diabetes Mellitus (T2DM) Patients



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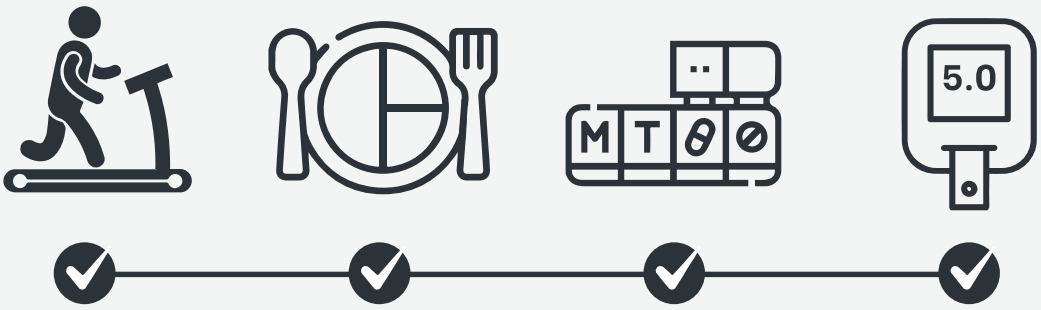

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Development Of An Instrument In Enhancing Healthy Lifestyles Among Type 2 Diabetes Mellitus (T2DM) Patients

NMRR-19-862-46635

ISBN 978-967-5340-60-4

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Suggested citation:

Institute for Health Behavioural Research (IHBR), Ministry of Health Malaysia. 2022. The Diabetes Behavioural Diagnosis Instrument (DBDI): Development of Instrument in Enhancing Healthy Lifestyle Among Type 2 Diabetes Mellitus (T2DM) Patients.

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Ministry of Health, Malaysia

Published by:

Institute for Health Behavioural Research,
Block B3, National Institute of Health Complex,
No.1, Jalan Setia Murni U13/52, Section U13,
Setia Alam, 40170 Shah Alam, Selangor.

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TECHNICAL REPORT

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DEDICATION

This study is devoted by the research team to the accomplishment of our objective(s). We anticipate that the findings of this study will assist healthcare providers in improving current flow and patients in improving their quality of life.

FOREWORD BY
THE DIRECTOR OF IHBR

We are immensely grateful for the opportunity to deliver this technical report as an official publication of the Institute for Health Behavioural Research (IHBR). Congratulations to the highly devoted team members for their dedication and commitment from the inception until the publication of this research. Their continuous efforts and hard work made this research and report possible. The ultimate goal of this study is to develop an instrument that can assess behavioural domains in an effort to improve the current practices in diabetes treatment, especially among T2DM patients. This report provides an in-depth explanation of the development process of an instrument via a study that involved both qualitative and quantitative methods.

Dr. Manimaran Krishnan
Director of Institute for Health Behavioural Research

ACKNOWLEDGEMENT

First and foremost, praises and thanks to the Almighty God, for His blessings throughout the preparation and completion of the technical report "The Diabetes Behavioural Diagnosis Instrument (DBDI): Development of Instrument in Enhancing Healthy Lifestyle among Type 2 Diabetes Mellitus (T2DM) Patients".

The research team would like to extend our utmost appreciation to the Director General of Health for the permission to publish this report. Special thanks to Dr. Manimaran Krishnan, the Director of the Institute for Health Behavioural Research, for his vision and support that culminated in this report.

This report was also greatly assisted by the many bodies and individuals, including all the health authorities and patients who participated in this study. Their contributions are highly acknowledged and appreciated.

Last but not least, our deepest thanks to all the research team members for their effort and determination in producing this report. This is the result of all the hard work and challenges throughout the preparation and completion of this report.

May God bless you all.

