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香港中文大學醫學院
Faculty of Medicine
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Management of Subthreshold Depression in Primary Care

JC JoyAge International Symposium 07-2024

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Outline of the presentation

- The story of Ms Chu
- Defining Subthreshold Depression and its Significance
- Care Model for Depression Primary Care
- Interventions of Subthreshold Depression in Primary Care
- Challenges and Opportunities
- Summary

Story of Ms. Chu

- 64 year-old Ms. Chu comes to see you today with 9-month history of feeling sad, she has hypertension with a BMI of 24 and her last visit was 4 months ago for her blood pressure control. She lives alone (divorced for many years) and her son was married a year ago and moved out from her flat. He sees her once a month.

- She has been having problem sleeping, feeling tired and but still able to go swimming although less often.

- She enjoyed a recent travel with her son to Japan but felt a bit sad when she was back to Hong Kong, living alone in her flat.

- She has no suicidality although she questions the purpose of life sometimes.

- She has no history of psychiatric illnesses

Patient Health Questionnaire - Depression (PHQ-9)

Instructions:

Over the last 2 weeks, how often have you been bothered by any of the following problems?

		Not at all	Several days	More than half the days	Nearly every day
1	Little interest or pleasure in doing things	0	1	2	3
2	Feeling down, depressed, or hopeless	0	1	2	3
3	Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4	Feeling tired or having little energy	0	1	2	3
5	Poor appetite or overeating	0	1	2	3
6	Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7	Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8	Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9	Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

Developer Reference:

Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues.

What is Subthreshold Depression

- A condition which **does not reach** the criteria of major depressive disorder (MDD)
  - Can be defined as two to four symptoms of depression that are experienced for more than nearly every day or more than half the time for 2 or more weeks and which have affected work, home or social functioning (score 5-9)

- **Highly prevalent** especially in the community and primary care settings (15%- 25.3% among patients in Hong Kong primary care settings)

- Associated with **significant reduction in quality of life**, increase in mortality and significant **increase in health care burden**

- 60% of patients continued to have subthreshold depression after 1 year; **up to 25% developed major depression** after 1-6 years of follow up

Depression Management: Stepped care

	Focus of the intervention	Nature of the intervention
STEP 4	Severe and complex[a] depression; risk to life; severe self-neglect	Medication, high-intensity psychological interventions, electroconvulsive therapy, crisis service, combined treatments, multi-professional and inpatient care
STEP 3	Persistent subthreshold depressive symptoms or mild to moderate depression with inadequate response to initial interventions; moderate and severe depression	Medication, high-intensity psychological interventions, combined treatments, collaborative care[b] and referral for further assessment and interventions
STEP 2	Persistent subthreshold depressive symptoms; mild to moderate depression	Low-intensity psychosocial interventions, psychological interventions, medication and referral for further assessment and interventions
STEP 1	All known and suspected presentations of depression	Assessment, support, psychoeducation, active monitoring and referral for further assessment and interventions

[a]Complex depression includes depression that shows an inadequate response to multiple treatments, is complicated by psychotic symptoms, and/or is associated with significant psychiatric comorbidity or psychosocial factors.
[b]Only for depression where the person also has a chronic physical health problem and associated functional impairment.

NICE 2009 guideline

Reference: National Institute for Health and Care Excellence (NICE) (2009) Depression in adults: recognition and management Clinical guideline

Step 2: Persistent subthreshold depressive symptoms; mild to moderate depression

A. General measures

- Depression with anxiety
- Sleep hygiene
- Active monitoring

B. Low-intensity psychosocial interventions

Consider offering one or more of the following:

- individual guided self-help based on the principles of CBT
- computerised cognitive behavioural therapy (CCBT)
- a structured group physical activity programme.

C. Group CBT

D. Drug treatment

Do not use antidepressants routinely, but consider them for people with:

- a past history of moderate or severe depression or
- initial presentation of subthreshold depressive symptoms that have been present for a long period (typically at least 2 years) or
- subthreshold depressive symptoms or mild depression that persist(s) after other interventions.

