UNIVERSITI PUTRA MALAYSIA

CHANGE PROCESS IN BRIEF COGNITIVE BEHAVIOUR THERAPY WORKSHOP FOR PSYCHOLOGICAL DISTRESS AND MENTAL HEALTH LITERACY AMONG PRIMARY CARE SELF-REFERRALS

SAM JENG MUN

FPSK(p) 2022 5

CHANGE PROCESS IN BRIEF COGNITIVE BEHAVIOUR THERAPY WORKSHOP FOR PSYCHOLOGICAL DISTRESS AND MENTAL HEALTH LITERACY AMONG PRIMARY CARE SELF-REFERRALS

By

SAM JENG MUN

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

July 2021

© COPYRIGHT UPM

All material contained within the thesis, including without limitation text, logos, icons, photographs, and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

CHANGE PROCESS IN BRIEF COGNITIVE BEHAVIOUR THERAPY WORKSHOP FOR PSYCHOLOGICAL DISTRESS AND MENTAL HEALTH LITERACY AMONG PRIMARY CARE SELF-REFERRALS

By

SAM JENG MUN

July 2021

Chairman : Siti Irma Fadhilah binti Ismail, PhD
Faculty : Medicine and Health Sciences

The prevalence of psychological distress in primary care appears to be high, yet majority of the individuals who can benefit from early and evidenced-based psychological approach are limited. Barriers concerning stigma, lack of access to psychological interventions, high volume of primary care attendees, and poor mental health literacy are among the factors that contribute to the access of adequate treatments.

The study examined psychological distress and mental health literacy (MHL) among primary care attendees in the suburban community. There were two interlinked phases in the study. In phase 1 (detection phase), the sociodemographic factors (age, gender, ethnicity, and education level) were discussed as predictive variables to psychological distress and MHL to inform on the intervention phase in phase 2. The prevalence of psychological distress using cross-sectional study design among the suburban primary care community were an important determinant for the justification for phase 2 using the DASS-21 questionnaire.

The first phase found a prevalence of 16.7% for at least mild level of depressive symptoms, 15% for at least mild level of anxiety symptoms, and 4.8% for at least mild level of stress symptoms among 293 primary care attendees using systematic random sampling. Gender as one of the sociodemographic factors was found to be the only predictor for psychological distress and mental health literacy using multiple linear regression. These findings from phase 1 highlighted the importance to integrate a feasible and evidenced-based psychological intervention in the primary care level, therefore phase 2 (intervention phase) studies the implementation of change process using the brief Cognitive Behavioral Therapy (b-CBT) as a potential approach in managing psychological distress and improving MHL among 73 primary care self-

© COPYRIGHT UPM

referrals using purposive sampling.

One-way repeated measure multivariate analysis of variance (MANOVA) was used to analyze the nonrandomized quasi-experimental study for the change process in psychological distress and MHL. Results revealed that there were significant differences in three time-points (pre-, post-, and one-month follow-up) for psychological distress and MHL using DASS-21 and Mental Health Knowledge Schedule (MAKS). The implementation strategy of b-CBT showed positive changes in integrating brief, non-stigmatized, and evidenced-based psychological approach to the primary care level. Potential feasibility on the implementation of b-CBT workshop to improve psychological distress and MHL can be found in the study. However, the self-referral characteristics of the attendees remained unknown. The reporting of this thesis follows TREND statement reporting guidelines.

© COPYRIGHT UPM

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

PROSES PERUBAHAN BENGKEL 'BRIEF COGNITIVE BEHAVIOUR THERAPY' UNTUK TEKANAN PSIKOLOGI DAN LITERASI KESIHATAN MENTAL DI KALANGAN RUJUKAN KENDIRI PESAKIT KLINIK KESIHATAN

Oleh

SAM JENG MUN

Julai 2021

Pengerusi : Siti Irma Fadhilah binti Ismail, PhD
Fakulti : Perubatan dan Sains Kesihatan

Prevalens tekanan psikologi di kalangan pesakit klinik kesihatan adalah tinggi, namun majoriti individu yang boleh mendapatkan faedah daripada pendekatan psikologi awal berasaskan bukti adalah terhad. Halangan seperti '*stigma*', kekurangan akses kepada intervensi psikologi, pesakit di klink kesihatan yang tinggi, dan kekurangan literasi kesihatan mental adalah antara faktor-faktor yang menyumbang kepada akses rawatan yang memuaskan.

Kajian ini bertujuan mengkaji tekanan psikologi dan literasi kesihatan mental dalam kalangan pesakit di klinik kesihatan dalam komuniti pinggir bandar. Terdapat dua fasa yang saling berkait dalam kajian ini. Dalam fasa 1 (fasa pengesanan), faktor sosiodemografi (umur, jantina, etnik, dan tahap pendidikan) telah dibincangkan sebagai pembolehubah ramalan kepada tekanan psikologi dan literasi kesihatan mental. Ini adalah untuk memaklumkan reka bentuk intervensi dalam fasa 2 dalam kajian ini. Prevalens tekanan psikologi menggunakan *'cross-sectional research design'* di kalangan komuniti klinik kesihatan merupakan penentu penting untuk justifikasi kajian fasa 2, menggunakan soal selidik DASS-21.

Hasil kajian dari fasa pertama mendapati sekurang-kurangnya 16.7% dalam "tahap sederhana symptom kemurungan", 15% dalam "tahap sederhana simptom kebimbangan", dan 4.8% dalam "tahap sederhana simptom tekanan" dalam kalangan 293 pesakit klinik kesihatan pensampelan rawak sistematik. Jantina sebagai salah satu faktor sosiodemografi yang telah didapati sebagai satu-satunya peramal untuk tekanan psikologi dan literasi kesihatan mental dalam analisasi *'multiple linear regression'*. Hasil daripada fasa 1 ini menekankan kepentingan untuk mengintegrasikan intervensi psikologi berasaskan bukti dalam peringkat pertama di sistem kesihatan, oleh itu fasa 2

© COPYRIGHT UPM

(fasa intervensi) mengkaji pelaksanaan proses *'brief Cognitive Behaviour Therapy'*(b-CBT) sebagai pendekatan yang berpotensi dalam menguruskan tekanan psikologi dan menambah baik literasi kesihatan mental di kalangan 73 rujukan kendiri, menggunakan *'purposive'* sampel di klinik kesihatan. Analisis *'multivariate analysis of variance'* (MANOVA) digunakan untuk menganalisa kajian *'nonrandomized quasi experiment'* untuk perubahan tekanan psikologi dan literasi kesihatan mental. Keputusan kajian didapati perbezaan yang ketara dalam tiga titik masa (*pre*-, *post*- dan susulan sebulan) untuk tekanan psikologi dan literasi kesihatan mental menggunakan DASS-21 dan *'Mental Health Knowledge Schedule'* (MAKS). Strategi pelaksanaan bengkel b-CBT menunjukkan perubahan positif dalam mengintegrasikan pendekatan psikologi yang ringkas, tidak berstigma, dan berasaskan bukti di kalangan pesakit klinik kesihatan. Pelaksanaan bengkel b-CBT mempunyai potensi untuk memperbaikkan tekanan psikologi dan literasi kesihatan mental.Walaubagaimanapun, ciri rujukan kendiri para pesakit tidak diketahui. Pelaporan tesis ini mengikut garis panduan pelaporan kenyataan TREND.

© COPYRIGHT UPM

ACKNOWLEDGEMENTS

Firstly, I would like to express my deepest appreciation to my committee chair, Dr. Siti Irma Fadhilah binti Ismail, who has been continuously giving me emotional support and encouragement during the course of my study. Without her guidance and persistent help, this thesis would not have been achievable. Many thanks also to one of my committee members, Prof. Dr. Sherina binti Mohd Sidik in assisting me with connecting to the primary care key individuals so that I can get approvals and obtain my data from this unique sample. My utmost gratitude for her to provide me with her support through her presence in all the meetings, proposals, and also one of the b-CBT workshops that we conducted.

Besides that, I would like to express my utmost gratitude for Dr. Tan Kit-Aun for providing me with knowledge guidance in statistics, research methodology, and write-up of this thesis. I am thankful for his guidance and responses to provide feedback for me to improve on my research skills. Additionally, thank you Dr. Zubaidah binti Jamil @ Osman, who has guided me since my Masters degree. I am thankful for her comments and suggestions to improve on my research study.

I gratefully acknowledge the funding received from Fundamental Research Grant Scheme (FRGS) to make this research possible. I am grateful for my research assistants, who has been assisting me with the data collection process. My deep appreciation goes to the primary care doctors who has been allowing and assisting me with data collection, coordination of venue, and providing feedback on the field work for its feasibility. Without them, my study would not have been possible.

A very special thanks and appreciation to my family members, especially my husband who has been constantly providing me with reminders to complete my study. Last but not least, I thank my son that past 30 months, for always having an absent mother figure during this thesis write up and making it possible for me to complete what I have started.

© COPYRIGHT UPM

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosopy. The members of the Supervisory Committee were as follows:

Siti Irma Fadhilah binti Ismail, PhD
Senior Lecturer
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Chairman)

Sherina binti Mohd Sidik, MBBS, MMed, PhD
Professor (Medical)
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Member)

Tan Kit-Aun, PhD
Senior Lecturer
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Member)

Zubaidah binti Jamil @ Osman, PhD
Senior Lecturer
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Member)

____

ZALILAH MOHD SHARIFF, PhD
Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 9 June 2022

© COPYRIGHT UPM

Declaration by Members of Supervisory Committee

This is to confirm that:

- the research conducted and the writing of this thesis was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

Signature: ______________________
Name of Chairman of Supervisory Committee: Dr. Siti Irma Fadhilah binti Ismail

Signature: ______________________
Name of Member of Supervisory Committee: Professor Dr. Sherina binti Mohd Sidik

Signature: ______________________
Name of Member of Supervisory Committee: Dr. Tan Kit-Aun

Signature: ______________________
Name of Member of Supervisory Committee: Dr. Zubaidah binti Jamil @ Osman

© COPYRIGHT UPM

TABLE OF CONTENTS

			Page
ABSTRACT			i
ABSTRAK			iii
ACKNOWLEDGEMENTS			v
APPROVAL			vi
DECLARATION			viii
LIST OF TABLES			xiv
LIST OF FIGURES			xvi
LIST OF APPENDICES			xvii
LIST OF ABBREVIATIONS			xviii

CHAPTER

1	**INTRODUCTION**		1
	1.1	General Introduction	1
	1.2	Mood Disorders	2
		1.2.1 Depression and Anxiety Disorders	2
		1.2.2 Psychological Stress	2
	1.3	Prevalence Studies	3
	1.4	Psychological Distress in Primary Care	4
	1.5	Study Location	4
	1.6	Mental Health Literacy	5
	1.7	Mental Health Systems in Malaysia and the United Kingdom	6
		1.7.1 Malaysia's Mental Health System	6
		1.7.2 United Kingdom Mental Health Services and Systems	7
		1.7.3 Stepped Care Model and Self-Referral Concept	8
	1.8	Brief Psychological Workshops	8
	1.9	Cognitive Behavioural Therapy	9
	1.10	Challenges to Service Provision	10
	1.11	Statement of Problems	11
	1.12	Significance of Research	12
	1.13	Operational Definitions	12
		1.13.1 Psychological Distress	13
		1.13.2 Mental Health Literacy (MHL)	14
	1.14	Research Objectives	14
	1.15	Research Hypotheses	14
	1.16	Theoretical Framework of the Study	15
	1.17	Outline of this Thesis	20
2	**LITERATURE REVIEW**		21
	2.1	Introduction	21
	2.2	Psychological Distress in Primary Care	21
	2.3	Prevalence of Psychological Distress in Primary Care	22

© COPYRIGHT UPM

2.3.1 Prevalence of Diagnosed Depression and Anxiety 22
2.3.2 Prevalence of Stress 23
2.3.3 National Screening for Prevalence of Psychological Distress 23
2.4 Prevalence of Major Depressive Disorder, Generalized Anxiety Disorder, and Adjustment Disorders 24
2.5 World Health Organization Studies on Psychological Distress 25
2.6 National Health and Morbidity Survey (NHMS) 2015 and 2017 26
2.7 Impact of Psychological Distress among the General Population 27
2.8 Sociodemographic Factors and Psychological Distress 28
2.8.1 Gender 28
2.8.2 Age 29
2.8.3 Education Level 30
2.8.4 Socio-economic Status 30
2.8.5 Ethnicity 31
2.9 Mental Health Literacy 31
2.9.1 Mental Health Literacy Scores 32
2.9.2 Importance of Mental Health Literacy 33
2.9.3 Sociodemographic Factors and Mental Health Literacy 34
2.10 Treatment Gap 35
2.11 Behaviour Change Wheel 36
2.12 Psychological Intervention 38
2.13 Efforts to Improve Primary Care Mental Health in Malaysia 41
2.14 Cognitive Behavioural Therapy (CBT) 42
2.14.1 Development of CBT 43
2.14.2 Brief Cognitive Behavioural Therapy (b-CBT) 44
2.15 Self-Referral Primary Care Attendees 47
2.16 Summary of Chapter 2 49

3 MATERIALS AND METHOD 50
3.1 Introduction 50
3.2 Phase 1: Research Design 50
3.3 Phase 1 – Study Population 50
3.4 Study Location 51
3.4.1 Reasons for Selecting a Suburban Location 52
3.4.2 Group Representation in Malaysia 52
3.4.3 The State of Selangor and Hulu Langat District 52
3.4.4 Hulu Langat District 53
3.5 Phase 1 – Sampling Frame 53
3.6 Phase 1 – Sample Size 54
3.7 Phase 1 – Selection Criteria 54
3.8 Phase 1 - Sampling Method 54
3.9 Phase 1 – Study Procedure 55
3.10 Phase 1 – Study Duration 55

© COPYRIGHT UPM

3.11 Phase 1 – Data Collection Procedure 55
3.12 Phase 1 – Instruments Used 56
3.12.1 DASS-21 56
3.12.2 Mental Health Knowledge Schedule 56
3.13 Translation and Back Translation 57
3.14 Pilot Study 58
3.15 Phase 1 – Data Analysis 59
3.16 Phase 1 – Descriptive Analysis 59
3.17 Phase 2 – Research Design 59
3.18 Phase 2 – Sample Size 61
3.19 Phase 2 - Selection Criteria 61
3.20 Phase 2 - Sampling Method 61
3.21 Phase 2 - Sampling Bias and Methods to Reduce Sampling Bias 62
3.22 Development of B-CBT Workshop Module 63
3.23 Phase 2 - Study Procedure 65
3.24 Phase 2 - Data Collection Procedure 66
3.25 Instruments 68
3.26 Study Duration for Phase 2 68
3.27 Control of Threat to Internal Validity 68
3.27.1 Testing Effect 68
3.27.2 History and Mortality Effect 68
3.27.3 Statistical Regression 69
3.28 Data Analysis 69
3.28.1 Multiple Linear Regression 69
3.28.2 One-way Repeated Measure Multivariate Analysis of Variance (MANOVA) 69
3.29 Research Ethics 70
3.30 TREND Reporting Guidelines Statement 71
3.31 Summary of Chapter 3 71

4 RESULTS 72
4.1 Introduction 72
4.2 Response Rates 72
4.3 Participants Flow 72
4.4 Recruitment Days 75
4.5 Intervention Days 75
4.6 Socio-demographic Data and Prevalence of Psychological Distress for Phase 1 Study 76
4.7 Testing the Normality of the Error Terms for Phase 1 78
4.8 Multicollinearity Tests for Phase 1 Study 79
4.9 Multiple Linear Regression Model 81
4.10 Statistical Conclusions for Phase 1 84
4.11 Socio-demographic Profile of Participants in Phase 2 Study ($n = 73$) 85
4.12 Testing the Normality of the Error Terms for Phase 2 86
4.13 Multicollinearity Test 88
4.14 Multivariate Analysis of Variance (MANOVA) 90
4.14.1 Intention-to-treat (ITT) Analysis and Per-Protocol Analysis 90

© COPYRIGHT UPM

4.14.2 Multivariate Analysis for Psychological Distress 90
4.14.3 Multivariate Analysis for Mental Health Literacy 93
4.15 Intention-to-Treat (ITT) Analysis 94
4.16 Per-protocol Analysis 95
4.17 Statistical Conclusions for Phase 2 95

5 DISCUSSION 97
5.1 Overview 97
5.2 Phase 1: Prevalence of Psychological Distress 97
5.3 Phase 1: Associations between Socio-demographic Factors with Psychological Distress and Mental Health Literacy 98
5.3.1 Gender and Psychological Distress 98
5.3.2 Phase 1: Gender and MHL 99
5.3.3 Phase 1: Ethnicity and MHL 99
5.3.4 Phase 1: Education Level, Mental Health Exposure and MHL 100
5.4 Phase 1: Limitations and Strengths 100
5.5 Summary of Findings from Phase 2 101
5.6 Importance of Early Psychological Intervention 101
5.7 B-CBT Workshop as an Evidenced-Based Approach 102
5.7.1 Modules in b-CBT Workshop 102
5.8 Low Mental Health Literacy 103
5.9 Low Cost and High-Volume of Attendees 105
5.10 Models Used for the Self-Referrals 105
5.11 Self-Referral Individuals and its Recruitment Process 106
5.12 Limitations and Strengths 107

6 CONCLUSION, IMPLICATIONS, AND RECOMMENDATIONS 109
6.1 Phase 1: Conclusion 109
6.2 Phase 1: Implications 109
6.3 Phase 1: Recommendations 110
6.4 Phase 2: Conclusion 110
6.5 Phase 2: Implications 111
6.6 Phase 2: Theoretical Implications 111
6.7 Phase 2: Practical Implications 111
6.8 Phase 2: Policy Development 112
6.9 Phase 2: Recommendations for Future Studies 112

REFERENCES 114
APPENDICES 145
BIODATA OF STUDENT 227
LIST OF PUBLICATIONS 228

© COPYRIGHT UPM

LIST OF TABLES

Table		Page
1.1	Framework of Phase 2 Study	19
2.1	Summary of Sessions Topics Used in Horrell et al., (2014)	45
2.2	Summary of Sessions Topics Used in Swift et al., (2012)	46
3.1	Independent Variables and Dependent Variables in Phase 2	60
3.2	Duration and Components of b-CBT	64
3.3	B-CBT Intervention Period	66
4.1	Visitation Days for Data Collection for Phase 1 and Phase 2	75
4.2	Phase 2 Study Intervention Days	75
4.3	Descriptive Statistics for Phase 1 Study (n = 293)	77
4.4	Prevalence of Psychological Distress (n=293)	78
4.5	Skewness, Kurtosis, Mean and Standard Deviation for Phase 1	79
4.6	Multicollinearity Matrix	80
4.7	Tolerance and VIF Scores for Psychological Distress and Mental Health Literacy	81
4.8	Regression Analysis Summary for Socio-demographic Factors Predicting Psychological Distress	83
4.9	Regression Analysis Summary for Socio-demographic Factors Predicting Mental Health Literacy	84
4.10	Phase 1 Hypotheses and Statistical Conclusions	85
4.11	Descriptive Statistics for Phase 2 study (n = 73)	86
4.12	Skewness, Kurtosis, Mean, and Standard Deviation for Phase 2	87
4.13	Intercorrelation Matrix (Pearson correlations) of the Dependent Variables in Phase 2	89
4.14	Within-subject effect for Time on Psychological Distress	91