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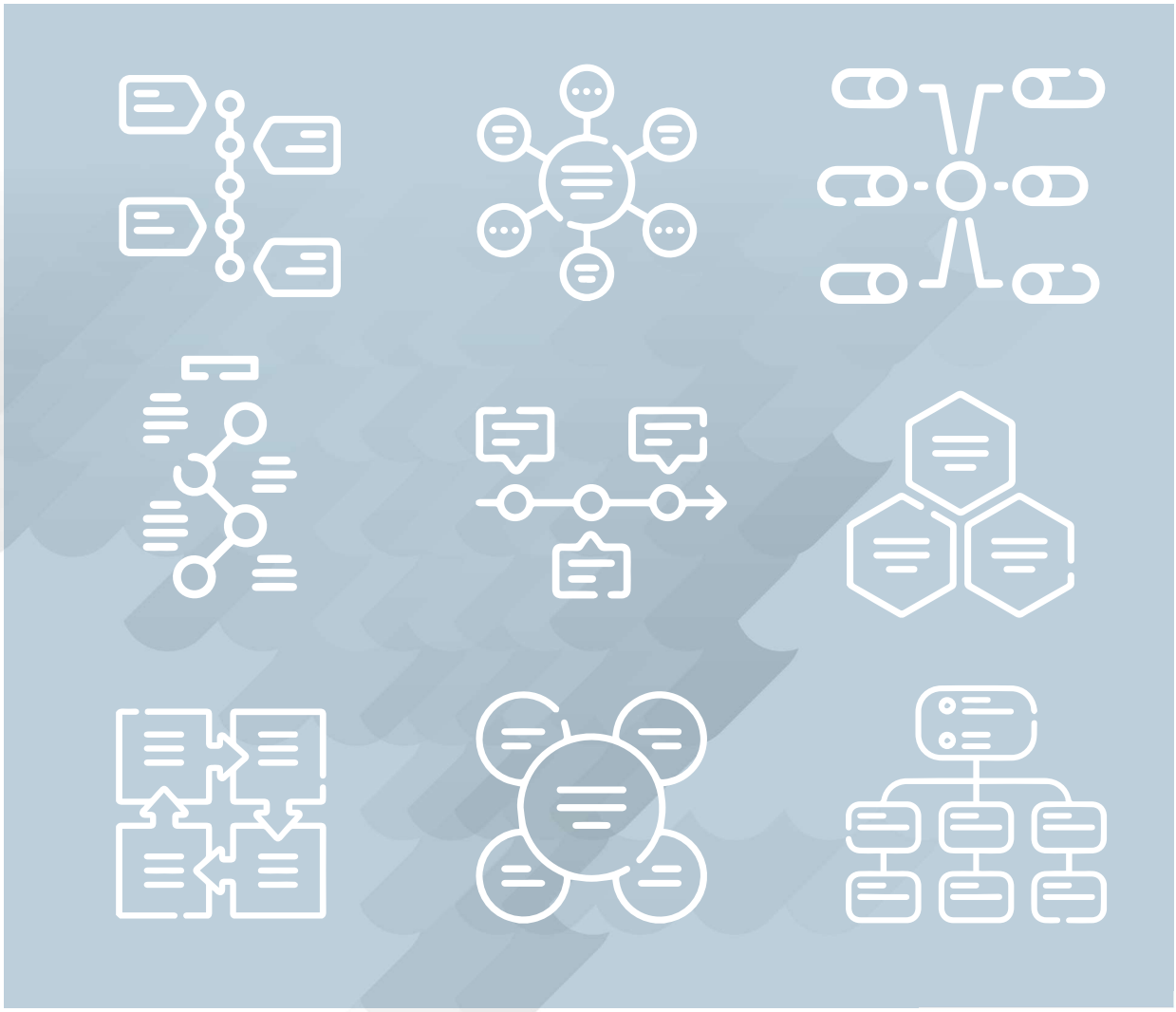

LIST OF ABBREVIATIONS

Acronym	Description
T2DM	Type 2 Diabetes Mellitus
WHO	World Health Organization
NHMS	National Health and Morbidity Survey
NGO	Non-Governmental Organisation
MOH	Ministry of Health
CPG	Clinical Practice Guideline
DBDI	Diabetes Behavioural Diagnosis Instrument
DSMQ	Diabetes Self-Management Questionnaire
GM	Glucose management
SDSCA	Diabetes Self-Care Activities Measure
heiQ	The Health Education Impact Questionnaire
IDI	In-Depth Interview
FGD	Focus Group Discussion
HCP	Healthcare Provider
SMBG	Self-Monitoring Blood Glucose
BP	Blood Pressure
HbA1c	Haemoglobin A1c
FMS	Family Medical Specialist
MTAC	Medication Therapy Adherence Clinic
MNT	Medical Nutrition Therapy
DM	Diabetes Mellitus
DE	Diabetic Educator
TCM	Traditional and Complementary Medicine
TCA	To Come Again
CBT	Cognitive Behavioural Therapy
QR code	Quick Response code
EFA	Exploratory Factor Analysis
CFA	Confirmatory Factor Analysis
CVI	Content Validity Index
I-CVI	Item Level Content Validity Index
S-CVI	Scale Level Content Validity Index
NMMR	National Medical Research Registry
BMI	Body Mass Index
SD	Standard Deviation

EXECUTIVE SUMMARY

This project was fully funded by the Ministry of Health Malaysia (MOH) (NMRR-19-862-46635). Ethical clearance was obtained from the MOH Malaysia [(KKM/ NIHSEC/P19-1453(7)]. It was completed within two years.

This report aims to provide an overview of the process involved in developing the tool for evaluating the self-management of T2DM patients in the form of a questionnaire. The study was divided into two phases: 1. Exploring the domains involved in the self-management of T2DM patients and 2. Developing the items as indicators to measure T2DM patients' cognitive, affective, and skills concerning diabetes care to be included in the final tool, i.e. Diabetes Behavioural Diagnosis Instrument (DBDI).

This report is meant to enlighten policymakers, stakeholders, funding agencies, and all who are invested or interested in this topic. We hope that the dissemination of this report can contribute towards the development of effective health interventions and behaviour modification for self-care among T2DM patients to improve their quality of life.

More importantly, this instrument can be incorporated into the clinical practice guidelines as a standard behavioural diagnosis for Type 2 DM patients to be used by the Diabetic Resource Centre in primary healthcare and hospital settings for effective personalised health behavioural interventions.

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