NICE 2009 guideline

Recommended treatment choices:

- NICE guidance for persistent subthreshold depressive symptoms or mild-to-moderate depression
  - Activity guidance e.g. sleep hygiene advice and structured physical activity programs

- For mild-to-moderate depression in adults:
  - Psychotherapy is recommended as an initial treatment option in most cases (Strong recommendation)
  - consider antidepressants as an alternative initial therapy in some cases (Weak recommendation)
    - a prior history of moderate or severe depression
    - subthreshold symptoms lasting ≥ 2 years
  - consider a combination of psychotherapy plus an antidepressant if there are comorbid psychosocial problems (Weak recommendation)

- For moderate-to-severe depression use a combination of an antidepressant plus psychotherapy (Strong recommendation):

- Consider electroconvulsive therapy (ECT) for severe depression if the patient is unresponsive to psychotherapy plus antidepressants or if there is an urgent need for rapid response (suicidal, food refusal, catatonic) (Weak recommendation).

- For most patients, optimal medications include selective serotonin reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs), mirtazapine, or bupropion (Strong recommendation).

Since the National Institute for Health and Care Excellence (NICE) published its last guideline on depression in 2009,[1] the prevalence of depression has increased,[2] particularly among vulnerable adults during the covid-19 pandemic.[3] Yet fewer than half of people affected receive treatment,[2] despite increased provision of psychological therapies[4] and antidepressants.[5] Most people who are treated still receive antidepressants[6] despite previous guideline recommendations to offer psychological therapies first,[1] and Public Health England is concerned that long term antidepressant prescribing is increasing, with many people experiencing withdrawal symptoms and having difficulty stopping them when appropriate.[7] In addition to cognitive behavioural therapy (CBT) as previously recommended,[1] other psychological treatments that have shown promise in recent years include behavioural activation[8] and mindfulness based therapies,[9] and these could offer more alternatives to antidepressants in the future.

Practice » Guidelines

Management of depression in adults: summary of updated NICE guidance

BMJ 2022 ; 378 doi: https://doi.org/10.1136/bmj.o1557 (Published 20 July 2022)
Cite this as: *BMJ* 2022;378:o1557

Depression in adults: discussing first-line treatments for less severe depression

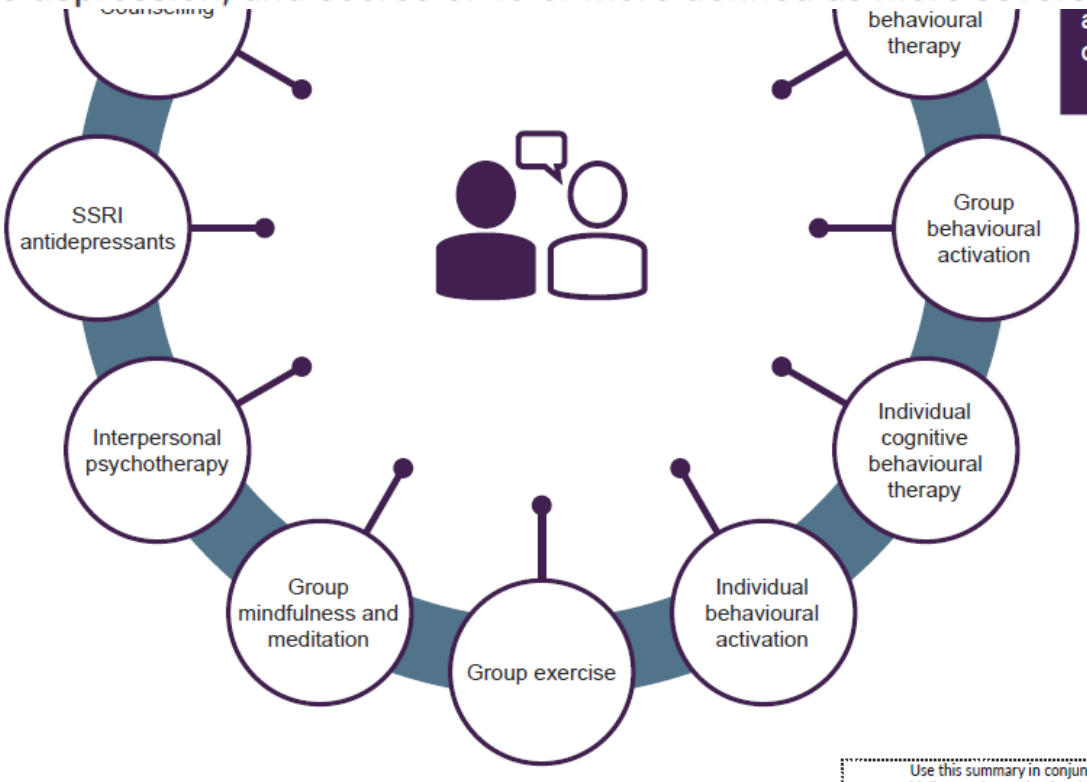
Discuss treatment options and match the choice of treatment to clinical needs and preferences, taking into account that any option can be used as first line, but consider the least intrusive and least resource intensive treatment first (guided self-help).