© COPYRIGHT UPM

4.15	Within-subject Effect for Time on Mental Health Literacy	93
4.16	Intention-to-treat (ITT) Analysis	95
4.17	Per-protocol Analysis	95
4.18	Statistical Conclusions for Phase 2	96

© COPYRIGHT UPM

LIST OF FIGURES

Figure		Page
1.1	The Theoretical Framework in Phase 1 Study	16
1.2	The Theoretical Framework in Phase 2 Study	17
3.1	Location of Klinik Kesihatan Kajang, Klinik Kesihatan Semenyih and Klinik Kesihatan Bangi from other government primary care clinics in the district of Hulu Langat, Selangor, Malaysia	53
3.2	Instruments Translation	58
3.3	Flowchart of Study Design	67
4.1	Participants Flow for Phase 1	73
4.2	Participants Flow for Phase 2	74
4.3	Changes in Mean for Depression, Anxiety, and Stress Mean across Time Points	92
4.4	Changes in Mean for Mental Health Recognition and Mental Health Knowledge across Time Points	94

© COPYRIGHT UPM

LIST OF APPENDICES

Appendix		Page
A	Hulu Langat Map	145
B	Stress Management Handbook for Participants (Compressed)	146
C	Brief CBT Manual	151
D	Powerpoint Slides for B-CBT Workshop	159
E	Questionnaires (Part A and B)	163
F	Fundamental Research Grant Scheme (FRGS)	174
G	Ethics	176
H	Behaviour Change Wheel and APEASE Criteria	184
I	WHO Pyramid Model	187
J	Stepped Care Model	188
K	CBT Model	189
L	TREND Statement Checklist	190
M	DASS-21 Scoring Instructions	193
N	B-CBT Module Development	194
O	Dummy Coding for Socio-demographic Variables	196
P	Analysis Plan	197
Q	SPSS Outputs	198

© COPYRIGHT UPM

LIST OF ABBREVIATIONS

APA	American Psychological Association
B-CBT	Brief Cognitive Behaviour Therapy
BCW	Behaviour Change Wheel
CBT	Cognitive Behaviour Therapy
CMD	Common Mental Disorders
GAD	Generalized Anxiety Disorder
IAPT	Improving Access to Psychological Therapies
KKS	Klinik Kesihatan Semenyih
KKB	Klinik Kesihatan Bangi
KKK	Klinik Kesihatan Kajang
MANOVA	Multivariate Analysis of Variance
MDD	Major Depressive Disorder
MHL	Mental Health Literacy
MOH	Ministry of Health
NHMS	National Health and Morbidity Survey
NICE	National Institute for Health and Clinical Excellence
RA	Research Assistant
UPM	Universiti Putra Malays

© COPYRIGHT UPM

CHAPTER 1

INTRODUCTION

1.1 General Introduction

Mental health is defined as the wellbeing of an individual's cognition, emotions, and behaviour. Mental health includes aspects of successful mental functions that allow individuals to realize their full potential in day-to-day operations. It is equally important as physical health as a sound mental health allows an individual to achieve success, cope with normal stresses of life, work productively, and contribute to the community (World Health Organization, 2017). The focus in today's world is not only to have a physically healthy body, but also a healthy mind to become more productive in their daily living (American Psychiatric Association, 2020).

Mental disorders are one of the most important contributors to the burden of disease and disability worldwide. Mental disorders can be complex and can take many forms with underlying root causes. It comprises a broad range of problems, with different symptoms. Typically, mental disorders are characterized by a wide range of health conditions that affect an individual's cognition, emotion, and behaviour. When an individual has a mental disorder, their daily functioning relating to work or school, social interactions, and relationships are affected (American Psychiatric Association, 2020).

Mental disorders include mental illness from the most commonly experienced symptoms of psychological stress to mood-related disorders and more complex mental health conditions such as psychotic disorders. The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)* specifies three sections for mood-related disorders: Bipolar and Related Disorders, Depressive Disorders, and Anxiety Disorders. Within each section of these mood-related disorders, there are diagnostic criteria for each mental disorder (Blashfield et al., 2014). Compared to these three mood-related disorders, Depressive Disorders and Anxiety Disorders are more common as compared to Bipolar and Related Disorders (Caron et al., 2012; Chin et al., 2017; Kessler et al., 2007).

Among all the mental disorders within the Depressive Disorders and Anxiety Disorders section in the DSM-5, Major Depressive Disorder (MDD) and Generalized Anxiety Disorder (GAD) are the more commonly occurring mood-related disorders (World Health Organization, 2017a). The diagnostic criteria for both mental disorders can be referred to the DSM-5 (please refer to page 150 and page 222, respectively, for the DSM-5 diagnostic criteria). In general, MDD is a clinical depression that can affect family, social, work, or school functioning. For GAD, it is a condition where an individual persistently and excessively worries about many different things in life.

© COPYRIGHT UPM

1.2 Mood Disorders

Mood disorders have been noticeable from classical ancient times to the current modern era. In ancient times, the description of depression is closely associated with supernatural occurrences such as movements of evil spirits, or a punishment from god. Later, Hippocrates (460–377 B.C.) began to explicitly term depression as 'Melancholia', which emanated from the cerebral dysfunction. The dysfunction is related to the imbalance release of black bile, which affects the equilibrium to maintain good health. Then, humoral theory sought to explain that the four "humors", namely yellow, phlegm, blood, and black bile, together with the four seasons would lead to developing different temperaments (i.e., Sanguine, Phlegmatic, Choleric, and Melancholic). These concepts and controversies from the past are still active. The advancement of explanations for mood disorders was based on the cerebral amine hypothesis, which is a modern humoral theory. In DSM-5, Melancholia still exists as a 'specifier' for major depressive episodes (Davison, 2006). The history of mood disorder provides a foundation in understanding the development of the categorization and diagnosis of mood disorder in this current century.

1.2.1 Depression and Anxiety Disorders

The description of depressive disorders and anxiety disorders can also be related to the pervasiveness of the disorders. The World Health Organization (2017) reports that depressive disorders and anxiety disorders are prevalent and common among the population across different cultures, therefore these two disorders can be referred to as common mental disorders (CMD). CMD has undertaken the iteration of the Global Burden of Disease (GDB) studies (World Health Organization, 2017a). In estimation, major depression is expected to be the largest contributor to the GBD in 2030 (Chong et al., 2012; Hassan et al., 2018; Shahar et al., 2016). Additionally, anxiety disorders were the sixth leading cause of GBD from 1990 to 2010 (Baxter et al., 2014). The term 'CMD' therefore, depicts the two most common mood disorders that are prevalent among the general population.

1.2.2 Psychological Stress

Studies have shown that psychological stress can contribute to the development of CMD. Psychological stress affects an individual's psychological and biological systems that are under pressure to cope with environmental demands (Shahsavarani et al., 2015). It is an overwhelming emotional pressure that exceeds an individual's ability to cope and endure. While an optimum level of stress allows an individual to perform accordingly, long-term, and overwhelming negative emotions will create an adverse effect on the individual's psychological and biological system. Studies have shown that there is a positive correlation between chronic psychological stress and the development of depression and anxiety, or CMD (Khan & Khan, 2017). Chronic psychological stress is considered one of the risk factors for the onset of CMD due to its longer duration (Yang et al., 2015).

© COPYRIGHT UPM

While the term ‘psychological stress’ can be used to describe emotions arising from daily pressure and environmental demands, adjustment disorder, on the other hand, is a psychological condition where an individual has persistent stressor or adverse life adjustments impacting the individual’s daily functioning for at least six months (Yang et al., 2015). The difference between psychological stress and adjustment disorders are the duration and functioning of the affected individual. First, individuals can experience psychological stress before either a long or short duration, while individuals with adjustment disorders need to have undergone a minimum of six months of persistent stress. Second, individuals experiencing psychological stress may or may not have their daily functioning impacted, while the diagnostic criteria for adjustment disorder include impairment on their daily functioning. In this thesis, the focus was solely on psychological stress as one of the variables as it covers a broader aspect of an individual’s experience (Shahsavarani et al., 2015; Yahaya, 2018; Yang et al., 2015). Past studies in western countries had indicated that psychological stress is one of the risk factors to developing CMD (Steel et al., 2014; World Health Organization, 2017b), hence, the current study would like to explore a similar phenomenon in the Malaysian population.

Besides psychological distress, current study also focused on depression and anxiety symptoms. The undifferentiated combinations of depression, anxiety, and psychological stress symptoms can be referred to as ‘psychological distress’ ((Drapeau et al., 2012). It is an extensively used indicator of general mental health in public health. Psychological distress is commonly used in population surveys and epidemiological studies, or as an outcome in clinical trials and intervention studies. In this thesis, psychological distress is used to characterize the state of emotions comprising depression, anxiety, and psychological stress, which are the three most common emotional conditions that exist in the general population worldwide (Arvidsdotter et al., 2016; Drapeau et al., 2012).

1.3 Prevalence Studies

Mental health disorders are a major public health issue throughout the world. In Malaysia, mental disorders are estimated to be about 8.6% of the total Disability-Adjusted Life Years (DALYs). The Malaysian Ministry of Health (MOH) has recently reported that one in three adults in the country was at risk of developing a mental health problem such as depression, anxiety, and psychological stress for the last five years. In year 2020, mental health issues were a major health problem in Malaysia (Hassan et al., 2018).

The National Health Morbidity Survey (NHMS) conducted by the MOH once every four years found that the prevalence of mental health problems among the population has an increasing trend from 10.7% in 1996 to 29.2% in 2015. NHMS reported that the prevalence of GAD, MDD, and suicidality among Malaysian adults aged 16 years and above was 1.7%, 2.4%, and 1.8%, respectively. In 2019, depression was estimated to be 2.3% (about 0.5 million Malaysians). With the relatively high percentage reported, it has also been increasingly recognized that depression and anxiety are the two most common mental health conditions that impacted the public health community.

© COPYRIGHT UPM

1.4 Psychological Distress in Primary Care

An attempt to estimate the prevalence of CMD in the primary care setting in Malaysia was reported to be 6.7–14.4%. However, it was inconclusive due to the inconsistency in a standard of measurement across all studies reviewed (Mukhtar and Oei, 2011). The MOH (2015) also stated that the prevalence of mental health problems or disorders in Malaysia was not well established. The prevalence of psychological distress in the Malaysian primary care setting was also limited. A study has shown that the prevalence of anxiety was 7.8% among women primary care attendees (Sidik et al., 2011). These indicated that the estimates of the prevalence of depression, anxiety, and stress among the primary care setting require more attention to improve on the statistics.

The socio-demographic risk factors associated with psychological distress had been well documented in past studies. First, females have a higher risk of developing psychological distress compared to males (Deshpande et al., 2014; World Health Organization, 2013). Second, past studies focused on the adult population in studies relating to psychological distress concluded that psychological distress could occur in all age groups from 18 and above, depending on the exposure to a stressful life event (Farrer et al., 2008; Kader Maideen et al., 2014). Third, individuals with higher education and higher household income have a lower risk of developing psychological distress (James et al., 2018; Ministry of Health Malaysia, 2011; Milanović et al., 2015). Fourth, the ethnicity in Malaysia that is reported to have the highest prevalence for depression and anxiety was Indian (Picco et al., 2017; Tobi et al., 2017). Therefore, the risk factors for developing psychological distress are contextual.

1.5 Study Location

Primary care is defined as the health care centre for the delivery of integrated and accessible health care services (American Psychological Association, 2016). It includes providing the first line of treatment and care for individuals with mental health issues, including issues relating to psychological distress (American Psychological Association, 2016; Arvidsdotter et al., 2016). Nevertheless, studies reported psychological distress is often overlooked in the primary care setting due to the masked symptoms of physical and psychosomatic complaints of their conditions (American Psychological Association, 2016), leading to worsened condition (Arvisdotter, 2016).

The World Health Organizations (2011 & 2018) have continuously informed that the integration of mental health services to primary care can improve the accessibility and availability of mental health services. In Malaysia, the medical referral system has indicated that psychiatric and psychological services fall within tertiary care (Ministry of Health Malaysia, 2011). The likelihood of having primary care attendees who are left out or not being referred to tertiary care can be high due to the level of accessibility (Seekles, van Straten, et al., 2009). Therefore, a targeted community mental health service in primary care is essential to allow undetected individuals with mental health conditions to access appropriate treatment and proper care pathway (Arvidsdotter et al., 2016).

© COPYRIGHT UPM

In Malaysia, the suburban population has a unique combination of socio-demographic characteristics to understand the condition and prevalence of their psychological states (Sidik et al., 2011). A suburban area is defined as a housing area on the peripheries of a city (Loh & Brieger, 2013). The study location of this research was in a suburban area in Hulu Langat district in Selangor, Malaysia. This area is reported to have the highest population in Malaysia. Hulu Langat district itself has a mixture of rural, suburban, and urban areas. The suburban area is reported to be exponentially growing with rural-urban migration, newfound economic affluence, and growth of infrastructure facilities. The development of suburban areas may happen at a very fast rate, which could potentially affect the mental health and community wellbeing (Yeoh et al., 2017). Therefore, these literature findings highlight the reason for the study to be focused on primary care settings in the suburban area in the Hulu Langat district due to the above-mentioned reasons.

1.6 Mental Health Literacy

Mental health literacy (MHL) is defined as the knowledge and beliefs about mental disorders that aid in mental health recognition, management, and prevention (Jorm et al., 1997). The MHL term was first used in 1997 to highlight the importance of recognizing mental health problems and their management and prevention strategies (Cotton et al., 2006b; Jorm et al., 1997; Jorm, 2012; Jorm et al., 2017). The framework of MHL is divided into three categories—recognition, knowledge, and attitude. These three categories are interconnected. For example, an individual who has good recognition of the signs and symptoms of depression (recognition) would source for information regarding the disorder and available help (knowledge). The action of sourcing and seeking help depends on the attitude toward the disorder and/or mental health in general (attitude) (Jorm et al., 1997).

Among the primary care attendees, the recognition and awareness of their mental health condition remains one of the challenges to obtaining effective mental health treatments. This subsequently affects the help-seeking behaviour among many primary care clinics throughout the world (Rafal, Gatto, and Debate, 2018; Gorcyznski, Sims-schouten, Hill and Wilson, 2017; Bonabi and colleagues, 2016). In Malaysia, studies have found that many among the general population did not want to admit that they have mental health issues despite the obvious mental health symptoms presented (Hassan et al., 2018b; Ibrahim et al., 2019a). This issue is most likely associated to fear of self-stigma and public stigma (Hassan, Kassim, Hassan, & Hamzah, 2018). The importance to study the MHL among the public to further understand their recognition, knowledge, and attitude toward mental health conditions in the current study is essential to bridge this gap.

Adequate MHL can affect the treatment outcomes between the primary care attendees and the general practitioners in the primary care clinics. It has been known that primary care attendees who negatively communicate their mental health condition to health care providers are more likely to have poor early detection and treatment (Jacomb & Jorm, 1997). For instance, attendees' reports in somatic terms, such as headache and muscle pain may lead to late detections and poor treatment outcomes. These physical reports

© COPYRIGHT UPM

could be perceived as nonmental health–related hence, affecting the key importance of early identification and early care (Herran, Vasquez-Barquerro, and Dunn, 1999). Therefore, adequate mental health literacy among primary care attendees and the general practitioners can assist in better communication between the two parties, leading to better-targeted treatment.

1.7 Mental Health Systems in Malaysia and the United Kingdom

The mental health systems between Malaysia and the United Kingdom were compared in the literature review. UK's mental health system (i.e., UK National Health Services, stepped care and self-referral concept) is chosen for comparison with the Malaysian mental health system as the mental health system in the United Kingdom involves the intervention of community sector. This involvement is consistent with the current study that focused on primary care in Malaysia.

1.7.1 Malaysia's Mental Health System

The National Mental Health Policy for Malaysia was formulated in 1998. This policy emphasizes on advocacy, promotion, prevention, treatment, and rehabilitation. There are eight guiding principles for the development of mental health in Malaysia, according to the policy—comprehensiveness, accessibility and equity, continuity and integration, multi-sectoral collaboration, community participation, human resource training, standards, and monitoring, as well as research. The policy was revised and updated to develop strategies for the implementation of mental health programs (Ministry of Health Malaysia, 2011, 2017; Tsuey Chong et al., 2013).

Following that, the Malaysian Mental Health Framework was developed in 2002 as a blueprint for the planning and implementation of mental health services in Malaysia (Ministry of Health Malaysia, 2011). A comprehensive range of services and care for all age groups, from mental health promotion, prevention of mental disorders, treatment, and rehabilitation of the mentally ill at the hospital, primary care, and community level, was highlighted. Among them, the emphasis on primary care facilities was still at a very early stage as the focus was more toward improving the number of psychiatric healthcare professionals (Ministry of Health Malaysia, 2011, 2017).

Next, the National Operational Plan of Action for Comprehensive Integrated Community Mental Health Services (CMHS) for the year 2013 to 2020 was formulated, mainly focusing on the Public Health Division of the Ministry of Health. Action plans, which include strengthening the community mental health services in the states for more community participation and detection, were recommended (Ministry of Health Malaysia, 2011). The effort aims to allow more accessible and integrated mental health care for the community to alleviate the prevalence rates of mental disorders in Malaysia (Ministry of Health Malaysia, 2017). However, these implementations have faced many challenges, such as lack of manpower and funding, lack of sharing of visions among mental health providers, and lack of coordination between primary health centers for

© COPYRIGHT UPM

mental health services activities (Midin and Toh, 2018). These issues were still present from the Malaysian Mental Health Framework that was proposed in 2002 (Ministry of Health Malaysia, 2017).

Mental health services in Malaysia have been offered in 704 (82%) of all primary health centers in the year 2002. Those services include mental health promotion, and early detection and treatment of common mental disorders. Follow-up of stable patients, outreach care for those who drop out of care, family intervention, and psychosocial rehabilitation were among the services offered in the chosen 23 clinics throughout Malaysia in their pilot study. Some of the clinics are still conducting services for the community, while most of the clinics currently conduct mental health screening (Ministry of Health Malaysia, 2017). The plan that was developed by the MOH—National Mental Health Policy in 1998 and 2012—was still ongoing, although many challenges are being faced. Therefore, the integration of mental health care services is still not fully utilized or implemented (Ministry of Health Malaysia, 2011, 2017).

There have been efforts to integrate mental health services to all primary mental healthcare clinics since the Malaysian Mental Health Framework was launched. The focus of the integration involves empowering the family physician with mental health promotion and rehabilitation. However, some primary care clinics in rural and suburban areas are still having limited resources and expertise to manage cases with mental health issues (Ministry of Health, 2015). As mentioned above, these challenges are not in ideal terms with the recommendations from the World Health Organization (2018), where resources were identified as one of the most important factors for the inclusion of mental health in primary care settings. Therefore, the ongoing effort to strengthen and increase mental healthcare services in the community is still in the early stages as compared to many other countries, such as the United Kingdom.

1.7.2 United Kingdom Mental Health Services and Systems

In the United Kingdom, the implementation of integrated care for mental health at the primary care level suggests multiple potential benefits for both primary care attendees and their providers, especially for the rural and suburban populations (National Health Services, 2018). Additionally, a recent systematic review study indicated that the integration of mental health care in the public health settings was found to increase patients' satisfaction with perceived quality of care and enabling access to services (Baxter et al., 2018) as well as often able to be more cost-effective (Department of Health: London, 2001). The benefits of the integration have assisted the UK National Health Services (NHS) to reduce the growing financial and service pressures through these transformations (National Association of Primary Care, 2018). Benefits and the possibility of mental health service integration were identified.