If the person has a clear preference, or experience from previous treatment to use as a guide: support the person's choice, unless there are concerns about suitability for this episode of depression.

Do not routinely offer antidepressants as a first-line treatment, unless that is the person's preference.

Less severe depression encompasses subthreshold and mild depression, and more severe depression encompasses moderate and severe depression. Thresholds on validated scales were used in this guideline as an indicator of severity. For example, a score 16 on the PHQ-9 scale was used, with scores less than 16 defined as less severe depression, and scores of 16 or more defined as more severe depression.

and consideration of implementation factors.



NICE National Institute for Health and Care Excellence

Use this summary in conjunction with table 1 in the NICE guideline on depression in adults: treatment and management.
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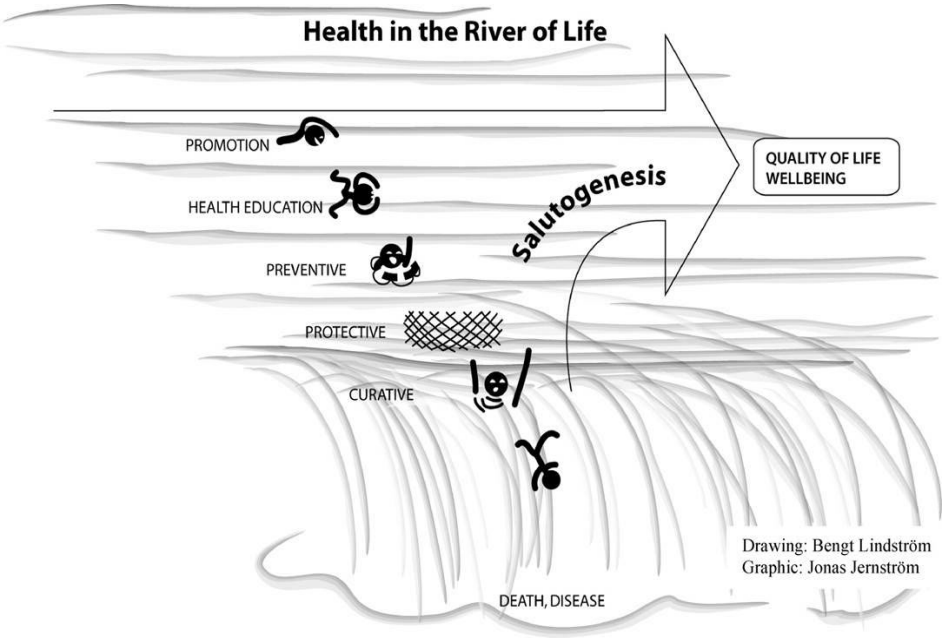
NICE 2022 guideline

Subthreshold Depression & Anxiety

High risk population for developing depression and anxiety disorder



- **Sub-threshold depressive and anxiety symptoms** are found to be prevalent in primary care
- Up to 35% of these patients will develop depression or anxiety disorder in one year
- Prevention of onset receives a high priority

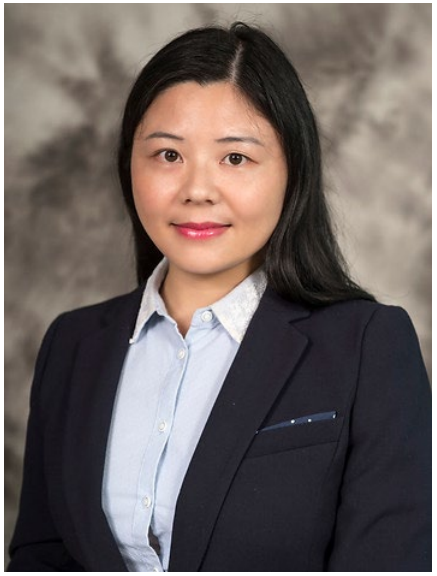
Ansseau, M., et al. (2004). J Affect Disord 78(1): 49-55.
Beekman, A. T., et al. (1998). Int J Geriatr Psychiatry 13(10): 717-726.
Beekman, A. T., et al. (1997). J Affect Disord 46(3): 219-231.

Depression & Anxiety Prevention

Prevention

---Prerequisite of minimizing adverse consequences and disease burden

Universal
Selective
Indicated — Most cost-effective



Journal of Affective Disorders 169 (2014) 212–220

Contents lists available at ScienceDirect

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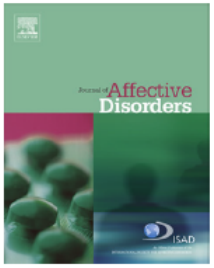
journal homepage: www.elsevier.com/locate/jad



Research report

Testing the Effectiveness of a Step Care Intervention for Preventing Major Depressive Disorder and Generalised Anxiety Disorder among Adults with Subthreshold Depression in Primary Care

Methods: Subthreshold depression and/or anxiety patients were randomized into the SCP group ($n=121$) or care as usual (CAU) group ($n=119$). The SCP included watchful waiting, telephone counseling, problem solving therapy, and family doctor treatment within one year. The primary outcome was the onset of major depressive disorder or generalized anxiety disorder in 15 months. The secondary outcomes were depressive and anxiety symptoms, quality of life and time absent from work due to any illness.

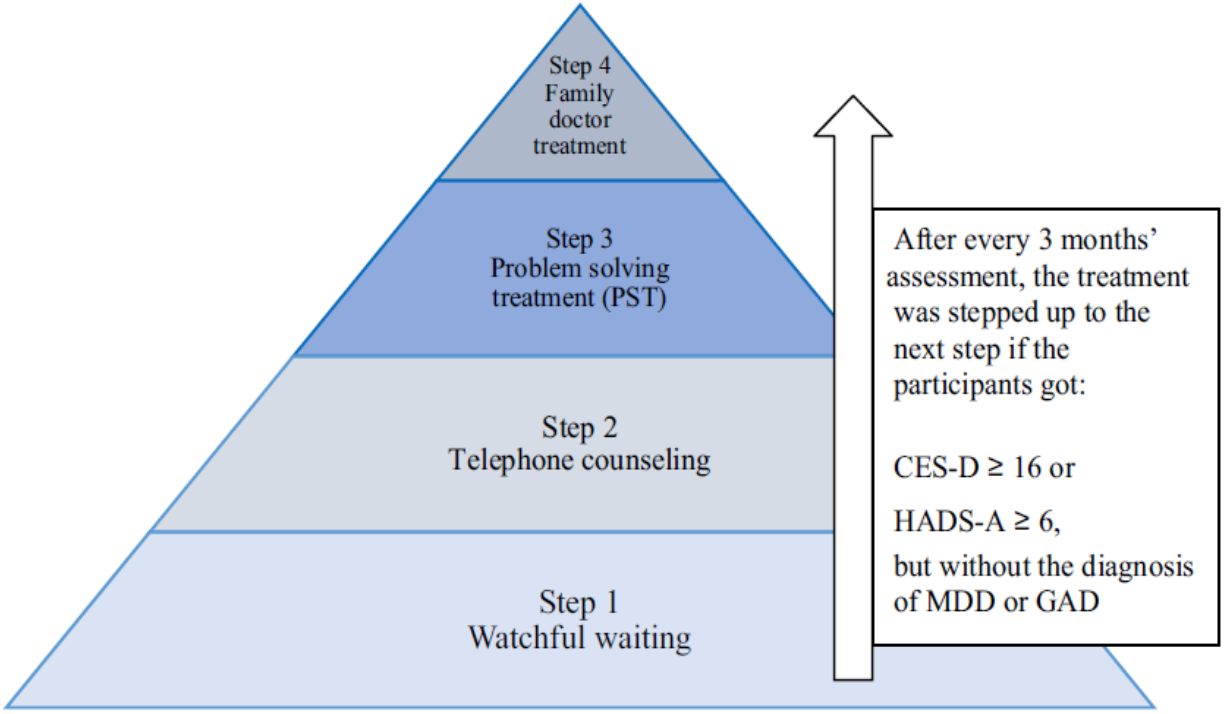


Fig. 1. Stepped care programme for depression and anxiety prevention among primary care patients with subthreshold depression or anxiety.