© COPYRIGHT UPM

1.7.3 Stepped Care Model and Self-Referral Concept

The implementation of integrated mental health services at the primary care level requires a few implementation strategies. First, the United Kingdom has identified the evidenced-based Stepped Care model and Improving Access to Psychological Therapies (IAPT) services as convincing models for the National Health Service in England to utilize (National Association of Primary Care, 2018; National Health Service, 2018). The Stepped Care model is used by the IAPT services to make clinical decisions as to the type of treatments currently most needed for the person to assess (Franx et al., 2012). The Stepped Care model is a system that provides monitoring and delivery of treatments. This model is most effective and yet, least resource intension as the treatment is only delivered to patients who needed them, or in other words, 'stepping up' to a tertiary care service as clinically required (Clark et al., 2009a; Franx et al., 2012; Richards & Borglin, 2011).

Second, Brown, June & Cochrane (1999) has introduced the concept of self-referral for mental health services. According to Brown et al., (1999), self-referral is defined as self-initiative in referring themselves to medical care. The rationale of having self-referral is to reduce stigma, social exclusions, discriminations, and lack of resources the self-referral concept to psychological services in primary care. These psychosocial and environmental factors were long identified as hampering factors that affect psychological help-seeking (Abi Doumit et al., 2019; Ibrahim et al., 2019; Shimotsu & Horikawa, 2016). Self-referral to psychological services, such as counseling and psychotherapies, can assist as an alternative access point to decrease the impact of "medicalization" so that mental health problems can be perceived as less likely to automatically come within the domain of medical professionals (Archer et al., 2009). The self-referral concept can improve on the number of individuals, who may benefit from early identifications of mild to moderate mental health conditions as they are frequently being "filtered out" from the health care system, despite consulted a primary care medical officer (Brown et al., 1999). This helps in improving access to mental health services at the primary care level (Brown et al., 2010b). The self-referral concept, therefore, can be said as an alternative to support the existing social and environmental issues that hinder an individual from seeking help in managing their mental health condition.

1.8 Brief Psychological Workshops

In the year 1996, the first day-long community in the United Kingdom called "Stress Workshop" using the self-referral route was introduced in conjunction with the World Health Organization campaign (Brown et al., 1999). The workshop aimed to improve the health of the general population in the United Kingdom. The workshop found that 39% who had not consulted the general practitioners, attended the workshop. This group of individuals was reflected as the group that had been "filtered out" or was reluctant to seek for help previously but was more receptive in attending this workshop. (Brown et al., 1999; Morgan et al., 2010). Additionally, the self-referral route to a large-scale psychological intervention was found to be a preferred approach for people experiencing distress as compared to self-referral to mental health professionals in the private setting,

© COPYRIGHT UPM

especially for common mental health problems (Brown et al., 2010; Brown & Cochrane, 1999). Through these studies, the self-referral route to mental health services appeared to be promising in increasing mental health help-seeking.

In the United Kingdom, the inclusion of mental health services for the public is important as it is an inherent element of the health and wellbeing of an individual. Furthermore, mental disorders are highly treatable and manageable, yet the treatment gap remains enormous (World Health Organization, 2018). However, social exclusion within the society, discrimination, stigma, lack of social network and support, lack of awareness and recognition of symptoms, as well as diminished social roles are among the ongoing challenges many different countries, including the United Kingdom (Crowe et al., 2018; Jorm, 2012b; Low et al., 2019; Shimotsu & Horikawa, 2016) and Malaysia. Studies have attempted to explain and rectify the multifactorial causes of having poor treatment gaps and the lack of resources and options for them to seek help and manage their mental health at an earlier level remain to contribute to the rising of mental health issues and repeated visitations to the general practitioners (Collins, 2016). The health care system in the United Kingdom that previously may not be able to target appropriate implementation strategies for mental health services has improved to target appropriate treatment and capture individuals who required the treatments.

Using psycho-educational Cognitive Behavioural Therapy (CBT) workshop and the self-referral route as an approach to increase the uptake of psychological interventions and reducing the individuals being "filtered out" was originally set up in Birmingham and further developed in south-east London (Brown, 2010). The workshop aimed to attract people with problems of depression and anxiety, who might not have proper access to primary care treatments, poor knowledge of mental health, or faces challenges to being discriminated against and stigmatized. These factors can address similar problems that may be faced by Malaysia's primary care attendees in accessing mental health treatments (Hassan et al., 2018).

1.9 Cognitive Behavioural Therapy

A psychological approach used in psychotherapy called the brief Cognitive Behavioural Therapy (b-CBT) has shown mild to moderate empirical support for the management of anxiety (d=1.06) and depression (d=0.33) (Cape et al., 2010; Christensen et al., 2006; Cully et al., 2012). Studies showed that the techniques in b-CBT stem from changing thoughts and behaviours that contribute to distressing emotions, creating awareness of problems, and learning a set of skills to manage one's issues (Cully et al., 2012). The techniques are similar to the traditional CBT model; however, in a more compressed duration. The typical CBT involves around 6 to 12 sessions with an hour per session (Beck, 2011). However, the b-CBT has 4 to 8 sessions, with an hour per session (Cully et al., 2012). The b-CBT workshop adopts from the b-CBT sessions is compressed to a 4-hour, half-day psychoeducational workshop (Brown et al., 1999). The components that are included in the b-CBT workshop include an introduction, goal setting, behaviour activation, identification of negative thoughts, thought challenging, thought patterns, and problem-solving skills. The main areas covered targeted the alleviation of depression

© COPYRIGHT UPM

and anxiety symptoms such as physical, cognitive, behavioural, and action planning (Cully et al., 2017; Ekers et al., 2006) and expected to improve on mental health literacy due to its psychoeducation nature of the workshop.

1.10 Challenges to Service Provision

There are a few challenges to mental health service provision based on the literature review. First, the population's recognition and awareness of one's mental health condition remain one of the challenges of obtaining mental health treatments (Khan et al., 2010; Amirah et al., 2020). As the level of MHL positively correlates to help-seeking behaviours among many primary care clinics throughout the world (Rafal, Gatto, and Debate, 2018; Gorcyznski, Sims-Schouten, Hill and Wilson, 2017; Bonabi et al.,, 2016), the concept of MHL should be further highlighted in mental health service provision. Studies have found that many among the Malaysian population do not come forward with their mental illness fearing social stigma and discriminations (Crowe et al., 2018). While some of the individuals relate mental illness to cultural-based syndrome due to their belief system, others do not seek treatments due to stigma (Hassan et al., 2018). Both the belief system and attitudes toward mental illness in Malaysia remain complex.

On the other hand, an individual may have difficulty recognizing the signs and symptoms of mental health disorders as well as the name of the mental disorders. This is a crucial stage of communication during the help-seeking attempts in the primary care clinic. It has been known that primary care attendees who negatively communicate their mental health condition to the health care providers are more likely to have poor early detection and treatment (Chen et al., 2000a). Most of the attendees' report in somatic terms, such as headache and muscle pain (Herran, Vasquez-Barquerro, and Dunn, 1999). These physical reports could be perceived as non-mental health-related, hence, affecting the key importance of early identification and early care. This may create another challenge for the mental health service provision due to communication and knowledge barriers.

Despite countless attempts by Malaysia's government to conduct awareness programs and advertisements (Cawangan Kawalan Amalan Perubatan Swasta (CKAPS) / Private Medical Practice Control Branch, 2014; Ministry of Health, 2017), individual factors such as stigma and discrimination toward mental health patients still affects the complex personal attitudes towards help-seeking in Malaysia (Hassan et al., 2018). The perception of mental health and mental disorder remained multifaceted in Malaysia. Attempts to understand the contribution to stigma and discrimination towards mental disorders include cultural factors, lack of understanding, social judgments, and fear (Aida et al., 2010; Norhayati Ibrahim et al., 2019; Shoesmith et al., 2018).

Lastly, it is undoubtedly that the integration of traditionally used psychotherapy services in primary care settings are costly and resource intensive (Brownawell & Kelley, 2011). With the fast and busy nature of the setting, it is almost difficult to implement traditional psychotherapy, which may require sessional follow-ups and a minimum of 45 minutes per session. Therefore, a proper implementation strategy needs to be considered. As

© COPYRIGHT UPM

indicated, short, brief, targeted intervention to symptoms, least resource-intensive, and self-management evidenced-based intervention has been discussed as a potential approach to be integrated into primary care. The Stepped Care model from the IAPT services and the self-referral concept used in the United Kingdom can be learned and utilized as a model to increase the access to psychological services for individuals who clinically require it. Therefore, the b-CBT workshop approach and recruitment strategy appeared to be encouraging in implementing in Malaysia's primary care setting.

1.11 Statement of Problems

The prevalence of psychological distress among primary care attendees in the suburban area is still unknown due to varied standards of measurements (Mukhtar & Oei, 2011). The prevalence of psychological distress in the suburban primary care community in Malaysia remains unidentified as most studies are focused on the general population instead of a specific group of population, such as the suburban primary care attendees. The unidentified prevalence of psychological distress among the suburban population can lead to poor targeted interventions as the needs are unidentified (Harder, 2014). Through the identification of specific prevalence psychological distress and its socio-demographic factors, the intervention planning can be more targeted.

Additionally, the MHL among the Malaysian population is still unknown at present. There were minimal studies that attempted to understand the MHL among individuals in Malaysia and none of them has been done in the primary care attendees. Through investigating the level of MHL among primary care attendees and its associated socio-demographic factors, light can be shed on the level of knowledge and awareness of mental health in the suburban community for a targeted intervention. It is aimed that the b-CBT workshop as the targeted intervention can be the potential approach as the b-CBT workshop stems strongly from a module with psychoeducation (Ekers et al., 2006). These assessment of the MHL rates are expected to bring new knowledge in the field of MHL among the primary care attendees and for future selected interventions in this area.

The need for integrating psychological service in long run to the primary care setting involves reducing stigma (Brown & Cochrane, 1999; Li et al., 201a), improving the provision of services, planning and implementing strategies for prevention of mental disorders (Brown & Cochrane, 1999; World Health Organization, 2011), and upscaling primary healthcare workers to apply psychosocial and behavioural skills to reduce the prevalence of psychological distress Brown et al., 1999, 2010). An evidence-based psychological service that could address the identified challenges to help-seeking is needed. Based on the literatures, the mental health system in Malaysia have limited evidence-based and targeted interventions for primary care attendees. The targeted interventions are important to complement with existing gaps in the existing system.

© COPYRIGHT UPM

1.12 Significance of Research

The current study can complement the existing system by addressing self-referred attendees in groups, while targets the awareness of the primary care population in general. The implementation of b-CBT as a potential approach to managing psychological distress follows the National Mental Health Policy in 1997 (developed by the Ministry of Health (MOH), with three aims: (1) to provide a basis in developing strategies and direction to those involved in any planning and implementation towards improving mental health and wellbeing; (2) to improve mental health services for populations at risk of developing psychosocial problems; and (3) to improve the psychiatric services for people with a mental disorder in the provision of care and protection by the family, community and relevant agencies.

This study was also consistent with the World Health Organization's (2018) suggestion on integrated care model in the primary care healthcare system to increase accessibility, enhancing primary care attendees perceived satisfaction and needs as well as lowering the cost incurred for the health system (World Health Organization, 2018b). This study's objectives are aligned to WHO's and MOH's policy in developing a targeted module to enhance well-being and reduced risk, via collaborative work within a non-psychiatric setting.

Besides that, the integration of psychological services in the primary healthcare setting will enable primary healthcare workers to apply the psychosocial skills and behavioural techniques to primary care attendees. This can improve the current provision of services through integration of mental health services to the primary healthcare. Additionally, the scaling up of mental health services can potentially increase the coverage and number of individuals receiving psychological services that are scientifically evidenced. This sustainable integration can benefit the primary healthcare workers to reduce their workload due to symptomatic and recurrent treatments as well as providing accessible resources for the attendees.

Lastly, the study highlighted the importance of looking at psychological distress (depression, anxiety, and stress) as an important contributor to the burden of disease in Malaysia. Moreover, the awareness of mental health and their mental health literacy are also important in facilitating help-seeking. These two factors can potentially improve on the burden of disease and disability, which can be impactful towards the economy of the country.

1.13 Operational Definitions

This study uses several key definitions to study the change process of an evidence-based intervention as brief CBT as a potential approach for the management of psychological distress (conceptualized as depression, anxiety, and stress) among primary care attendees in the suburban primary care clinics.

© COPYRIGHT UPM

The first phase of the study focused on obtaining the prevalence of psychological distress and the socio-demographic factors (age, gender, ethnicity, and education level) to predict psychological distress (depression, anxiety, and stress). The same set of socio-demographic factors was used to predict mental health literacy among the primary care attendees. The objective of the first phase was to inform on the widespread of psychological distress in justifying the need for intervention in the second phase, as well as the identification of socio-demographic factors as variables that are important for the second phase of the study consider.

The second phase of the study was to assess the change process of using a validated psychological approach, namely brief Cognitive Behavioural Therapy (b-CBT) approach. Change process is the process to assist individuals to change their internal (e.g., knowledge, awareness, thoughts, emotions) and external processes (e.g., behaviour, physiological state) to achieve a desired outcome. The compressed version of b-CBT in a workshop format (b-CBT workshop) is used to manage mild-to-moderate levels of psychological distress and improving mental health literacy among the primary care self-referrals. The purpose of this phase of the study was to identify the change process of the b-CBT workshop in the management of psychological distress and improving mental health literacy using psychoeducation, cognitive and behavioural approach, across different time effect (pre-intervention, post-intervention, and one-month follow-up). It is the changes of the individual's internal and external state to achieve the study objectives. The implementation strategy used in this phase follows the gaps in knowledge identified.

1.13.1 Psychological Distress

In this study, psychological distress was defined by the symptoms from Major Depressive Disorder (MDD) and Generalized Anxiety Disorder (GAD) as well as psychological stress. The diagnostic criteria for MDD and GAD can be referred to the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)* (APA, 2013, p.150, p.222). For psychological stress, the study defines this construct as a response that involves the interrelations between the physiological, behavioural, and cognitive responses aimed at maintaining homeostasis whenever there are any changes to the individual or environment (Tan & Yip, 2018).

In this study, the MDD, GAD, and stress symptoms are screened and identified using the the Depression, Anxiety, and Stress Scale-21-items (DASS-21) (Lovibond & Lovibond, 1995). The depression, anxiety, and stress items in the DASS has 7-items each in the questionnaire. The cut-off scores of the for the three components in the scale are indicated in Appendix M.

© COPYRIGHT UPM

1.13.2 Mental Health Literacy (MHL)

Mental Health Literacy (MHL) refers to "knowledge about mental health disorders that are associated with their recognition, management, and prevention" (Jorm, 2000). In this study, MHL is defined as stigma-related mental health knowledge. MHL is measured using the Mental Health Knowledge Schedule (MAKS) (Evans-Lacko et al., 2010) . In the MAKS, there are two components namely, mental health knowledge and mental health recognition. In mental health knowledge, six items measure stigma-related mental health knowledge such as recognition, help-seeking, support, employment, treatment, and recovery. In mental health recognition, six-items were asked about familiarity and recognition with mental health conditions. The scoring for both components use the ordinal scale. The total of each of the components from the MAKS showed the higher the score, the higher the mental health knowledge and recognition.

1.14 Research Objectives

Phase 1: The objectives in the first phase of the study was to identify the prevalence of psychological distress (conceptualized as depression, anxiety, and stress) and whether the socio-demographic factors predict psychological distress. The same set of socio-demographic factors was also used to determine whether they predict mental health literacy (conceptualized as mental health recognition and mental health knowledge) among primary healthcare attendees in the government primary health care clinics in the Hulu Langat district.

Phase 2: The objective in the second phase of the study was to determine the change process of the b-CBT intervention approach in reducing psychological distress (conceptualized as depression, anxiety. and stress) and improving mental health literacy (mental health knowledge and mental health recognition) at three-time points (i.e. pre-intervention, post-intervention, and one-month follow-up) among self-referral primary health care attendees in the government primary health care clinics in the Hulu Langat district

1.15 Research Hypotheses

In the phase 1 study, the cross-sectional research design was guided by the research hypotheses below:

RH1: Socio-demographic factors (age, gender, ethnicity, and educational level) would predict depression among primary care attendees at primary health care clinics in Hulu Langat district

RH2: Socio-demographic factors (age, gender, ethnicity, and educational level) would predict anxiety among primary care attendees at primary health care clinics in Hulu Langat district.

RH3: Socio-demographic factors (age, gender, ethnicity, and

© COPYRIGHT UPM

educational level) would predict stress among primary care attendees at primary health care clinics in Hulu Langat district

RH4: Socio-demographic factors (age, gender, ethnicity, and educational level) would predict mental health recognition among primary care attendees at primary health care clinics in Hulu Langat district.

RH5: Socio-demographic factors (age, gender, ethnicity, and educational level) would predict mental health knowledge among primary care attendees at primary health care clinics in Hulu Langat district.

In the phase 2 study, the quasi-experimental research design was guided by the research hypotheses below:

RH6: There would be a significant change in depression over pre-intervention, post-intervention, and one-month follow-up among primary care self-referrals after receiving b-CBT intervention at primary health care clinics in Hulu Langat district.

RH7: There would be a significant change in anxiety over pre-intervention, post-intervention, and one-month follow-up among primary care self-referrals after receiving-CBT intervention at primary health care clinics in Hulu Langat district

RH8: There would be a significant change in stress scores over pre-intervention, post-intervention, and one-month follow-up among primary care self-referrals after receiving b-CBT at primary health care clinics in Hulu Langat district.

RH9: There would be a significant change in mental health recognition scores over pre-intervention, post-intervention, and one-month follow-up among primary care self-referrals after receiving b-CBT intervention at primary health care clinics in Hulu Langat district.

RH10: There would be a significant change in mental health knowledge scores over pre-intervention, post-intervention, and one-month follow-up among primary care self-referrals after receiving b-CBT intervention at primary health care clinics in Hulu Langat district

1.16 Theoretical Framework of the Study

The study was conducted in two phases. In Phase 1, the prevalence of psychological distress was obtained to identify the number of cases that are within the range of mild, moderate, and severe levels of psychological distress. The results would inform the implementation of a targeted intervention for the same group of population. Besides that, Phase 1 was also used to inform on the potential participants' socio-demographic characteristics in Phase 2 using the socio-demographic factors (age, gender, ethnicity, and educational level) (Chong et al., 2016; Yahaya, 2018; Yeoh et al., 2017; Yuan et al.,

© COPYRIGHT UPM

2016). These socio-demographic variables aimed to predict psychological distress and mental health literacy. Figure 1.1 showed the theoretical framework in Phase 1. The socio-demographic factors (age, gender, ethnicity, and educational level) are the predictors and psychological distress, and mental health literacy are the criteria. Both results from Phase 1 would then assist with the justification of intervention and participants recruitments in Phase 2. Therefore, both phases are linked.