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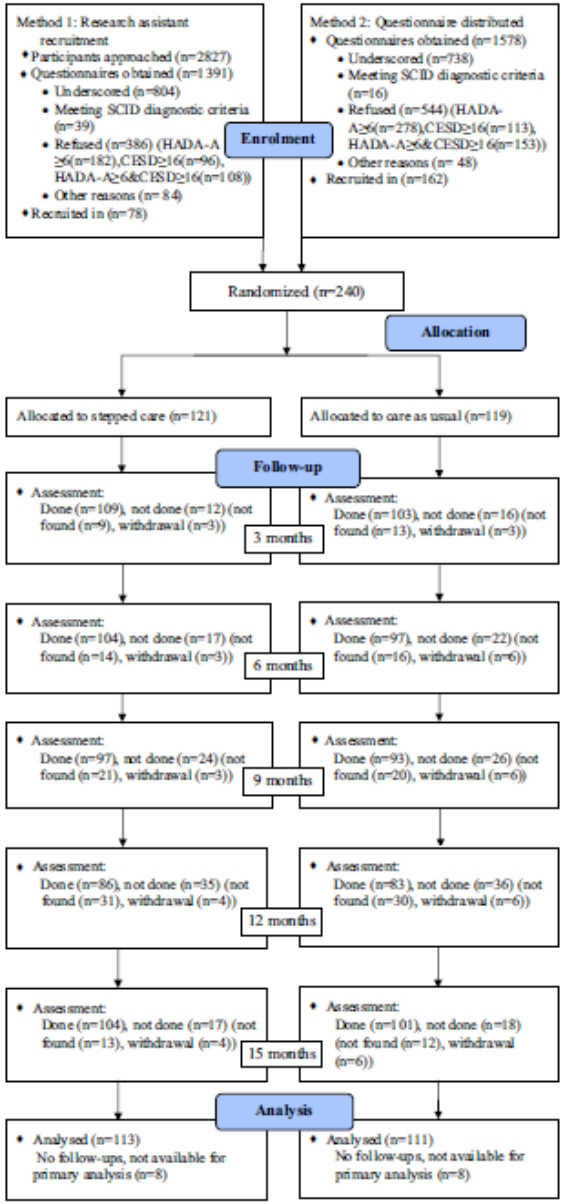

Fig. 2. CONSORT (Consolidated Standards of Reporting Trials) flow diagram of stepped care programme for depression and anxiety.

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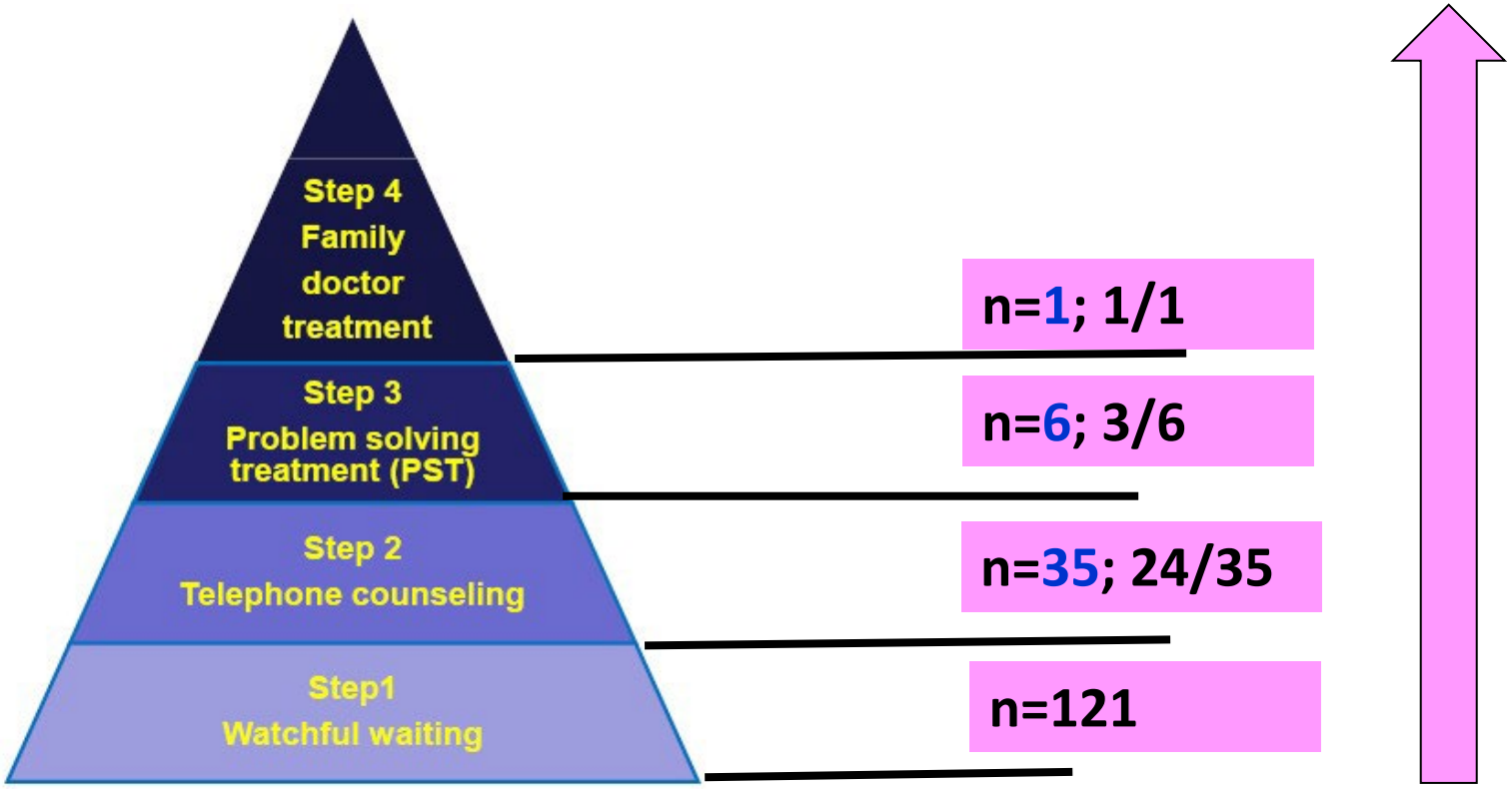
Stepped care programme