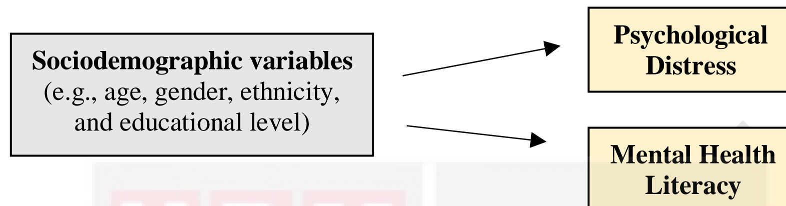

Figure 1.1 : The Theoretical Framework in Phase 1 Study

In Phase 2, b-CBT workshop as a potential approach in the change process of psychological distress was studied. The b-CBT workshop was used in this study as it is one of the most widely and most evidenced-based psychotherapy approaches to manage psychological distress. The cognitive and behavioural components in the traditional CBT have proven evidenced-based results to improve on psychological distress symptoms particularly. The framework which stated that the change of cognition can lead to a change of emotions and behaviours appeared to be able to target the negative thoughts of depression, anxiety, and stress, as well as the lack of control over their physical body (i.e. palpitations) that frequently exist in individuals with anxiety. Techniques such as behavioural activation, deep breathing, psychoeducation, cognitive identification, cognitive challenging, goal setting, and problem-solving are among the CBT techniques following the framework.

Figure 1.2 shows the theoretical framework for the Phase 2 study. The framework was obtained from The Public Health Model (Centre for Disease Control and Prevention, 2021). The public health approach is a four-step model that is based on scientific evidenced method. It can be applied to any health problems, including mental health conditions that affect the population (Centre for Disease Control and Prevention, 2021). The design of the study from Phase 1 to Phase 2 follows this model for Step 1, 2 and 3.

Step 1 focused on understanding the magnitude of the problems which includes analyzing data that are related to the health problem (Centre for Disease Control and Prevention, 2021). In the study, Phase 1 follows Step 1 in the public health model. The identification of the prevalence of psychological distress can inform the psychological distress conditions in the primary care population pertaining to the magnitude of the problem in Phase 1. This data is important for Phase 2 study and Step 3 in the public health model.

© COPYRIGHT UPM

Step 2 focused on identifying the risk and protective factors of the health problem (Centre for Disease Control and Prevention, 2021). Besides identifying the prevalence of psychological distress, the study also identified the risks factors which were the socio-demographic characteristics of the primary care attendees having psychological distress in Phase 1. The identification of risk factors can increase the understanding of the likelihood an individual having psychological distress and poor mental health literacy.

Step 3 emphasized on developing and testing prevention strategies (Centre for Disease Control and Prevention, 2021). Information obtained from Phase 1 study and Step 1 from the model are useful to develop evidenced-based treatment for the mental health problem. The development of b-CBT as a potential approach to improve psychological distress and mental health literacy among the primary care attendees is considered Step 3 in the model. The application of an evidenced-based approach, the b-CBT on psychological distress and mental health literacy were evaluated for its change process.

Step 4 focused on assurance of widespread adoption where the dissemination of the evaluated treatment strategies can be done. This dissemination technique helps to promote widespread adoption which comprises networking, training, and evaluation. The study stops at Step 3 and will continue to move to Step 4 based on the evaluation and results obtained.

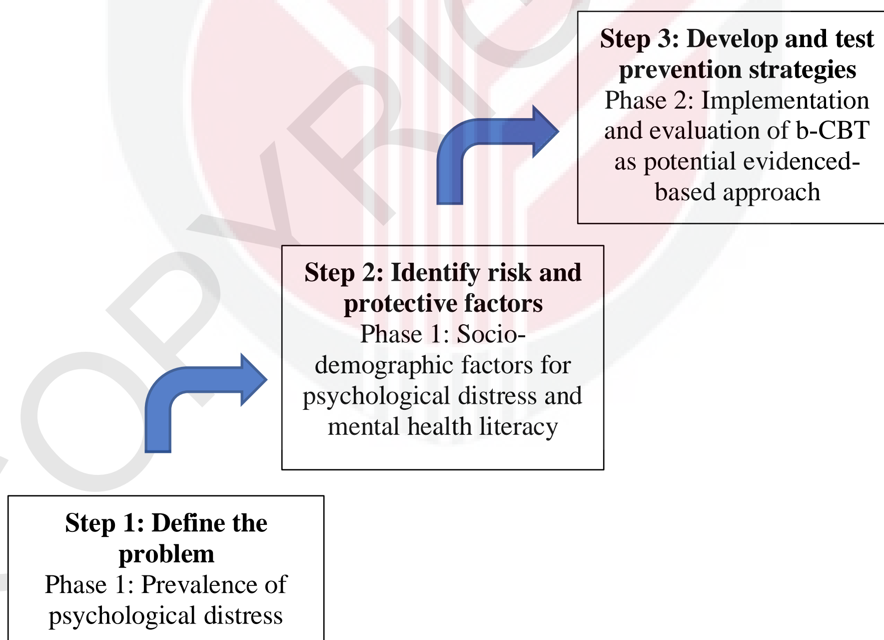

Figure 1.2 : The Theoretical Framework in Phase 2 Study
Note : The Public Health Approach to Violence Prevention. The figure demonstrates three out of four steps of the Public Health Model.
(Source : Centre for Disease and Control (2021)

Table 1.1 shows the targeted domains, aim of intervention, and its expected outcomes

© COPYRIGHT UPM

based on the issues identified from the literatures for the implementation of b-CBT workshop. Detailed components of each session, such as issues identified, domains of interventions, proposed interventions, the aim of the intervention, and expected outcomes in the b-CBT workshop implementation was shown in table 1.1. The issues identified were based on the problem statements and the domains of interventions were based on past literature. The proposed intervention being b-CBT detailed the specific components and its implementation strategies to address the problem statements in issues identified.

© COPYRIGHT UPM

Table 1.1 : Framework of Phase 2 Study

Issues identified	Domains of intervention	Proposed intervention	Aim of intervention	Expected outcomes
Early intervention	Access to primary care	b-CBT	Recognition and self-help	Remissions of symptoms
Evidenced-based approach	Psychological and evidenced-based (CBT)	b-CBT	Recognition and self-help	Remissions of symptoms
Low MHL affects the efficiency of primary care attendees	Psycho-education	b-CBT	Recognition, self-help, and resources	Early identification and self-management
Stigma	Non-stigma/ non-medical publicity	Psycho-education	Recognitions and beliefs	Early identification and self-management
Volume of attendees	Accessibility	Large-scale workshop	Promote accessibility	Low cost, and a high volume of attendees

© COPYRIGHT UPM

1.17 Outline of this Thesis

This chapter provides the introduction of the whole thesis. Details of the past literature using local and international evidence and gaps in knowledge are discussed in Chapter 2. Then, the study design and methodology are presented in Chapter 3. The results and discussion of the study are presented in Chapters 4 and 5, respectively. Finally, Chapter 6 includes the conclusion, recommendations, and future studies

© COPYRIGHT UPM

REFERENCES

Abdul Manaf, M. R., Mustafa, M., Abdul Rahman, M. R., Yusof, K. H., & Abd Aziz, N. A. (2016). Factors influencing the prevalence of mental health problems among Malay elderly residing in a rural community: A cross-sectional study. PLoS ONE, 11(6). https://doi.org/10.1371/journal.pone.0156937

Abi Doumit, C., Haddad, C., Sacre, H., Salameh, P., Akel, M., Obeid, S., Akiki, M., Mattar, E., Hilal, N., Hallit, S., & Soufia, M. (2019a). Knowledge, attitude and behaviours towards patients with mental illness: Results from a national Lebanese study. *PLOS ONE*, *14*(9), e0222172. https://doi.org/10.1371/journal.pone.0222172

Aida, J., Azimah, M. N., Mohd Radzniwan, A. R., Iryani, M. D. T., Ramli, M., & Khairani, O. (2010). Barriers to the utilization of primary care services for mental health prolems among adolescents in a secondary school in Malaysia. *Malaysian Family Physician*, *5*(1), 31–35.

Akincigil, A., & Matthews, E. B. (2017). National Rates and Patterns of Depression Screening in Primary Care: Results From 2012 and 2013. *Psychiatric Services*, *68*(7), 660–666. https://doi.org/10.1176/appi.ps.201600096

Akoglu, H. (2018). User's guide to correlation coefficients. In *Turkish Journal of Emergency Medicine* (Vol. 18, Issue 3, pp. 91–93). Emergency Medicine Association of Turkey. https://doi.org/10.1016/j.tjem.2018.08.001

Albert, P. R. (2015). Why is depression more prevalent in women? *Journal of Psychiatry and Neuroscience*, *40*(4), 219–221. https://doi.org/10.1503/jpn.150205

Alexander, L. K., Lopes, B., Ricchetti-Masterson, K., & Yeatts, K. B. (2015). Second Edition of the ERIC Notebook: Cross-sectional Studies. *ERIC Notebook*, 1–5.

Algren, M. H., Ekholm, O., Nielsen, L., Ersbøll, A. K., Bak, C. K., & Andersen, P. T. (2018). Associations between perceived stress, socioeconomic status, and health-risk behaviour in deprived neighbourhoods in Denmark: A cross-sectional study. *BMC Public Health*, *18*(1). https://doi.org/10.1186/s12889-018-5170-x

Alonso, J., Angermeyer, M. C., Bernert, S., Bruffaerts, R., Brugha, T. S., Bryson, H., De Girolamo, G., De Graaf, R., Demyttenaere, K., Gasquet, D., Haro, J. M., Katz, S. J., Kessler, R. C., Kovess, Y., Lépine, J. P., Ormel, J., Polidori, G., Russo, L. J., Vilagut, G., … Vollebergh, W. A. M. (2004). Prevalence of mental disorders in Europe: Results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) project. In *Acta Psychiatrica Scandinavica, Supplement* (Vol. 109, Issue 420, pp. 21–27). Blackwell Munksgaard. https://doi.org/10.1111/j.1600-0047.2004.00327.x

© COPYRIGHT UPM

Alonso, J., Liu, Z., Evans-Lacko, S., Sadikova, E., Sampson, N., Chatterji, S., Abdulmalik, J., Aguilar-Gaxiola, S., Al-Hamzawi, A., Helena Andrade, L., Bruffaerts, R., Cardoso, G., Cia, A., Florescu, S., de Girolamo, G., Gureje, O., Maria Haro, J., He, Y., de Jonge, P., … Wojtyniak, B. (2018). Treatment Gap for Anxiety Disorders is Global: Results of the World Mental Health Surveys in 21 countries HHS Public Access. *Depress Anxiety*, *35*(3), 195–208. https://doi.org/10.1002/da.22711

Aluh, D. O., Okonta, M. J., & Odili, V. U. (2019a). Cross-sectional survey of mental health literacy among undergraduate students of the University of Nigeria. *BMJ Open*, *9*(9), e028913. https://doi.org/10.1136/bmjopen-2019-028913

American Psychiatric Association. (2020). *What Is Mental Illness?* American Psychiatric Association. https://www.psychiatry.org/patients-families/what-is-mental-illness. Retrieved 2nd February 2018

American Psychological Association. (2011). *Stress and Gender*. https://www.apa.org/news/press/releases/stress/2011/gender. Retrieved 2nd February 2018.

American Psychological Association. (2016). *Briefing Series on the Role of Psychology in Health Care APA Centre for Psychology and Health Primary Care*. https://www.apa.org/health/briefs. Retrieved 16 March 2018.

American Psychological Association. (2018). *Module 5: Integrated Primary Care Intervention and Consultation Skills*. Integrated Health Care Alliance. https://www.apa.org/ihca/resources/course-module-5. Retrieved 2 January 2019.

Amirah, S, N, M. H., Husna, H., Muhamad Afnan, A., Suriani, I., & Ahmad Iqmer Nashriq, M. N. (2020a). Sociodemographic factors of mental health literacy among housewives living in low cost apartments in Puchong, Selangor, Malaysia. *Malaysian Journal of Medicine and Health Sciences*, *16*(1), 121–125

Amirul, F. M., & Id, I. (2019). Psychological distress and its association with socio-demographic factors in a rural district in Bangladesh: A cross-sectional study. *PLOSOne, 14(3)* https://doi.org/10.1371/journal.pone.0212765

Aniza I, & Norhayati M. (2016). Review Barriers to Health Promotion for Indigineous Communities: Lessons for Malaysia. *Malaysian Journal of Public Health Medicine* (Vol. 16, Issue 1).

American Psychological Association. (2020). *What Is Mental Illness?* American Psychiatric Association. https://www.psychiatry.org/patients-families/what-is-mental-illness. Retrieved 6 June 2019.

© COPYRIGHT UPM

Archer, M., Brown, J. S. L., Idusohan, H., Coventry, S., Manoharan, A., & Espie, C. a. (2009a). The development and evaluation of a large-scale self-referral CBT-I intervention for men who have insomnia: an exploratory study. *Behavioural and Cognitive Psychotherapy*, *37*(3), 239–248. https://doi.org/10.1017/S1352465809005256

Arvidsdotter, T., Marklund, B., Kylén, S., Taft, C., & Ekman, I. (2016a). Understanding persons with psychological distress in primary health care. *Scandinavian Journal of Caring Sciences*, *30*(4), 687–694. https://doi.org/10.1111/scs.12289

Attygalle, U. R., Perera, H., & Jayamanne, B. D. W. (2017). Mental health literacy in adolescents: ability to recognise problems, helpful interventions and outcomes. *Child and Adolescent Psychiatry and Mental Health*, *11*(1), 38. https://doi.org/10.1186/s13034-017-0176-1

Bahrami, M. A., Bahrami, D., & Chaman-Ara, K. (2019a). The correlations of mental health literacy with psychological aspects of general health among Iranian female students. *International Journal of Mental Health Systems*, *13*(1), 59. https://doi.org/10.1186/s13033-019-0315-6

Bandelow, B., & Michaelis, S. (2015). Epidemiology of anxiety disorders in the 21st century. *Dialogues in Clinical Neuroscience*, *17*(3), 327–335.

Bandura, A. (1986). *Prentice-Hall series in social learning theory.Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc. https://psycnet.apa.org/record/1985-98423-000. Retrieved from 4 November 2019.

Barbeau, E. M., Krieger, N., & Soobader, M. J. (2004). Working Class Matters: Socioeconomic Disadvantage, Race/Ethnicity, Gender, and Smoking in NHIS 2000. *American Journal of Public Health*, *94*(2), 269–278. https://doi.org/10.2105/AJPH.94.2.269

Baumann, A., Muijen, M., & Gaebel, W. (2010). Mental health and well-being at the workplace – protection and inclusion in challenging times. *World Health Organization*, 52.

Baxter, A. J., Scott, K. M., Ferrari, A. J., Norman, R. E., Vos, T., & Whiteford, H. A. (2014). Challenging the myth of an “epidemic” of common mental disorders: Trends in the global prevalence of anxiety and depression between 1990 and 2010. *Depression and Anxiety*, *31*(6), 506–516. https://doi.org/10.1002/da.22230

Baxter, A. J., Vos, T., Scott, K. M., Ferrari, A. J., & Whiteford, H. A. (2014). The global burden of anxiety disorders in 2010. *Psychological Medicine*, *44*(11), 2363–2374. https://doi.org/10.1017/S0033291713003243

© COPYRIGHT UPM

Baxter, S., Johnson, M., Chambers, D., Sutton, A., Goyder, E., & Booth, A. (2018). The effects of integrated care: A systematic review of UK and international evidence. *BMC Health Services Research*, *18*(1), 1–13. https://doi.org/10.1186/s12913-018-3161-3

Beck, A. T. (2019). A 60-Year Evolution of Cognitive Theory and Therapy. *Perspectives on Psychological Science : A Journal of the Association for Psychological Science*, *14*(1), 16–20. https://doi.org/10.1177/1745691618804187

Beck, A. T., & Beck, J. S. (2019). *Determining Treatment Length in CBT*. Beck Institute for Cognitive Behaviour Therapy. https://beckinstitute.org/determining-treatment-length-in-cbt/. Retrieved from 21 December 2019

Beck, A. T., & Greenberg, R. L. (1979). Brief cognitive therapies. *Psychiatric Clinics of North America*, *2*(1), 23–37. https://doi.org/10.1016/s0193-953x(18)31022-0

Benjamin, C. L., Puleo, C. M., Settipani, C. A., Brodman, D. M., Edmunds, J. M., Cummings, C. M., & Kendall, P. C. (2011). History of Cognitive-Behavioural Therapy in Youth. In *Child and Adolescent Psychiatric Clinics of North America* (Vol. 20, Issue 2, pp. 179–189). NIH Public Access. https://doi.org/10.1016/j.chc.2011.01.011

Berardelli, I., Bloise, M. C., Bologna, M., Conte, A., Pompili, M., Lamis, D. A., Pasquini, M., & Fabbrini, G. (2018). Cognitive behavioural group therapy versus psychoeducational intervention in Parkinson's disease. *Neuropsychiatric Disease and Treatment*, *14*, 339–405. https://doi.org/10.2147/NDT.S152221

Bjelland, I., Krokstad, S., Mykletun, A., Dahl, A. A., Tell, G. S., & Tambs, K. (2008). Does a higher educational level protect against anxiety and depression? The HUNT study. *Social Science and Medicine*, *66*(6), 1334–1345. https://doi.org/10.1016/j.socscimed.2007.12.019

Bjørnsen, H. N., Espnes, G. A., Eilertsen, M.-E. B., Ringdal, R., & Moksnes, U. K. (2019). The Relationship Between Positive Mental Health Literacy and Mental Well-Being Among Adolescents: Implications for School Health Services. *The Journal of School Nursing*, *35*(2), 107–116. https://doi.org/10.1177/1059840517732125

Blashfield, R. K., Keeley, J. W., Flanagan, E. H., & Miles, S. R. (2014). The Cycle of Classification: DSM-I Through DSM-5 . *Annual Review of Clinical Psychology*, *10*(1), 25–51. https://doi.org/10.1146/annurev-clinpsy-032813-153639

Bloch, S. (2004). A Pioneer in Psychotherapy Research: Aaron Beck. *Australian & New Zealand Journal of Psychiatry*, *38*(11–12), 855–867. https://doi.org/10.1080/j.1440-1614.2004.01505.x

© COPYRIGHT UPM

Bonabi, H., Müller, M., Ajdacic-Gross, V., Eisele, J., Rodgers, S., Seifritz, E., Rössler, W., & Rüsch, N. (2016). Mental health literacy, attitudes to help seeking, and perceived need as predictors of mental health service use: A longitudinal study. *Journal of Nervous and Mental Disease*, *204*(4), 321–324. https://doi.org/10.1097/NMD.0000000000000488

Bonett, D. G., & Wright, T. A. (2015). Cronbach's alpha reliability: Interval estimation, hypothesis testing, and sample size planning. *Journal of Organizational Behaviour*, *36*(1), 3–15. https://doi.org/10.1002/job.1960

Bornstein, R. (2020). *The Psychodynamic Perspective | Noba*. NOBA. https://nobaproject.com/modules/the-psychodynamic-perspective. Retrieved from 2 January 2021

Bourget Management Consulting, Canadian Alliance on Mental Illness and Mental Health, & Gibson Library Connection Inc. (2004). Mental health literacy: A review of the literature. *Canadian Alliance on Mental Illness and Mental Health*, *36*(November 2004), 1–37. http://books.scholarsportal.info/viewdoc.html?id=368363. Retrieved from 16 July 2019

Bragg, T., Segal, D., & Coolidge, F. (2018). Mental Health Literacy and Attitudes about Mental Disorders among Younger and Older Adults: A Preliminary Study. *Open Journal of Geriatrics*, *1*(2), 1–6.