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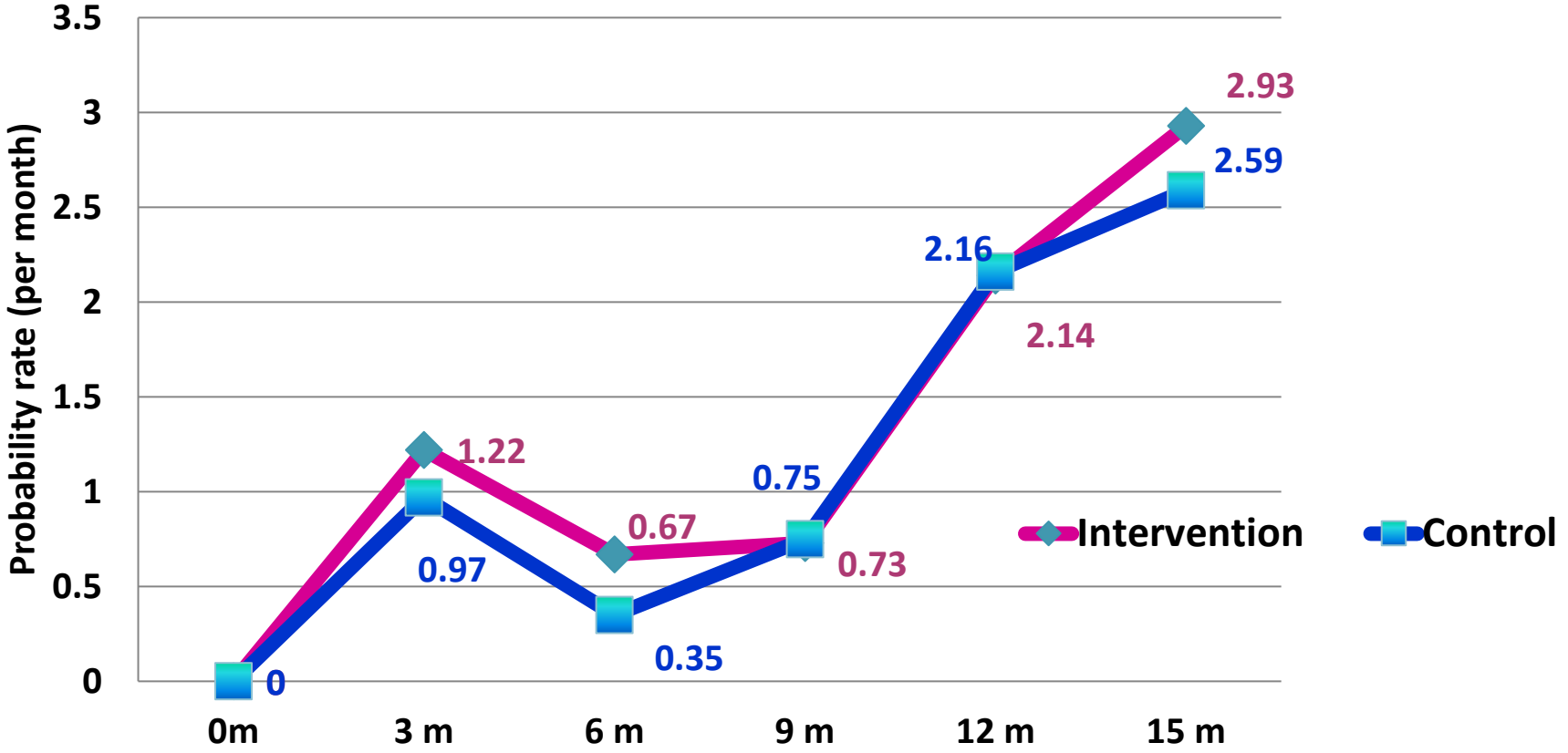
Probability (per month per 100 persons) of developing depression and anxiety disorders



Cumulative probability (SC vs CAU)

15 months: 21.81% (23.07% vs 20.46%)

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Reasons of non-superiority & limitation

- **Severity at baseline and natural variation of depressive and anxiety symptoms**

- **A low proportion of participants needed further intervention
  - **About 2/3 got "spontaneous recovery" after 3-months' watchful waiting**
  - Regression to mean

- Statistical power

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醫院管理局
HOSPITAL AUTHORITY

HA Convention Masterclass 2

Integrated Mental Health Programme for Common Mental Disorder patients in GOPCs

On behalf of COC (Family Medicine)
Dr. Daniel Chu
COS, Dept. of Family Medicine & Primary Healthcare
Deputy Service Director (Primary and Community Health Care)
Hong Kong East Cluster

The IMHP model

- **Time-specific, encounter specific**
- **Key workers (nurse / social worker / OT)**
- **Risk stratification & monitoring by standardized tool : PHQ-9 & GAD-7**
- **Step-wise care:**
  - Low risk → key worker
  - Medium risk → key worker + primary care doctors
  - High risk → FM +/- Psychiatrist
- **Objective measurement of outcomes using PHQ-9 & GAD-7**

Roles & responsibilities of key workers

- **Nurse / social worker / occupational therapist (can be from NGO)**
- **Roles / functions:**
  - Initial assessment
  - Patient education & self management support
  - Care coordination
  - Follow up & symptom monitoring
  - Brief psychotherapy e.g. behavioural activation, problem solving therapy
  - Relapse prevention

https://www3.ha.org.hk/haconvention/hac2014/proceedings/downloads/MC2.3.pdf
Accessed: 27 June 2024

Integrated Mental Health Program of implementation

- In Oct 2010, IMHP was implemented in New Territories East Cluster
  - Fanling Family Medicine Centre, North District
  - Wong Siu Ching Family Medicine Centre, Tai Po
  - Yuen Chau Kok and Lek Yuen General Outpatient Clinics, Sha Tin

North District

Tai Po

Sha Tin

IMHP in New Territories East Cluster

NTEC Department of Family Medicine

+

香港復康會
The Hong Kong Society for Rehabilitation
社區復康網絡
Community Rehabilitation Network

Non Government Organisation

→

IMHP – provides care to patients with depression & anxiety in outpatient setting

Target patients

Primary care level
(General outpatient clinics)