Breedvelt, J. J. F., Zamperoni, V., South, E., Uphoff, E. P., Gilbody, S., Bockting, C. L. H., Churchill, R., & Kousoulis, A. A. (2020). A systematic review of mental health measurement scales for evaluating the effects of mental health prevention interventions. *European Journal of Public Health*, *30*(3), 539–545. https://doi.org/10.1093/eurpub/ckz233

Brown, G., Irving, E., & Keegan, P. (2008). *An Introduction to Educational Assessment, Measurement and Evaluation - Gavin Brown, Earl Irving, Peter Keegan - Google Books.* Pearson Education. https://books.google.com.my/books?id=Wz3kPgAACAAJ&dq=An+Introduction+to+Educational+Assessment,+Measurement+and+Evaluation+,2nd+Edition+(2008),+Authors:+Gavin+Brown,+Earl+Irving+and+Peter+Keegan..+++Pearson+Prentice+Hall&hl=en&sa=X&ved=2ahUKEwjB9vmSnJ3qAhVCXSsKHYZlBasQ6AEwAXoECAAQAQ. Retrieved 19 July 2019.

Brown, J. (2018). Increasing access to psychological treatments for adults by improving uptake and equity: Rationale and lessons from the UK. *International Journal of Mental Health Systems*, *12*(1), 10–13. https://doi.org/10.1186/s13033-018-0246-7.

Brown, J. S. L., Boardman, J., Elliott, S. a., Howay, E., & Morrison, J. (2005a). Are self-referrers just the worried well? A cross-sectional study of self-referrers to community psycho-educational stress and self-confidence workshops. *Social Psychiatry and Psychiatric Epidemiology*, *40*(5), 396–401. https://doi.org/10.1007/s00127-005-0896-z

© COPYRIGHT UPM

Brown, J. S. L., Boardman, J., Whittinger, N., & Ashworth, M. (2010c). Can a self-referral system help improve access to psychological treatments? In *British Journal of General Practice* (Vol. 60, Issue 574, pp. 365–371). Royal College of General Practitioners. https://doi.org/10.3399/bjgp10X501877

Brown, J. S. L., & Cochrane, R. (1999). A comparison of people who are referred to a psychology service and those who self-refer to a large-scale stress workshops open to the general public. *Journal of Mental Health*, *8*(3), 297–306.

Brown, J. S. L., Cochrane, R., & Cardone, D. (1999). Large-scale health promotion stress workshops: Promotion, programme content and client response. *Journal of Mental Health*, *8*(4), 391–402.

Brown, June S L, Cochrane, R., & Cardone, D. (1999). Large-scale health promotion stress workshops: Promotion, programme content and client response. *Journal of Mental Health*, *8*(4), 391–402.

Brownawell, A., & Kelley, K. (2011a). Psychotherapy is effective and here's why. *American Psychological Association*, *42*(9), 14. https://www.apa.org/monitor/2011/10/psychotherapy. Retrieved 5 July 2017

Bunnell, B. E., Davidson, T. M., Dewey, D., Price, M., & Ruggiero, K. J. (2017). Rural and Urban/Suburban Families' Use of a Web-Based Mental Health Intervention. *Telemedicine and E-Health*, *23*(5), 390–396. https://doi.org/10.1089/tmj.2016.0153

Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive-behavioural therapy: A review of meta-analyses. *Clinical Psychology Review*, *26*(1), 17–31. https://doi.org/10.1016/j.cpr.2005.07.003

Campos, L., Dias, P., Duarte, A., Veiga, E., Dias, C., & Palha, F. (2018). Is It Possible to "Find Space for Mental Health" in Young People? Effectiveness of a School-Based Mental Health Literacy Promotion Program. *International Journal of Environmental Research and Public Health*, *15*(7), 1426. https://doi.org/10.3390/ijerph15071426

Cape, J., Whittington, C., Buszewicz, M., Wallace, P., & Underwood, L. (2010a). Brief psychological therapies for anxiety and depression in primary care: Meta-analysis and meta-regression. *BMC Medicine*, *8*(1), 38. https://doi.org/10.1186/1741-7015-8-38

Caron, J., Fleury, M. J., Perreault, M., Crocker, A., Tremblay, J., Tousignant, M., Kestens, Y., Cargo, M., & Daniel, M. (2012a). Prevalence of psychological distress and mental disorders, and use of mental health services in the epidemiological catchment area of Montreal South-West. *BMC Psychiatry*, *12*(1), 183. https://doi.org/10.1186/1471-244X-12-183

© COPYRIGHT UPM

Cawangan Kawalan Amalan Perubatan Swasta (CKAPS) / Private Medical Practice Control Branch. (2014). *Guidelines on Processing Application for Registration of Private Medical and Dental Clinics (Garis Panduan Memproses Permohonan Pendaftaran Klinik Akta Kemudahan Dan Perkhidmatan Jagaan Kesihatan).* http://medicalprac.moh.gov.my/v2/uploads/Garis%20Panduan%20Memproses%20Permohonan%20Pendaftaran%20Klinik%20Perubatan%20Swasta%20(edit%202020).pdf. Retrieved from 5 September 2019

Centre for Disease Control and Prevention. (2021). *The Public Health Approach to Violence Prevention |Violence Prevention |Injury Centre |CDC*. https://www.cdc.gov/violenceprevention/about/publichealthapproach.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Fpublichealthissue%2Fpublichealthapproach.html. Retrieved from 6 September 2019

Chaplin, T. M. (2015). Gender and emotion expression: A developmental contextual perspective. *Emotion Review*, *7*(1), 14–21. https://doi.org/10.1177/1754073914544408

Chen, H., Parker, G., Kua, J., Jorm, A., & Loh, J. (2000a). Mental health literacy in Singapore: A comparative survey of psychiatrists and primary health professionals. In *Annals of the Academy of Medicine Singapore* (Vol. 29, Issue 4, pp. 467–473). https://europepmc.org/article/med/11056777

Chen, Y., Bennett, D., Clarke, R., Guo, Y., Yu, C., Bian, Z., Ma, L., Huang, Y., Sun, Q., Zhang, N., Zheng, X., Chen, J., Peto, R., Kendler, K. S., Li, L., Chen, Z., Chen, J., Chen, Z., Collins, R., … Qiu, Z. (2017). Patterns and correlates of major depression in Chinese adults: A cross-sectional study of 0.5 million men and women. *Psychological Medicine*, *47*(5), 958–970. https://doi.org/10.1017/S0033291716002889

Chin, W. S., Shiao, J. S. C., Liao, S. C., Kuo, C. Y., Chen, C. C., & Guo, Y. L. (2017). Depressive, anxiety and post-traumatic stress disorders at six years after occupational injuries. *European Archives of Psychiatry and Clinical Neuroscience*, *267*(6), 507–516. https://doi.org/10.1007/s00406-016-0762

Chong, L. T., Chong, M. C., Tang, L. Y., Ramoo, V., Chui, P. L., & Hmwe, N. T. T. (2019). The Relationship Between Psychological Distress and Religious Practices and Coping in Malaysian Parents of Children with Thalassemia. *Journal of Pediatric Nursing*, *48*, e15–e20. https://doi.org/10.1016/j.pedn.2019.05.016

Chong, S. A., Abdin, E., Picco, L., Pang, S., Jeyagurunathan, A., Vaingankar, J. A., Kwok, K. W., & Subramaniam, M. (2016a). Recognition of mental disorders among a multiracial population in Southeast Asia. *BMC Psychiatry*, *16*(1), 121. https://doi.org/10.1186/s12888-016-0837-2

© COPYRIGHT UPM

Chong, S. A., Abdin, E., Vaingankar, J. A., Heng, D., Sherbourne, C., Yap, M., Lim, Y. W., Wong, H. B., Ghosh-Dastidhar, B., Kwok, K. W., & Subramaniam, M. (2012). A population-based survey of mental disorders in Singapore. *Annals of the Academy of Medicine Singapore*, *41*(2), 49–66.

Christensen, H., Griffiths, K. M., Mackinnon, A. J., & Brittliffe, K. (2006). Online randomized controlled trial of brief and full cognitive behaviour therapy for depression. *Psychological Medicine*, *36*(12), 1737–1746. https://doi.org/10.1017/S0033291706008695

Citypopulation. (2017). *Ulu Langat (District, Malaysia) - Population Statistics, Charts, Map and Location*. https://www.citypopulation.de/en/malaysia/admin/selangor/1008__ulu_langat/. Retrieved from 7 November 2019

Clark, D. M., Layard, R., Smithies, R., Richards, D. A., Suckling, R., & Wright, B. (2009a). Improving access to psychological therapy: Initial evaluation of two UK demonstration sites. *Behaviour Research and Therapy*, *47*(11), 910–920. https://doi.org/10.1016/j.brat.2009.07.010

Coles, M. E., Ravid, A., Gibb, B., George-Denn, D., Bronstein, L. R., & McLeod, S. (2016). Adolescent Mental Health Literacy: Young People's Knowledge of Depression and Social Anxiety Disorder. *Journal of Adolescent Health*, *58*(1), 57–62. https://doi.org/10.1016/j.jadohealth.2015.09.017

Collins, A. M. (2016). Integrating mental health into primary care. *American Journal of Nursing*, *116*(12), 68–69. https://doi.org/10.1097/01.NAJ.0000508676.69402.4c

Conejo-Cerón, S., Moreno-Peral, P., Rodríguez-Morejón, A., Motrico, E., Navas-Campaña, D., Rigabert, A., Martín-Pérez, C., Rodríguez-Bayón, A., Ballesta-Rodríguez, M. I., Luna, J. de D., García-Campayo, J., Roca, M., & Bellón, J. Á. (2017). Effectiveness of psychological and educational interventions to prevent depression in primary care: A systematic review and meta-analysis. In *Annals of Family Medicine* (Vol. 15, Issue 3, pp. 262–271). Annals of Family Medicine, Inc. https://doi.org/10.1370/afm.2031

Cook, S. C., Schwartz, A. C., & Kaslow, N. J. (2017a). *Evidence-Based Psychotherapy: Advantages and Challenges*. https://doi.org/10.1007/s13311-017-0549-4

Cotton, S. M., Wright, A., Harris, M. G., Jorm, A. F., & McGorry, P. D. (2006a). Influence of gender on mental health literacy in young Australians\rdoi:10.1111/j.1440-1614.2006.01885.x. *Australian and New Zealand Journal of Psychiatry*, *40*(9), 790–796. https://doi.org/10.1111/j.1440-1614.2006.01885.x

Cross, S. P. M., & Hickie, I. (2017). Transdiagnostic stepped care in mental health. In *Public Health Research and Practice* (Vol. 27, Issue 2). Sax Institute. https://doi.org/10.17061/phrp2721712

© COPYRIGHT UPM

Crowe, A., Mullen, P. R., & Littlewood, K. (2018a). Self-Stigma, Mental Health Literacy, and Health Outcomes in Integrated Care. *Journal of Counseling & Development*, *96*(3), 267–277. https://doi.org/10.1002/jcad.12201

Cuijpers, P., Karyotaki, E., de Wit, L., & Ebert, D. D. (2020). The effects of fifteen evidence-supported therapies for adult depression: A meta-analytic review. *Psychotherapy Research*, *30*(3), 279–293. https://doi.org/10.1080/10503307.2019.1649732

Cuijpers, P., Quero, S., Dowrick, C., & Arroll, B. (2019). Psychological Treatment of Depression in Primary Care: Recent Developments. In *Current Psychiatry Reports* (Vol. 21, Issue 12, pp. 1–10). Springer. https://doi.org/10.1007/s11920-019-1117-x

Cully, J. A., Armento, M. E. A., Mott, J., Nadorff, M. R., Naik, A. D., Stanley, M. A., Sorocco, K. H., Kunik, M. E., Petersen, N. J., & Kauth, M. R. (2012). Brief cognitive behavioural therapy in primary care: a hybrid type 2 patient-randomized effectiveness-implementation design. *Implementation Science*, *7*(1), 1–12. https://doi.org/10.1186/1748-5908-7-64

Cully, J. A., Stanley, M. A., Petersen, N. J., Hundt, N. E., Kauth, M. R., Naik, A. D., Sorocco, K., Sansgiry, S., Zeno, D., & Kunik, M. E. (2017). Delivery of Brief Cognitive Behavioural Therapy for Medically Ill Patients in Primary Care: A Pragmatic Randomized Clinical Trial. *Journal of General Internal Medicine*, *32*(9), 1014–1024. https://doi.org/10.1007/s11606-017-4101-3

Cully, J. A., & Teten, A. L. (2008). *A Therapist's Guide to Brief Cognitive Behavioural Therapy*. https://depts.washington.edu/dbpeds/therapists_guide_to_brief_cbtmanual.pdf . Retrieved from 3 March 2015

Davison, K. (2006). Historical aspects of mood disorders. *Psychiatry*, *5*(4), 115–118. https://doi.org/10.1383/psyt.2006.5.4.115. Retrieved from 14 July 2018

Department of Statistics Malaysia. (2017). *Current population estimates, Malaysia, 2017–2018*. https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=155&bul_id=c1pqTnFjb29HSnNYNUpiTmNWZHArdz09&menu_id=L0pheU43NWJwRWVSZklWdzQ4TlhUUT09. Retrieved from 19 April 2019

Des Jarlais, D. C. (2014). TREND (Transparent Reporting of Evaluations with Nonrandomized Designs). *Guidelines for Reporting Health Research: A User's Manual*, 156–168. https://doi.org/10.1002/9781118715598.ch16

Deshpande, S. S., Kalmegh, B., Patil, P. N., Ghate, M. R., Sarmukaddam, S., & Paralikar, V. P. (2014a). Stresses and Disability in Depression across Gender. *Depression Research and Treatment*, *2014*(2009). https://doi.org/10.1155/2014/735307

© COPYRIGHT UPM

Dias, P., Campos, L., Almeida, H., & Palha, F. (2018). Mental health literacy in young adults: Adaptation and psychometric properties of the mental health literacy questionnaire. *International Journal of Environmental Research and Public Health*, *15*(7). https://doi.org/10.3390/ijerph15071318

Dieleman, J. L., Baral, R., Birger, M., Bui, A. L., Bulchis, A., Chapin, A., Hamavid, H., Horst, C., Johnson, E. K., Joseph, J., Lavado, R., Lomsadze, L., Reynolds, A., Squires, E., Campbell, M., DeCenso, B., Dicker, D., Flaxman, A. D., Gabert, R., … Murray, C. J. L. (2016). US spending on personal health care and public health, 1996-2013. *JAMA - Journal of the American Medical Association*, *316*(24), 2627–2646. https://doi.org/10.1001/jama.2016.16885

Dien et al., 2013. (2008). National Institutes of Health Public Access Policy Assistance: One Library's Approach. *Journal of Medical Library*, *23*(1), 1–7. https://doi.org/10.1038/jid.2014.371

Domhardt, M., & Baumeister, H. (2018a). Psychotherapy of adjustment disorders: Current state and future directions. *The World Journal of Biological Psychiatry*, *19*(sup1), S21–S35. https://doi.org/10.1080/15622975.2018.1467041

Donker, T., Griffiths, K. M., Cuijpers, P., & Christensen, H. (2009). Psychoeducation for depression, anxiety and psychological distress: A meta-analysis. *BMC Medicine*, *7*, 79. https://doi.org/10.1186/1741-7015-7-79

Drapeau, A., Marchand, A., & Beaulieu-Prevost, D. (2012a). Epidemiology of Psychological Distress. *Mental Illnesses - Understanding, Prediction and Control*, *May 2014*. https://doi.org/10.5772/30872. Retrieved from 20 November 2019

Dressler, W. W., Balieiro, M. C., & Santos, J. E. dos. (2002). Culture and psychological distress. *Paidéia (Ribeirão Preto)*, *12*(22), 5–18. https://doi.org/10.1590/s0103-863x2002000100002

Driessen, E., Smits, N., Dekker, J. J. M., Peen, J., Don, F. J., Kool, S., Westra, D., Hendriksen, M., Cuijpers, P., & Van, H. L. (2016). Differential efficacy of cognitive behavioural therapy and psychodynamic therapy for major depression: A study of prescriptive factors. *Psychological Medicine*, *46*(4), 731–744. https://doi.org/10.1017/S0033291715001853

Ekers, D. M., Lovell, K., & Playle, J. F. (2006a). The use of CBT based, brief, facilitated self-help interventions in primary care mental health service provision: Evaluation of a 10-day training programme. *Clinical Effectiveness in Nursing*, *9*(SUPPL. 1), 88–96. https://doi.org/10.1016/j.cein.2006.06.001

Evans-Lacko, S., Little, K., Meltzer, H., Rose, D., Rhydderch, D., Henderson, C., & Thornicroft, G. (2010a). Development and Psychometric Properties of the Mental Health Knowledge Schedule. *La Revue Canadienne de Psychiatrie*, *55*(7).

© COPYRIGHT UPM

Fadli, Z, H., Razalo, S., & Yusoff, H. (2016). (PDF) Psychological Distress and Lifestyle of Malay Medical Students. *Journal of Medical Education*, *15*(2).

Farrer, L., Leach, L., Griffiths, K. M., Christensen, H., & Jorm, A. F. (2008). Age differences in mental health literacy. *BMC Public Health*, *8*. https://doi.org/10.1186/1471-2458-8-125

Faul, E. L. & B. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioural, and biomedical sciences. *Behaviour Research Methods*, *39*(2), 175–191.

Field. (2005). *Multiple Regression using SPSS*. http://www.lifesci.sussex.ac.uk/lifesci-. Retrieved from 15 July 2019.

Field, A. P., & Hole, Graham. (2003). *How to design and report experiments*. Sage Publications.

Fink, G. (2016a). Stress: Concepts, definition and history. In *The Curated Reference Collection in Neuroscience and Biobehavioural Psychology* (pp. 549–555). Elsevier Science Ltd. https://doi.org/10.1016/B978-0-12-809324-5.02208-2

Franx, G., Oud, M., de Lange, J., Wensing, M., & Grol, R. (2012a). Implementing a stepped-care approach in primary care: Results of a qualitative study. *Implementation Science*, *7*(1), 8. https://doi.org/10.1186/1748-5908-7-8

Freeman, A., Tyrovolas, S., Koyanagi, A., Chatterji, S., Leonardi, M., Ayuso-Mateos, J. L., Tobiasz-Adamczyk, B., Koskinen, S., Rummel-Kluge, C., & Haro, J. M. (2016). The role of socio-economic status in depression: Results from the COURAGE (aging survey in Europe). *BMC Public Health*, *16*(1). https://doi.org/10.1186/s12889-016-3638-0

Funk, M., Dr, W., & Ivbijaro, G. (2008a). Integrating mental health into primary care A global perspective. [Electronic version] *Mental Health in Family Medicine, 5*(1): 5-8

Furnham, A., & Swami, V. (2018). Mental health literacy: A review of what it is and why it matters. *International Perspectives in Psychology: Research, Practice, Consultation*, *7*(4), 240–257. https://doi.org/10.1037/ipp0000094

Ganasen, K. A., Parker, S., Hugo, C. J., Stein, D. J., Emsley, R. A., & Seedat, S. (2008). Mental health literacy: Focus on developing countries. *African Journal of Psychiatry (South Africa)*, *11*(1), 23–28. https://doi.org/10.4314/ajpsy.v11i1.30251

Gautam, S., Jain, A., Gautam, M., Vahia, V., & Gautam, A. (2017). Clinical Practice Guidelines for the Management of Generalised Anxiety Disorder (GAD) and Panic Disorder (PD). In *Indian Journal of Psychiatry* (Vol. 59, Issue 5, pp. S67–S73). Medknow Publications. https://doi.org/10.4103/0019-5545.196975

© COPYRIGHT UPM

Gaynor, K., & Brown, J. S. L. (2012). Self-referrers to community workshops: Who are they and why do some participants not consult with their GP about their mental health difficulties? *Journal of Mental Health (Abingdon, England)*, *22*(3), 1–10. https://doi.org/10.3109/09638237.2012.734646

Gebremedhin, H., Bifftu, B., Lebessa, M. T., Weldeyes, A., Gebru, T. T., & Petrucka, P. (2020a). <p>Prevalence and Associated Factors of Psychological Distress Among Secondary School Students in Mekelle City, Tigray Region, Ethiopia: Cross-Sectional Study</p>. *Psychology Research and Behaviour Management*, *Volume 13*, 473–480. https://doi.org/10.2147/PRBM.S252779

Gelberg, L., Andersen, R. M., & Leake, B. D. (2000). The Behavioural Model for Vulnerable Populations: application to medical care use and outcomes for homeless people. *Health Services Research*, *34*(6), 1273–1302.

Ghawadra, S. F., Abdullah, K. L., Choo, W. Y., & Phang, C. K. (2019). Psychological distress and its association with job satisfaction among nurses in a teaching hospital. *Journal of Clinical Nursing*, *28*(21–22), 4087–4097. https://doi.org/10.1111/jocn.14993

Goodheart, C. D., Levant, R. F., Barlow, D. H., Carter, J., Davidson, K. W., Hagglund, K. J., Hollon, S. D., Johnson, J. D., Leviton, L. C., Mahrer, A. R., Newman, F. L., Norcross, J. C., Silverman, D. K., Smedley, B. D., Wampold, B. E., Westen, D. I., Yates, B. T., Zane, N. W., Reed, G. M., … Bullock, M. (2006). Evidence-based practice in psychology. *American Psychologist*, *61*(4), 271–285. https://doi.org/10.1037/0003-066X.61.4.271

Gouda, H. N., & Powles, J. W. (2014). The science of epidemiology and the methods needed for public health assessments: A review of epidemiology textbooks. *BMC Public Health*, *14*(1), 1–12. https://doi.org/10.1186/1471-2458-14-139

Gruenberg, E. M. (1959). The prevention of mental disorders. *Journal of Chronic Diseases*, *9*(2–3), 187–198. https://doi.org/10.1016/0021-9681(59)90159-6

Gu, L., Xie, J., Long, J., Chen, Q., Chen, Q., Pan, R., Yan, Y., Wu, G., Liang, B., Tan, J., Xie, X., Wei, B., & Su, L. (2013). Epidemiology of Major Depressive Disorder in Mainland China: A Systematic Review. *PLoS ONE*, *8*(6). https://doi.org/10.1371/journal.pone.0065356

Guan, N. C., Lee, T. C., Francis, B., & Yen, T. S. (2018). Psychiatrists in Malaysia: The Ratio and Distribution. [Electronic Version} *Malaysian Journal of Psychiatry*, *27*(1).

Guastello, S., & Jay, K. (2019). Improving the patient experience through a comprehensive performance framework to evaluate excellence in person-centred care. *BMJ Open Quality*, *8*(4), 737. https://doi.org/10.1136/bmjoq-2019-000737

Gupta, S. (2011). Intention-to-treat concept: A review. *Perspectives in Clinical Research*, *2*(3), 109. https://doi.org/10.4103/2229-3485.83221

© COPYRIGHT UPM

Gutierrez-Rojas, L., Porras-Segovia, A., Dunne, H., Andrade-Gonzalez, N., & Cervilla, J. A. (2020). *Prevalence and correlates of major depressive disorder: a systematic review*. *42*(6), 657–672. https://doi.org/10.1590/1516-4446

Hadjimina, E., & Furnham, A. (2017). Influence of age and gender on mental health literacy of anxiety disorders. *Psychiatry Research*, *251*, 8–13. https://doi.org/10.1016/j.psychres.2017.01.089

Haggerty, J. (2020). *History of Psychotherapy*. PsychCentral. https://psychcentral.com/lib/history-of-psychotherapy/. Retrieved from 20 November 2019

Hakami, R. (2018a). Prevalence of psychological distress among undergraduate students at Jazan University: A cross-sectional study. *Saudi Journal of Medicine and Medical Sciences*, *6*(2), 82. https://doi.org/10.4103/sjmms.sjmms_73_17

Halje, K., Timpka, T., Tylestedt, P., Adler, A. K., Fröberg, L., Schyman, T., Johansson, K., & Dahl, K. (2015). Self-referral psychological treatment centre for young adults: A 2-year observational evaluation of routine practice before and after treatment. *BMJ Open*, *5*(8), e008030. https://doi.org/10.1136/bmjopen-2015-008030

Harder, T. (2014). Some notes on critical appraisal of prevalence studies: Comment on: "The development of a critical appraisal tool for use in systematic reviews addressing questions of prevalence." *International Journal of Health Policy and Management*, *3*(5), 289. https://doi.org/10.15171/IJHPM.2014.99

Harold B, Gary B, Phillip F, les G, & Anthony J. (2007). *Practice Guidelines for Group Psychotherapy*. 85. https://www.agpa.org/docs/default-source/practice-resources/download-full-guidelines-(pdf-format)-group-works!-evidence-on-the-effectiveness-of-group-therapy.pdf?sfvrsn=2&sfvrsn=2. Retrieved from 11 November 2019

Harris, A. D., McGregor, J. C., Perencevich, E. N., Furuno, J. P., Zhu, J., Peterson, D. E., & Finkelstein, J. (2006). The use and interpretation of quasi-experimental studies in medical informatics. *Journal of the American Medical Informatics Association*, *13*(1), 16–23. https://doi.org/10.1197/jamia.M1749

Hassan, M. F. bin, Hassan, N. M., Kassim, E. S., & Hamzah, M. I. (2018). Issues and Challenges of Mental Health in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, *8*(12). https://doi.org/10.6007/ijarbss/v8-i12/5288

Hinton, D. E., & Patel, A. (2017). Cultural Adaptations of Cognitive Behavioural Therapy. *Psychiatric Clinics of North America*, *40*(4), 701–714. https://doi.org/10.1016/j.psc.2017.08.006

© COPYRIGHT UPM

Hirsch, C. R., Beale, S., Grey, N., & Liness, S. (2019). Approaching Cognitive Behaviour Therapy For Generalized Anxiety Disorder From A Cognitive Process Perspective. *Frontiers in Psychiatry*, *10*, 796. https://doi.org/10.3389/fpsyt.2019.00796

Hirschfeld, R. M. A. (2001). The comorbidity of major depression and anxiety disorders: Recognition and management in primary care. *Primary Care Companion to the Journal of Clinical Psychiatry*, *3*(6), 244–254.

Ho, F. Y. Y., Yeung, W. F., Ng, T. H. Y., & Chan, C. S. (2016). The Efficacy and Cost-Effectiveness of Stepped Care Prevention and Treatment for Depressive and/or Anxiety Disorders: A Systematic Review and Meta-Analysis. In *Scientific Reports* (Vol. 6). Nature Publishing Group. https://doi.org/10.1038/srep29281

Hodges, S. (2018). Cognitive behaviour therapy. [Electronic Version] *Creating New Families: Therapeutic Approaches to Fostering, Adoption and Kinship Care*, 84–94. https://doi.org/10.4324/9780429473395-11

Hoebel, J., Maske, U. E., Zeeb, H., & Lampert, T. (2017). Social Inequalities and Depressive Symptoms in Adults: The Role of Objective and Subjective Socioeconomic Status. *PLOS ONE*, *12*(1), e0169764. https://doi.org/10.1371/journal.pone.0169764

Hofstede, G. (1980). Culture and Organizations. *International Studies of Management & Organization*, *10*(4), 15–41. https://doi.org/10.1080/00208825.1980.11656300

Horrell, L., Goldsmith, K. A., Tylee, A. T., Schmidt, U. H., Murphy, C. L., Bonin, E. M., Beecham, J., Kelly, J., Raikundalia, S., & Brown, J. S. L. (2014a). One-day cognitive-behavioural therapy self-confidence workshops for people with depression: Randomised controlled trial. *British Journal of Psychiatry*, *204*(3), 222–233. https://doi.org/10.1192/bjp.bp.112.121855

Hunt, J., & Eisenberg, D. (n.d.). *Mental Health Problems and Help-Seeking Behaviour Among College Students*. https://doi.org/10.1016/j.jadohealth.2009.08.008

Huxley, P. (1996). Mental illness in the community: The Goldberg-Huxley model of the pathway to psychiatric care. *Nordic Journal of Psychiatry, Supplement*, *50*(37), 47–53. https://doi.org/10.3109/08039489609099730

Ibrahim, N., Amit, N., Shahar, S., Wee, L. H., Ismail, R., Khairuddin, R., Siau, C. S., & Safien, A. M. (2019a). Do depression literacy, mental illness beliefs and stigma influence mental health help-seeking attitude? A cross-sectional study of secondary school and university students from B40 households in Malaysia. *BMC Public Health*, *19*(S4), 544. https://doi.org/10.1186/s12889-019-6862-6

Ibrahim, N., Sidik, S. M., Kar, P. C., Mukhtar, F., Awang, H., Kiat, A. J., Osman, Z. J., & Ghaffar, S. F. A. (2017). Prevalence and predictors of depression and suicidal ideation among adolescents attending government secondary schools in Malaysia. *Medical Journal of Malaysia*, *72*(4), 221–227.

© COPYRIGHT UPM

Illman, N. A., & Brown, J. S. L. (2016). Reaching Out to Problem Anger: Assessing the Effectiveness of One-Day Cognitive Behavioural Workshops in a Community Setting in the UK. *Behavioural and Cognitive Psychotherapy*, *44*(5), 615–619. https://doi.org/10.1017/S1352465816000126

Institute of Medicine of the National Acadamies. (2015). *Committee on Developing Evidence-Based Standards for Psychosocial Interventions for Mental Disorders*. https://www.ncbi.nlm.nih.gov/books/NBK305126/. Retrieved from 21 November 2019

Jabatan Kesihatan Negeri Selangor. (2019). *Portal Rasmi Jabatan Kesihatan Negeri Selangor*. Portal Rasmi Jabatan Kesihatan Negeri Selangor. http://www.jknselangor.moh.gov.my/. Retrieved from 19 November 2019

James, S. L., Abate, D., Abate, K. H., Abay, S. M., Abbafati, C., Abbasi, N., Abbastabar, H., Abd-Allah, F., Abdela, J., Abdelalim, A., Abdollahpour, I., Abdulkader, R. S., Abebe, Z., Abera, S. F., Abil, O. Z., Abraha, H. N., Abu-Raddad, L. J., Abu-Rmeileh, N. M. E., Accrombessi, M. M. K., … Murray, C. J. L. (2018). Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, *392*(10159), 1789–1858. https://doi.org/10.1016/S0140-6736(18)32279-7

Janardhan Reddy, Y. C., Sudhir, P. M., Manjula, M., Arumugham, S. S., & Narayanaswamy, J. C. (2020). Clinical Practice Guidelines for Cognitive-Behavioural Therapies in Anxiety Disorders and Obsessive-Compulsive and Related Disorders. *Indian Journal of Psychiatry*, *62*(8), S230–S250. https://doi.org/10.4103/psychiatry.IndianJPsychiatry_773_19

Jansen, S., White, R., Hogwood, J., Jansen, A., Gishoma, D., Mukamana, D., & Richters, A. (2015). The “treatment gap” in global mental health reconsidered: Sociotherapy for collective trauma in Rwanda. *European Journal of Psychotraumatology*, *6*. https://doi.org/10.3402/ejpt.v6.28706

Jorm, A. F, Jacomb. A, C. H, R. R, P. P. (1997). “Mental health literacy”: A survey of the public’s ability to recognise mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia*, *166*(4), 182–186. https://doi.org/10.5694/j.1326-5377.1997.tb140071.x

Jorm, A. F. (2000). Mental health literacy: Public knowledge and beliefs about mental disorders. In *British Journal of Psychiatry* (Vol. 177, Issue NOV., pp. 396–401). Cambridge University Press. https://doi.org/10.1192/bjp.177.5.396

Jorm, A. F. (2012). Mental health literacy; empowering the community to take action for better mental health. *American Psychologist*, *67*(3), 231–243. https://doi.org/10.1037/a0025957

© COPYRIGHT UPM

Jorm, A. F., Korten, A. E., Jacomb, P. A., Christensen, H., Rodgers, B., & Pollitt, P. (1997). "Mental health literacy": A survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia*, *166*(4), 182–186. https://doi.org/10.5694/j.1326-5377.1997.tb140071.x

Jorm, A. F., Patten, S. B., Brugha, T. S., & Mojtabai, R. (2017). Has increased provision of treatment reduced the prevalence of common mental disorders? Review of the evidence from four countries. *World Psychiatry*, *16*(1), 90–99. https://doi.org/10.1002/wps.20388

Kader Maideen, S. F., Mohd Sidik, S., Rampal, L., & Mukhtar, F. (2014). Prevalence, associated factors and predictors of depression among adults in the community of Selangor, Malaysia. *PLoS ONE*, *9*(4). https://doi.org/10.1371/journal.pone.0095395

Kaur, G., Tee, G. H., Ariaratnam, S., Krishnapillai, A. S., & China, K. (2013a). Depression, anxiety and stress symptoms among diabetics in Malaysia: A cross sectional study in an urban primary care setting. *BMC Family Practice*, *14*(1), 69. https://doi.org/10.1186/1471-2296-14-69

Kawangit, R, M., & Don, A, G. (2012). (PDF) The history of ethnic relationship in Malaysia. *Advances in Natural and Applied Sciences*, *72*(12), 19.

Ke, G. N., & Wong, S. F. (2018). Outcome of the Psychological Intervention Program: Internet Use for Youth. *Journal of Rational - Emotive and Cognitive - Behaviour Therapy*, *36*(2), 187–200. https://doi.org/10.1007/s10942-017-0281-3

Kelly, C. M., Jorm, A. F., & Wright, A. (2007). Improving mental health literacy as a strategy to facilitate early intervention for mental disorders. *The Medical Journal of Australia*, *187*(7 Suppl). https://doi.org/10.5694/j.1326-5377.2007.tb01332.x

Kessler, R. C., & Bromet, E. J. (2013). The Epidemiology of Depression Across Cultures. *Ssrn*. https://doi.org/10.1146/annurev-publhealth-031912-114409

Kessler, R. C., Merikangas, K. R., & Wang, P. S. (2007a). Prevalence, Comorbidity, and Service Utilization for Mood Disorders in the United States at the Beginning of the Twenty-first Century. *Annual Review of Clinical Psychology*, *3*(1), 137–158. https://doi.org/10.1146/annurev.clinpsy.3.022806.091444

Khan, S. A., & Khan, R. A. (2017). Annals of Psychiatry and Mental Health Cite this article. *Ann Psychiatry Ment Health*, *5*(1), 1091.

Khan, T. M., Sulaiman, S. A., & Hassali, M. A. (2010). Mental health literacy towards depression among non-medical students at a Malaysian university. *Mental Health in Family Medicine*, *7*(1), 27–35. /pmc/articles/PMC2925162/?report=abstract

© COPYRIGHT UPM

Kihlstrom, N. F., Dorfman, J., & Park, L. (2007). *Implicit and Explicit Memory and Learning* (M. Velmans & S. Scneider, Eds.; 1st ed.).

Kilkkinen, A., Kao-philpot, A., O'neil, A., Philpot, B., Reddy, P., Bunker, S., & Dunbar, J. (2007a). Prevalence of psychological distress, anxiety and depression in rural communities in Australia. *Australian Journal of Rural Health*, *15*(2), 114–119. https://doi.org/10.1111/j.1440-1584.2007.00863.x

Knott, L. (2014). *Cognitive and Behavioural Therapies. Depression treatment | Patient*. NICE. https://patient.info/doctor/cognitive-and-behavioural-therapies. Retrieved 2 March 2019

Kohn, R., Saxena, S., Levav, I., & Saraceno, B. (2004). The treatment gap in mental health care. In *Bulletin of the World Health Organization* (Vol. 82, Issue 11). http://www.who.int/bulletin. Retrieved 18 November 2018

Kongsuk, T., Supanya, S., Kenbubpha, K., Phimtra, S., Sukhawaha, S., & Leejongpermpoon, J. (2017a). Services for depression and suicide in Thailand. *WHO South-East Asia Journal of Public Health*, *6*(1), 34–38. https://doi.org/10.4103/2224-3151.206162

Kragh, A. R., Folke, F., Andelius, L., Ries, E. S., Rasmussen, R. V., & Hansen, C. M. (2019a). Evaluation of tools to assess psychological distress: How to measure psychological stress reactions in citizen responders- a systematic review. In *BMC Emergency Medicine* (Vol. 19, Issue 1, p. 64). BioMed Central Ltd. https://doi.org/10.1186/s12873-019-0278-6

Krishnaswamy, S., Subramaniam, K., Jemain, A. A., Low, W. Y., Ramachandran, P., Indran, T., & Patel, V. (2012). Common mental disorders in Malaysia: Malaysian mental health survey, 2003-2005. *Asia-Pacific Psychiatry*, *4*(3), 201–209. https://doi.org/10.1111/j.1758-5872.2012.00180.x

Kutcher, S., Bagnell, A., & Wei, Y. (2015). Mental Health Literacy in Secondary Schools. A Canadian Approach. In *Child and Adolescent Psychiatric Clinics of North America* (Vol. 24, Issue 2, pp. 233–244). W.B. Saunders. https://doi.org/10.1016/j.chc.2014.11.007

Kutcher, S., Wei, Y., & Coniglio, C. (2016). Mental health literacy: Past, present, and future. In *Canadian Journal of Psychiatry* (Vol. 61, Issue 3, pp. 154–158). SAGE Publications Inc. https://doi.org/10.1177/0706743715616609

Kutcher, S., Wei, Y., Costa, S., Gusmão, R., Skokauskas, N., & Sourander, A. (2016). Enhancing mental health literacy in young people. In *European Child and Adolescent Psychiatry* (Vol. 25, Issue 6, pp. 567–569). Dr. Dietrich Steinkopff Verlag GmbH and Co. KG. https://doi.org/10.1007/s00787-016-0867-9

Lauber, C., Ajdacic-Gross, V., Fritschi, N., Stulz, N., & Rössler, W. (2005a). Mental health literacy in an educational elite - An online survey among university students. *BMC Public Health*, *5*. https://doi.org/10.1186/1471-2458-5-44

© COPYRIGHT UPM

Lee, J., Lee, E. H., & Moon, S. H. (2019). Systematic review of the measurement properties of the Depression Anxiety Stress Scales–21 by applying updated COSMIN methodology. In *Quality of Life Research* (Vol. 28, Issue 9, pp. 2325–2339). Springer International Publishing. https://doi.org/10.1007/s11136-019-02177-x

Levey, A. S., & Coresh, J. (2002). *Clinical Practice Guidelines Clinical Practice Guidelines K/Doqi* (Vol. 19). www.kidney.org. Retrieved from 3 November 2018

Leys, C., Klein, O., Dominicy, Y., & Ley, C. (2018). Detecting multivariate outliers: Use a robust variant of the Mahalanobis distance. *Journal of Experimental Social Psychology*, *74*(September 2017), 150–156. https://doi.org/10.1016/j.jesp.2017.09.011

Li, J., Li, J., Thornicroft, G., & Huang, Y. (2014). Levels of stigma among community mental health staff in Guangzhou, China. *BMC Psychiatry*, *14*(1). https://doi.org/10.1186/s12888-014-0231-x

Linde, K., Rücker, G., Sigterman, K., Jamil, S., Meissner, K., Schneider, A., & Kriston, L. (2015). Comparative effectiveness of psychological treatments for depressive disorders in primary care: Network meta-analysis. *BMC Family Practice*, *16*(1), 103. https://doi.org/10.1186/s12875-015-0314-x

Linde, K., Sigterman, K., Kriston, L., Rücker, G., Jamil, S., Meissner, K., & Schneider, A. (2015). Effectiveness of psychological treatments for depressive disorders in primary care: Systematic review and meta-analysis. *Annals of Family Medicine*, *13*(1), 56–68. https://doi.org/10.1370/afm.1719

Loh, L., & Brieger, W. (2013). Suburban sprawl in the developing world: Duplicating past mistakes? the case of kuala lumpur, Malaysia. *International Quarterly of Community Health Education*, *34*(2), 199–211. https://doi.org/10.2190/IQ.34.2.g

Lopez, V., Sanchez, K., Killian, M. O., & Eghaneyan, B. H. (2018). Depression screening and education: An examination of mental health literacy and stigma in a sample of Hispanic women. *BMC Public Health*, *18*(1), 646. https://doi.org/10.1186/s12889-018-5516-4

Low, S. K., Lee, W. Y., & Jacob, C. S. (2019). Psychological Distress of Community Based Residents with Mental Illness in Perak, Malaysia. *Current Psychology*, *38*(2), 397–404. https://doi.org/10.1007/s12144-017-9621-9

Lykkegaard, J., Prior, A., & Rosendal, M. (2020). General practitioners' management of patients with psychological stress: Audit results from Denmark. *BMC Family Practice*, *21*(1), 67. https://doi.org/10.1186/s12875-020-01137-6

© COPYRIGHT UPM

Mansfield, R., Patalay, P., & Humphrey, N. (2020a). A systematic literature review of existing conceptualisation and measurement of mental health literacy in adolescent research: Current challenges and inconsistencies. *BMC Public Health*, *20*(1), 607. https://doi.org/10.1186/s12889-020-08734-1

Marastuti, A., Subandi, M. A., Retnowati, S., Marchira, C. R., Yuen, C. M., Good, B. J., & Good, M. J. D. (2020). Development and Evaluation of a Mental Health Training Program for Community Health Workers in Indonesia. *Community Mental Health Journal*, 1–7. https://doi.org/10.1007/s10597-020-00579-7

Marks, S. (2017a). Psychotherapy in historical perspective. In *History of the Human Sciences* (Vol. 30, Issue 2, pp. 3–16). SAGE Publications Ltd. https://doi.org/10.1177/0952695117703243

Marmot, M. (2005). Social determinants of health inequalities. *Lancet*, *365*(9464), 1099–1104. https://doi.org/10.1016/s0140-6736(05)74234-3

Matcham, F., Rayner, L., Hutton, J., Monk, A., Steel, C., & Hotopf, M. (2014a). Self-help interventions for symptoms of depression, anxiety and psychological distress in patients with physical illnesses: A systematic review and meta-analysis. In *Clinical Psychology Review* (Vol. 34, Issue 2, pp. 141–157). https://doi.org/10.1016/j.cpr.2014.01.005

Math, S., Gowda, G., Basavaraju, V., Manjunatha, N., Kumar, C., Enara, A., Gowda, M., & Thirthalli, J. (2019). Cost estimation for the implementation of the Mental Healthcare Act 2017. In *Indian Journal of Psychiatry* (Vol. 61, Issue 10, pp. S650–S659). Wolters Kluwer Medknow Publications. https://doi.org/10.4103/psychiatry.IndianJPsychiatry_188_19

Mayor, E. (2015). Gender roles and traits in stress and health. *Frontiers in Psychology*, *6*(JUN). https://doi.org/10.3389/fpsyg.2015.00779

McCaffrey, E. S. N., Chang, S., Farrelly, G., Rahman, A., & Cawthorpe, D. (2017a). Mental health literacy in primary care: Canadian Research and Education for the Advancement of Child Health (CanREACH). *Evidence-Based Medicine*, *22*(4), 123–131. https://doi.org/10.1136/ebmed-2017-110714

McIntyre, C., Harris, M. G., Baxter, A. J., Leske, S., Diminic, S., Gone, J. P., Hunter, E., & Whiteford, H. (2017). Assessing service use for mental health by Indigenous populations in Australia, Canada, New Zealand and the United States of America: a rapid review of population surveys. *Health Research Policy and Systems*, *15*(1), 67. https://doi.org/10.1186/s12961-017-0233-5

McKeague, L., Morant, N., Blackshaw, E., & Brown, J. S. L. (2018). Exploring the feasibility and acceptability of a school-based self-referral intervention for emotional difficulties in older adolescents: qualitative perspectives from students and school staff. *Child and Adolescent Mental Health*, *23*(3), 198–205. https://doi.org/10.1111/camh.12234

© COPYRIGHT UPM

Meichenbaum, D. (2013). Cognitive-Behaviour Modification: An Integrative Approach - Donald Meichenbaum. In *Springer*.

Michie, S., Atkins, L., & West, R. (2014). The Behaviour Change Wheel: A Guide to Designing Interventions. In *The Behaviour Change Wheel: Book Launch Event*.

Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, *6*(1). https://doi.org/10.1186/1748-5908-6-42

Mignogna, J., Hundt, N. E., Kauth, M. R., Kunik, M. E., Sorocco, K. H., Naik, A. D., Stanley, M. A., York, K. M., & Cully, J. A. (2014). Implementing brief cognitive behavioural therapy in primary care: A pilot study. *Translational Behavioural Medicine*, *4*(2), 175–183. https://doi.org/10.1007/s13142-013-0248-6

Milanović, S. M., Erjavec, K., Poljičanin, T., Vrabec, B., & Brečić, P. (2015). Prevalence of depression symptoms and associated socio-demographic factors in primary health care patients. *Psychiatria Danubina*, *27*(1), 31–37.

Ministry of Health Malaysia. (2011). *Psychiatric and mental health services operational policy*. 124. http://www.moh.gov.my/images/gallery/Polisi/PSYCHIATRY_OPERATIONAL_POLICY.pdf. Retrieved from 4 April 2019

Ministry of Health Malaysia. (2015). *Management of Major Depressive Disorder (Second Edition)*. http://www.moh.gov.myhttp://www.acadmed.org.my. Retrieved from 19 November 2019

Ministry of Health Malaysia. (2017). *Malaysia Healthcare Performance Report 2016*. Malaysian Mental Healthcare Performance. http://www.moh.gov.my/moh/resources/Penerbitan/Laporan/Umum/Mental Healthcare Performance Report 2016.pdf. Retrieved 6 June 2019

Ministry of Health Malaysia. (2017). *Malaysia Healthcare Performance Report 2016*. Malaysian Mental Healthcare Performance. http://www.moh.gov.my/moh/resources/Penerbitan/Laporan/Umum/Mental Healthcare Performance Report 2016.pdf. Retrieved from 3 March 2019

Ministry of Health Malaysia. (2018). *Issues and Challenges of Mental Health in Malaysia*. https://www.researchgate.net/publication/331008460_Issues_and_Challenges_of_Mental_Health_in_Malaysia. Retrieved 6 June 2019

Ministry of Health Malaysia (n.d) | *News Highlights*. https://www.moh.gov.sg/news-highlights/details/percentage-of-spending-on-mental-health-diabetes-and-ageing-versus-total-healthcare-spending-in-2018-against-amount-budgeted-for-2019/. Retrieve 4 April 2020

© COPYRIGHT UPM

Molnar, F. J., Hutton, B., & Fergusson, D. (2008). Does analysis using "last observation carried forward" introduce bias in dementia research? In *CMAJ* (Vol. 179, Issue 8, pp. 751–753). Canadian Medical Association. https://doi.org/10.1503/cmaj.080820

Morgan, A. J., & Jorm, A. F. (2008). Self-help interventions for depressive disorders and depressive symptoms: a systematic review. *Annals of General Psychiatry*, *7*(1). https://doi.org/10.1186/1744-859x-7-13

Morgan, F. N., McCabe, D. B., Howley, M. J., McCabe, J., & Steward, M. D. (2010). The Influence of Different Types of Cues-to-Action on Vaccination Behaviour: An Exploratory Study. *The Journal of Marketing Theory and Practice*, *18*(2), 191–208. https://doi.org/10.2753/MTP1069-6679180207

Mukhtar, F., & Oei, P. S. T. (2011). A Review on the Prevalence of Depression in Malaysia. *Current Psychiatry Reviews*, *7*(3), 234–238. https://doi.org/10.2174/157340011797183201

Murre, J. M. J., & Dros, J. (2015). Replication and Analysis of Ebbinghaus' Forgetting Curve. *PLoS One, 10*(7) https://doi.org/10.1371/journal.pone.0120644.

Muslan, A., Med, M. O., & Dietrich, U. (2019). *Urbanisation Challenges in Health : Urban Crisis : Preventions , Readiness and Preparedness Participation and Cross-Sector Engagement for Healthier Communities*. *74*, 2019.

Mwinyi, J., Pisanu, C., Castelao, E., Stringhini, S., Preisig, M., & Schiöth, H. B. (2017). Anxiety Disorders are Associated with Low Socioeconomic Status in Women but Not in Men. *Women's Health Issues*, *27*(3), 302–307. https://doi.org/10.1016/j.whi.2017.01.001

Naeem, F., Farooq, S., & Kingdon, D. (2015a). Cognitive behavioural therapy (brief versus standard duration) for schizophrenia. In *Cochrane Database of Systematic Reviews* (Vol. 2015, Issue 10). John Wiley and Sons Ltd. https://doi.org/10.1002/14651858.CD010646.pub3

Nakash, O., Nagar, M., Danilovich, E., Bentov-Gofrit, D., Lurie, I., Steiner, E., Sadeh-Sharvit, S., Szor, H., & Levav, I. (2014). Ethnic disparities in mental health treatment gap in a community-based survey and in access to care in psychiatric clinics. *International Journal of Social Psychiatry*, *60*(6), 575–583. https://doi.org/10.1177/0020764013504562

Naquib Hasief, M. B., & Amirah, N. Z. (2017). Health Intervention Program on Stress among Community in Mukim Sg Pelek, Sepang, Selangor, Malaysia. [Electronic Version] *International Journal of Advances in Science, Engineering, and Technology, 5*(2).

National Association of Primary Care. (2018). *Achieving the Provision of Integrated Care*. *June*, 0–22. https://napc.co.uk/wp-content/uploads/2018/06/Provision-of-integrated-care.pdf. Retrieved from 3rd November 2019

© COPYRIGHT UPM

National Mental Health Commission Australia. (2019). Monitoring Mental Health and Suicide Prevention Reform. *National Report*. www.mentalhealthcommission.gov.au. Retrieved from 2nd January 2021

Ng, C. G. (2014). A Review of Depression Research in Malaysia. *Medical Journal of Malaysia*, *69*(August), 42–45.

National Health Services. (2018). *Service standards*. https://www.england.nhs.uk/mental-health/adults/iapt/service-standards/. Retrieved 16 November 2019

The National Institute for Health and Care Excellence. (2004). *Depression: management of depression in primary and secondary care. Guidance NICE*. https://www.nice.org.uk/guidance/cg23. Retrieved 2nd January 2018

Nieuwsma, J. A., Trivedi, R. B., McDuffie, J., Kronish, I., Benjamin, D., & Williams, J. W. (2011). Brief Psychotherapy for Depression in Primary Care: A Systematic Review of the Evidence. [Electronic Version] *VA Evidence-Based Synthesis Program Reports*.

Noordzij, M., Dekker, F. W., Zoccali, C., & Jager, K. J. (2010). Measures of Disease Frequency: Prevalence and Incidence. *Nephron Clinical Practice*, *115*(1), c17–c20. https://doi.org/10.1159/000286345

Nordin, R. Bin, Kaur, A., Soni, T., Por, L. K., & Miranda, S. (2017). Construct validity and internal consistency reliability of the malay version of the 21-item depression anxiety stress scale (Malay-DASS-21) among male outpatient clinic attendees in Johor. *Medical Journal of Malaysia*, *72*(5), 264–270.

O'Connor, M., & Casey, L. (2015a). The Mental Health Literacy Scale (MHLS): A new scale-based measure of mental health literacy. *Psychiatry Research*, *229*(1–2), 511–516. https://doi.org/10.1016/j.psychres.2015.05.064

O'donnell, M. L., Agathos, J. A., Metcalf, O., Gibson, K., & Lau, W. (2019). Adjustment disorder: Current developments and future directions. *International Journal of Environmental Research and Public Health*, *16*(14). https://doi.org/10.3390/ijerph16142537

Of, C., & Of, L. (2019). Single-Case Experimental Design. *Journal of Physiotherapy, 66*(3). https://doi.org/10/1016/j.jphys.2020.06.004

Ogbo, F. A., Mathsyaraja, S., Koti, R. K., Perz, J., & Page, A. (2018). The burden of depressive disorders in South Asia, 1990–2016: findings from the global burden of disease study. *BMC Psychiatry*, *18*(1), 1–11. https://doi.org/10.1186/s12888-018-1918-1

Ogorchukwu, J. M., Sekaran, V. C., Nair, S., & Ashok, L. (2016). Mental health literacy among late adolescents in South India: What they know and what attitudes drive them. *Indian Journal of Psychological Medicine*, *38*(3), 234–241. https://doi.org/10.4103/0253-7176.183092

© COPYRIGHT UPM

Olah, M. E., Gaisano, G., & Hwang, S. W. (2013). The effect of socioeconomic status on access to primary care: An audit study. *CMAJ*, *185*(6), E263. https://doi.org/10.1503/cmaj.121383

OMS. (2004). The global burden of disease 2004. [Electronic Version] *Update, World Health Organization*, 146. https://doi.org/10.1038/npp.2011.85

Papadopoulos, I., & Shea, S. (2018). European refugee crisis: Psychological trauma of refugees and care givers. *International Journal of Migration, Health and Social Care*, *14*(1), 106–116. https://doi.org/10.1108/IJMHSC-08-2016-0032

Parry, W., Wolters, A. T., Brine, R. J., & Steventon, A. (2019). Effect of an integrated care pathway on use of primary and secondary healthcare by patients at high risk of emergency inpatient admission: A matched control cohort study in Tower Hamlets. *BMJ Open*, *9*(6), 1–16. https://doi.org/10.1136/bmjopen-2018-026470

Parvez, E, I, M., Al-Bedri, A., Subramaniam, V., Matthews, P., Ai Theng, C., Perubatan Primer PPUKM, K., Tasik Permaisuri, B., Lumpur, K., Warga, P., Perubatan Universiti Kebangsaan Malaysia, P., Razak, B., Kesihatan Jenjarom, K., & Kampung Jenjarom, J. (2018a). Prevalence and Related Factors of Depression among Healthcare Personnel at Primary Healthcare Centres. In *Malaysian Journal of Medicine and Health Sciences* (Vol. 14, Issue SP2).

Perfect, D., Jackson, C., Pybis, J., & Hill, A. (2016). *Choice of therapies in IAPT: An overview of the availability and client profile of step 3 therapies*. British Association for Counselling and Psychology. https://www.bacp.co.uk/media/1977/bacp-choice-of-therapies-in-iapt.pdf. Retrieved 6 January 2021

Pheh, K. S., Ong, W, H, A, O., Low, S. K., Tan, C. S., & Kok, J. K. (2017). The Malay version of the mental health knowledge schedule: a preliminary study. [Electronic Version] *Malaysian Journal of Psychiatry*, *26*(1).

Picco, L., Subramaniam, M., Abdin, E., Vaingankar, J. A., & Chong, S. A. (2017a). Gender differences in major depressive disorder: Findings from the Singapore mental health study. *Singapore Medical Journal*, *58*(11), 649–655. https://doi.org/10.11622/smedj.2016144

Rafal, G., Gatto, A., & DeBate, R. (2018). Mental health literacy, stigma, and help-seeking behaviours among male college students. *Journal of American College Health*, *66*(4), 284–291. https://doi.org/10.1080/07448481.2018.1434780

Rahman, R. A., Idris, I. B., & Ibrahim, H. (2020). Risk factors of depression, anxiety and stress among adults attending primary health clinics in an urban area in Klang Valley, Malaysia. *Malaysian Journal of Medicine and Health Sciences*, *16*(1), 240–246.

© COPYRIGHT UPM

Rahman, R. A., Idris, I. B., & Ibrahim, H. (2017). Depression, Anxiety, and Stress among Adults in Putrajaya, Malaysia: A Cross-Sectional Study. [Electronic Version] *International Conference on Public Health.*

Rancans, E., Renemane, L., Kivite-Urtane, A., & Ziedonis, D. (2020). Prevalence and associated factors of mental disorders in the nationwide primary care population in Latvia: A cross-sectional study. *Annals of General Psychiatry*, *19*(1), 25. https://doi.org/10.1186/s12991-020-00276-5

Razak, A. A. (2017). Cultural Construction of Psychiatric Illness in Malaysia. *The Malaysian Journal of Medical Sciences : MJMS*, *24*(2), 1. https://doi.org/10.21315/MJMS2017.24.2.1

Reavley, N. J., & Jorm, A. F. (2012). Public recognition of mental disorders and beliefs about treatment: Changes in Australia over 16 years. *British Journal of Psychiatry*, *200*(5), 419–425. https://doi.org/10.1192/bjp.bp.111.104208

Reavley, N. J., McCann, T. V., & Jorm, A. F. (2012a). Mental health literacy in higher education students. *Early Intervention in Psychiatry*, *6*(1), 45–52. https://doi.org/10.1111/j.1751-7893.2011.00314.x

Richards, D. A., & Borglin, G. (2011). Implementation of psychological therapies for anxiety and depression in routine practice: Two year prospective cohort study. *Journal of Affective Disorders*, *133*(1–2), 51–60. https://doi.org/10.1016/j.jad.2011.03.024

Richardson, A. E., Broadbent, E., & Morton, R. P. (2019). A systematic review of psychological interventions for patients with head and neck cancer. In *Supportive Care in Cancer* (Vol. 27, Issue 6, pp. 2007–2021). Springer Verlag. https://doi.org/10.1007/s00520-019-04768-3

Ricou, M., Marina, S., Vieira, P. M., Duarte, I., Sampaio, I., Regalado, J., & Canário, C. (2019). Psychological intervention at a primary health care centre: Predictors of success. *BMC Family Practice*, *20*(1), 116. https://doi.org/10.1186/s12875-019-1005-9

Rivenbark, J. G., & Ichou, M. (2020). Discrimination in healthcare as a barrier to care: experiences of socially disadvantaged populations in France from a nationally representative survey. *BMC Public Health 2020 20:1*, *20*(1), 1–10. https://doi.org/10.1186/S12889-019-8124-Z

Robertson, L., Aboaja, A., Walker, D.-M., Vostanis, P., Witt, K. G., Chakrabarti, I., Perry, A. E., & Townsend, E. (2020). Interventions for mood, anxiety disorders or self-harm in young offenders. *Cochrane Database of Systematic Reviews*. https://doi.org/10.1002/14651858.cd013768

Rovira, J., Albarracin, G., Salvador, L., Rejas, J., Sánchez-Iriso, E., & Cabasés, J. M. (2012). The cost of generalized anxiety disorder in primary care settings: Results of the ANCORA study. *Community Mental Health Journal*, *48*(3), 372–383. https://doi.org/10.1007/s10597-012-9503-4

© COPYRIGHT UPM

Ruiz-Rodríguez, P., Cano-Vindel, A., Navarro, R. M., Medrano, L., Moriana, J. A., Aguado, C. B., Cabré, G. J., & González-Blanch, C. (2017). A systematic review and critique of the economic impact and burden of common mental disorders in spain. *Ansiedad y Estres*, *23*(2–3), 118–123. https://doi.org/10.1016/j.anyes.2017.10.003

Salkind, N. J. (2010). Encyclopedia of Research Design: Grounded Theory. [Electronic Version] *Encyclopedia of Research Design*, 181–186. https://doi.org/10.4135/9781412961288

Saloheimo, H. P., Markowitz, J., Saloheimo, T. H., Laitinen, J. J., Sundell, J., Huttunen, M. O., A. Aro, T., Mikkonen, T. N., & Katila, H. O. (2016). Psychotherapy effectiveness for major depression: A randomized trial in a Finnish community. *BMC Psychiatry*, *16*(1), 1–9. https://doi.org/10.1186/s12888-016-0838-1

Santoft, F., Axelsson, E., Öst, L. G., Hedman-Lagerlöf, M., Fust, J., & Hedman-Lagerlöf, E. (2019). Cognitive behaviour therapy for depression in primary care: Systematic review and meta-analysis. *Psychological Medicine*, *49*(8), 1266–1274. https://doi.org/10.1017/S0033291718004208

Searle, K., Blashki, G., Kakuma, R., Yang, H., Zhao, Y., & Minas, H. (2019). Current needs for the improved management of depressive disorder in community healthcare centres, Shenzhen, China: a view from primary care medical leaders. *International Journal of Mental Health Systems 2019 13:1*, *13*(1), 1–18. https://doi.org/10.1186/S13033-019-0300-0

Seekles, W., Cuijpers, P., Kok, R., Beekman, A., Van Marwijk, H., & Van Straten, A. (2013). Psychological treatment of anxiety in primary care: A meta-analysis. *Psychological Medicine*, *43*(2), 351–361. https://doi.org/10.1017/S0033291712000670

Seekles, W., Van Straten, A., Beekman, A., van Marwijk, H., & Cuijpers, P. (2009). Stepped care for depression and anxiety: From primary care to specialized mental health care: A randomised controlled trial testing the effectiveness of a stepped care program among primary care patients with mood or anxiety disorders. *BMC Health Services Research*, *9*, 90. https://doi.org/10.1186/1472-6963-9-90

Seelert, Hill, R. (1999). Measuring patient distress in primary care. [Electronic Version] *PubMed*, *31*(7), 483–487.

Shahar, H. K., Mohammed, H., S^2, H. K., & Salmiah, M. S. (2016). Coping with Depression, Anxiety, And Stress: A Cross-Sectional Study Among Malaysian Students in A Public University Parenting View project Effectiveness of a “reminder module” in improving adherence and treatment outcomes of patients on ART in Malaysia V. *IOSR Journal of Dental and Medical Sciences*, *15*(11), 83–95. https://doi.org/10.9790/0853-1511068395

© COPYRIGHT UPM

Shahsavarani, A. M., Azad, E., Abadi, M., & Kalkhoran, M. H. (2015). Stress: Facts and Theories through Literature Review. In *International Journal of Medical Reviews Systematic Review International Journal of Medical Reviews* (Vol. 2, Issue 2).

Sharma, G., Gupta, S., Gupta, A., Kalyani, V. C., Rohilla, K. K., Thozhuthungal Sreejeev, A., Yanthan, Y. P., Kumar, U., Das, B., Sharma, G., Sehrawat, A., & Gupta, M. (2020). Identification of factors influencing delayed presentation of cancer patients. *International Journal Of Community Medicine And Public Health*, *6*(6), 2723–2729. https://doi.org/10.18203/2394-6040.ijcmph20201709

Shedler, J. (2010). *The Efficacy of Psychodynamic Psychotherapy*. American Psychological Association https://www.apa.org/pubs/journals/releases/amp-65-2-98.pdf. Retrieved from 5 January 2021

Sherina, M. S., & Rampal, L. (2004). Psychological Stress Among Undergraduate Medical Students. *PubMed, 59*(2), 207-11

Sherman, M. D., Miller, L. W., Keuler, M., Trump, L., & Mandrich, M. (2017). Managing Behavioural Health Issues in Primary Care. In *Family Practice Management* (Vol. 24, Issue 2).

Shidhaye, R., Lund, C., & Chisholm, D. (2015). Closing the treatment gap for mental, neurological and substance use disorders by strengthening existing health care platforms: Strategies for delivery and integration of evidence-based interventions. In *International Journal of Mental Health Systems* (Vol. 9, Issue 1, p. 40). BioMed Central Ltd. https://doi.org/10.1186/s13033-015-0031-9

Shimotsu, S., & Horikawa, N. (2016). Self-stigma in depressive patients: Association of cognitive schemata, depression, and self-esteem. *Asian Journal of Psychiatry*, *24*, 125–129. https://doi.org/10.1016/j.ajp.2016.09.003

Shoesmith, W. D., Borhanuddin, A. F. B. A., Yong Pau Lin, P., Abdullah, A. F., Nordin, N., Giridharan, B., Forman, D., & Fyfe, S. (2018). Reactions to symptoms of mental disorder and help seeking in Sabah, Malaysia. *The International Journal of Social Psychiatry*, *64*(1), 49–55. https://doi.org/10.1177/0020764017739643

Sidik, S. M., Arroll, B., & Goodyear-Smith, F. (2011a). Prevalence of anxiety among women attending a primary care clinic in Malaysia. *British Journal of General Practice*, *61*(587). https://doi.org/10.3399/bjgp11X577990

Sidik, S. M., Arroll, B., Goodyear-Smith, F., & Ahmad, R. (2012a). Prevalence of depression among women attending a primary urban care clinic in Malaysia. *Singapore Medical Journal*, *53*(7), 468–473.

Singh, S., Zaki, R, A. (2018a). (PDF) Mental health literacy among young adolescents in Selangor. *National Conference*. https://www.researchgate.net/publication/335574126_Mental_health_literacy_among_young_adolescents_in_Selangor. Retrieved from 3 July 2019

© COPYRIGHT UPM

Smith, D. T., Mouzon, D. M., & Elliott, M. (2018). Reviewing the Assumptions About Men's Mental Health: An Exploration of the Gender Binary. *American Journal of Men's Health*, *12*(1), 78–89. https://doi.org/10.1177/1557988316630953

Squire, L. R., Wixted, J. T., & Clark, R. E. (2007). Recognition memory and the medial temporal lobe: A new perspective. In *Nature Reviews Neuroscience* (Vol. 8, Issue 11, pp. 872–883). [Electronic Version] NIH Public Access. https://doi.org/10.1038/nrn2154

Steel, Z., Marnane, C., Iranpour, C., Chey, T., Jackson, J. W., Patel, V., & Silove, D. (2014). The global prevalence of common mental disorders: A systematic review and meta-analysis 1980-2013. *International Journal of Epidemiology*, *43*(2), 476–493. https://doi.org/10.1093/ije/dyu038

Stromberg, S. E., Russell, M. E., & Carlson, C. R. (2015). Diaphragmatic breathing and its effectiveness for the management of motion sickness. *Aerospace Medicine and Human Performance*, *86*(5), 452–457. https://doi.org/10.3357/AMHP.4152.2015

Subramaniam, M., Abdin, E., Vaingankar, J. A., Shafie, S., Chua, H. C., Tan, W. M., Tan, K. B., Verma, S., Heng, D., & Chong, S. A. (2019). Minding the treatment gap: results of the Singapore Mental Health Study. *Social Psychiatry and Psychiatric Epidemiology*, *0123456789*. https://doi.org/10.1007/s00127-019-01748-0

Swannell, E. J. (2015). *Measuring and predicting mental health literacy for depression*. https://doi.org/10.1080/14623730.2015.1089010

Swift, N., Steward, R., Andiappan, M., Smith, A., Espie, C. A., & Brown, J. S. L. (2012). The effectiveness of community day-long CBT-I workshops for participants with insomnia symptoms: a randomised controlled trial. *Journal of Sleep Research*, *21*(3), 270–280. https://doi.org/10.1111/j.1365-2869.2011.00940.x

Tabachnick, B. G., & Fidell, L. S. (2014). Multilevel linear modeling. In *Pearson new international edition: Using multivariate statistics* (pp. 837–914). Pearson Education Limited.

Tan, K. C., Chan, G. C., Eric, H., & Maria, A. B. I. (2015). *Depression, anxiety and stress among patients with diabetes in primary care: A cross-sectional study | Request PDF*. Malaysian Family Physician. https://www.researchgate.net/publication/290653825_Depression_anxiety_and_stress_among_patients_with_diabetes_in_primary_care_A_cross-sectional_study. Retrieved 20 November 2019

Tan, K. L., & Yadav, H. (2013). Depression among the urban poor in Peninsular Malaysia: A community based cross-sectional study. *Journal of Health Psychology*, *18*(1), 121–127. https://doi.org/10.1177/1359105311433908

© COPYRIGHT UPM

Tan, S. Y., & Yip, A. (2018). Hans Selye (1907-1982): Founder of the stress theory. *Singapore Medical Journal*, *59*(4), 170–171. https://doi.org/10.11622/smedj.2018043

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, *2*, 53–55. https://doi.org/10.5116/ijme.4dfb.8dfd

Tobi, S. N. M., Masrom, M., Rahaman, S. A. S. A., & Mohammed, A. (2017). MyHEALTH portal: Malaysia national web-based health information service for public well-being. *Advanced Science Letters*, *23*(4), 2853–2856. https://doi.org/10.1166/asl.2017.7719

Tong, S. F., Low, W. Y., Ismail, S. B., Trevena, L., & Willcock, S. (2011). Malaysian primary care doctors' views on men's health: An unresolved jigsaw puzzle. *BMC Family Practice*, *12*(1), 29. https://doi.org/10.1186/1471-2296-12-29

Tongco, M. D. C. (2007). Purposive Sampling as a Tool for Informant Selection. *Ethnobotany Research & Applications*, *5*, 147–158.

Tsuey Chong, S., Mohamad, M. S., & Er, A. C. (2013). The mental health development in Malaysia: History, current issue and future development. *Asian Social Science*, *9*(6), 1–8. https://doi.org/10.5539/ass.v9n6p1

Twomey, C., O'Reilly, G., & Byrne, M. (2015a). Effectiveness of cognitive behavioural therapy for anxiety and depression in primary care: A meta-analysis. *Family Practice*, *32*(1), 3–15. https://doi.org/10.1093/fampra/cmu060

Udayakumar, K., Thoumi, A., Gonzalez-Smith, J., & Kadakia, K. (2018). Mark McClellan Advancing Integrated Care in England. https://healthpolicy.duke.edu/sites/default/files/2019-11/advancing_integrated_care_in_england_final_report.pdf. Retrieved 5 Jan 2021

Valderas, J. M., Starfield, B., Sibbald, B., Salisbury, C., & Roland, M. (2009). Defining comorbidity: Implications for understanding health and health services. *Annals of Family Medicine*, *7*(4), 357–363. https://doi.org/10.1370/afm.983

Veer-Tazelaar, P. V. N. T., Smit, F., Van Hout, H., Van Oppen, P., Van Horst, H. Der, Beekman, A., & Van Marwijk, H. (2010). Cost-effectiveness of a stepped care intervention to prevent depression and anxiety in late life: Randomised trial. *British Journal of Psychiatry*, *196*(4), 319–325. https://doi.org/10.1192/bjp.bp.109.069617

Verhey, I. J., Ryan, G. K., Scherer, N., & Magidson, J. F. (2020). Implementation outcomes of cognitive behavioural therapy delivered by non-specialists for common mental disorders and substance-use disorders in low- And middle-income countries: A systematic review. In *International Journal of Mental Health Systems* (Vol. 14, Issue 1). BioMed Central Ltd. https://doi.org/10.1186/s13033-020-00372-9

© COPYRIGHT UPM

Wang, J., Wu, X., Lai, W., Long, E., Zhang, X., Li, W., Zhu, Y., Chen, C., Zhong, X., Liu, Z., Wang, D., & Lin, H. (2017). Prevalence of depression and depressive symptoms among outpatients: A systematic review and meta-analysis. *BMJ Open*, *7*(8), 1–14. https://doi.org/10.1136/bmjopen-2017-017173

Washington, D. C. (2014). Promoting Mental Health in Indigeneous Populations Experiences from Countries. *Pan American Health Organization.* https://iris.paho.org/handle/10665.2/28415. Retrieved from 5 January 2021

Watanabe, N. (2016). Low prevalence rates of common mental disorders in Japan: Does it still hold true? *Epidemiology and Psychiatric Sciences*, *25*(3), 233–234. https://doi.org/10.1017/S2045796015000967

Wei, Y., Mcgrath, P. J., Hayden, J., & Kutcher, S. (2015). *Mental health literacy measures evaluating knowledge, attitudes and help-seeking: a scoping review*. https://doi.org/10.1186/s12888-015-0681-9

Wenzel, A, Donson, K, S., & Hays, P, A. (2016). Cognitive Behavioural Therapy Techniques and Strategies. *American Psychological Association*. https://doi.org/10.1037/14936-001

Wiegner, L., Hange, D., Björkelund, C., & Ahlborg, G. (2015). Prevalence of perceived stress and associations to symptoms of exhaustion, depression and anxiety in a working age population seeking primary care - An observational study. *BMC Family Practice*, *16*(1), 1–8. https://doi.org/10.1186/s12875-015-0252-7

Wittchen, H. (2020). The timing of depression: an epidemiological perspective *Medicographia.* https://www.medicographia.com/2010/10/the-timing-of-depression-an-epidemiological-perspective/. Retrieved from 2 June 2019

Wong, C. H., Sultan Shah, Z. U. B., Teng, C. L., Lin, T. Q., Majeed, Z. A., & Chan, C. W. (2016a). A systematic review of anxiety prevalence in adults within primary care and community settings in Malaysia. *Asian Journal of Psychiatry*, *24*, 110–117. https://doi.org/10.1016/j.ajp.2016.08.020

Wong, K. (2016). Gender Differences in Mental Health Literacy of University Students. *Western Undergraduate Psychology Journal*, *4*(41).

Wong, S. F., & Lua, P. L. (2011). Anxiety and Depressive Symptoms among Communities in the East Coast of Peninsular Malaysia: A Rural Exploration. *Malaysian Journal of Psychiatry E-journal*. https://www.mjpsychiatry.org/index.php/mjp/article/view/143. Retrieved from 1 July 2018

World Health Organization (2003). Investing in Mental Health. https://apps.who.int/iris/handle/10665/42823. Retrieved from 1 July 2019

World Health Organization (2010). Stress at the workplace. https://www.who.int/news-room/questions-and-answers/item/ccupational-health-stress-at-the-workplace. Retrieved from 16 November 2019

© COPYRIGHT UPM

World Health Organizations. (2010). Process of translation and adaptation of instruments. https://www.mhinnovation.net/sites/default/files/files/WHO%20Guidelines%20on%20Translation%20and%20Adaptation%20of%20Instruments.docx. Retrieved from 2 November 2017

World Health Organization (2011). The treatment gap in mental health care. (2011). http://apps.who.int/iris/bitstream/handle/10665/44697/9799241564359_eng.pdf;jsessionid=3D75D5D1A26B89E4216FFABF78831065?sequence=1. Retrieved from 18 July 2019

World Health Organization. (2013). Gender and women's mental health. https://www.who.int/teams/mental-health-and-substance-use/promotion-prevention/gender-and-women-s-mental-health. Retrieved 2 June 2019

World Health Organization. (2017). World Health Organization Report - Depression and Other Common Mental Disorders: Global Health Estimates. *World Health Organization*, 1–24. https://doi.org/CC BY-NC-SA 3.0 IGO

World Health Organization (2018). Mental Health in Primary Care: Illusion or Inclusion? https://apps.who.int/iris/handle/10665/326298. Retrieved from 20 November 2019

Wu, Q., Luo, X., Chen, S., Qi, C., Long, J., Xiong, Y., Liao, Y., & Liu, T. (2017). Mental health literacy survey of non-mental health professionals in six general hospitals in Hunan Province of China. *PLOS ONE*, *12*(7), e0180327. https://doi.org/10.1371/journal.pone.0180327

Xu, J., Wang, J., Wimo, A., & Qiu, C. (2016). The economic burden of mental disorders in China, 2005-2013: Implications for health policy. *BMC Psychiatry*, *16*(1), 137. https://doi.org/10.1186/s12888-016-0839-0

Y. Alkandari, N. (2020). Students Anxiety Experiences in Higher Education Institutions. In *Anxiety Disorders* [Electronic Version]. IntechOpen. https://doi.org/10.5772/intechopen.92079

Yahaya, S. N. (2018). Prevalence and associated factors of stress, anxiety and depression among emergency medical officers in Malaysian hospitals. *World Journal of Emergency Medicine*, *9*(3), 178. https://doi.org/10.5847/wjem.j.1920-8642.2018.03.003

Yang, L., Zhao, Y., Wang, Y., Liu, L., Zhang, X., Li, B., & Cui, R. (2015a). The Effects of Psychological Stress on Depression. *Current Neuropharmacology*, *13*(4), 494–504. https://doi.org/10.2174/1570159x1304150831150507

Yeoh, S. H., Tam, C. L., Wong, C. P., & Bonn, G. (2017a). Examining depressive symptoms and their predictors in Malaysia: Stress, locus of control, and occupation. *Frontiers in Psychology*, *8*(AUG), 1–10. https://doi.org/10.3389/fpsyg.2017.01411

© COPYRIGHT UPM

Yu, Y., Liu, Z., Hu, M., Liu, H., Yang, J. P., Zhou, L., & Xiao, S. (2015). Mental Health Help-Seeking Intentions and Preferences of Rural Chinese Adults. *PLOS ONE*, *10*(11), e0141889. https://doi.org/10.1371/journal.pone.0141889

Yuan, Q., Abdin, E., Picco, L., Vaingankar, J. A., Shahwan, S., Jeyagurunathan, A., Sagayadevan, V., Shafie, S., Tay, J., Chong, S. A., & Subramaniam, M. (2016). Attitudes to Mental Illness and Its Demographic Correlates among General Population in Singapore. *PLOS ONE*, *11*(11), e0167297. https://doi.org/10.1371/journal.pone.0167297

Yusoff, M. S. B., Mat Pa, M. N., Esa, A. R., & Abdul Rahim, A. F. (2013). Mental health of medical students before and during medical education: A prospective study. *Journal of Taibah University Medical Sciences*, *8*(2), 86–92. https://doi.org/10.1016/j.jtumed.2013.03.004

Zhang, A., Franklin, C., Jing, S., Bornheimer, L. A., Hai, A. H., Himle, J. A., Kong, D., & Ji, Q. (2019a). The effectiveness of four empirically supported psychotherapies for primary care depression and anxiety: A systematic review and meta-analysis. *Journal of Affective Disorders*, *245*(December 2018), 1168–1186. https://doi.org/10.1016/j.jad.2018.12.008

© COPYRIGHT UPM