(1) Patients with depressive and anxiety symptoms

Secondary care level
(Common mental disorder clinics, Psy)

(2) Stabilised patients with depression and anxiety

Integrated mental health programme

Protocol-driven management

- Manage patients with CMD in GOPC based on the **stratified risk level**

GOPC patients with CMD symptoms

PHQ-9
GAD-7

PHQ-9 Score	GAD-7 Score	Risk Level	Management Plan
≤ 4	≤ 4	Normal	• Reassurance
5 – 9	5 – 9	Mild	• Lifestyle Modification / Patient Empowerment
10 – 14	10 – 14	Moderate	• Key worker with support from • **Key worker for counselling** • **Refer to IMHP doctor if needed**
15 – 19		Moderately Severe	
≥ 20	≥ 15	Severe	• Key worker & IMHP doctor • **Key worker for counselling + IMHP doctor** • **Refer to Psy/AED if developing suicidal ideation/psychosis**

Intervention – mild risk

- **Patient reassurance**
- **Lifestyle modification**

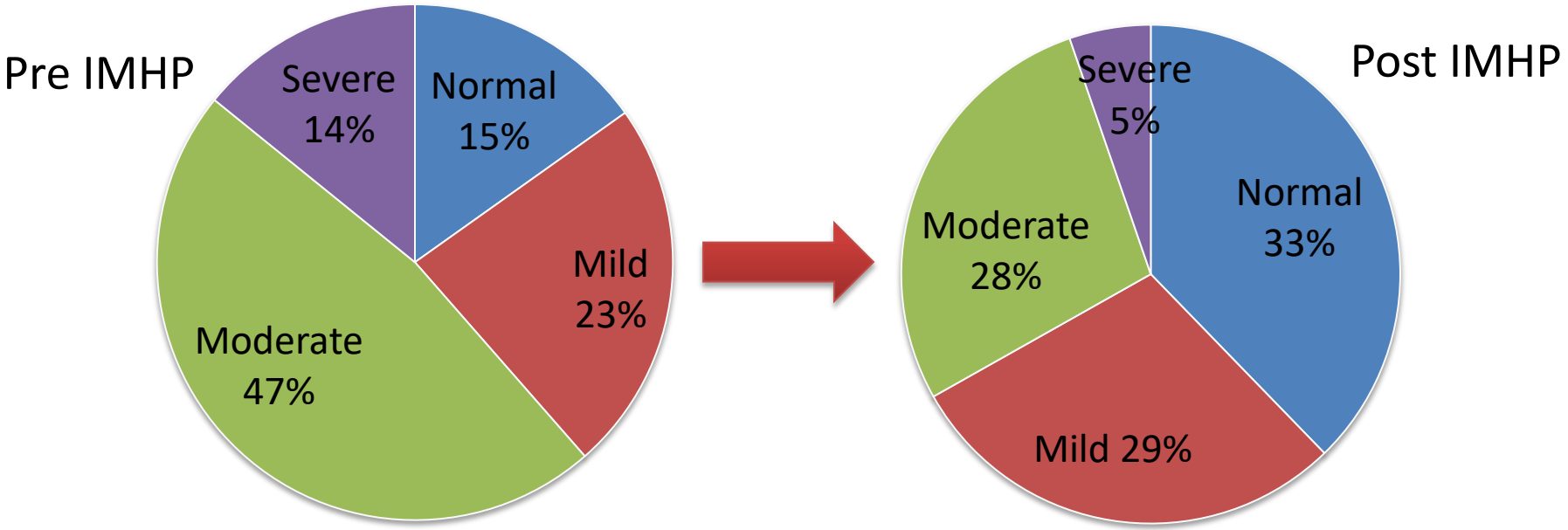
Baseline: Initial PHQ-9 and GAD-7 (%)

	GAD Normal	GAD Mild	GAD Moderate	GAD Severe
PHQ Normal	10.6%	3.4%	1.0%	0.2%
PHQ Mild	5.6%	10.8 %	6.0 %	1.1 %
PHQ Moderate	1.5 %	9.5 %	21.7 %	14.7 %
PHQ Severe	0.2 %	0.5 %	2.5 %	11.0 %

Total number of patients: 3999
Initial assessment not available in 64 patients

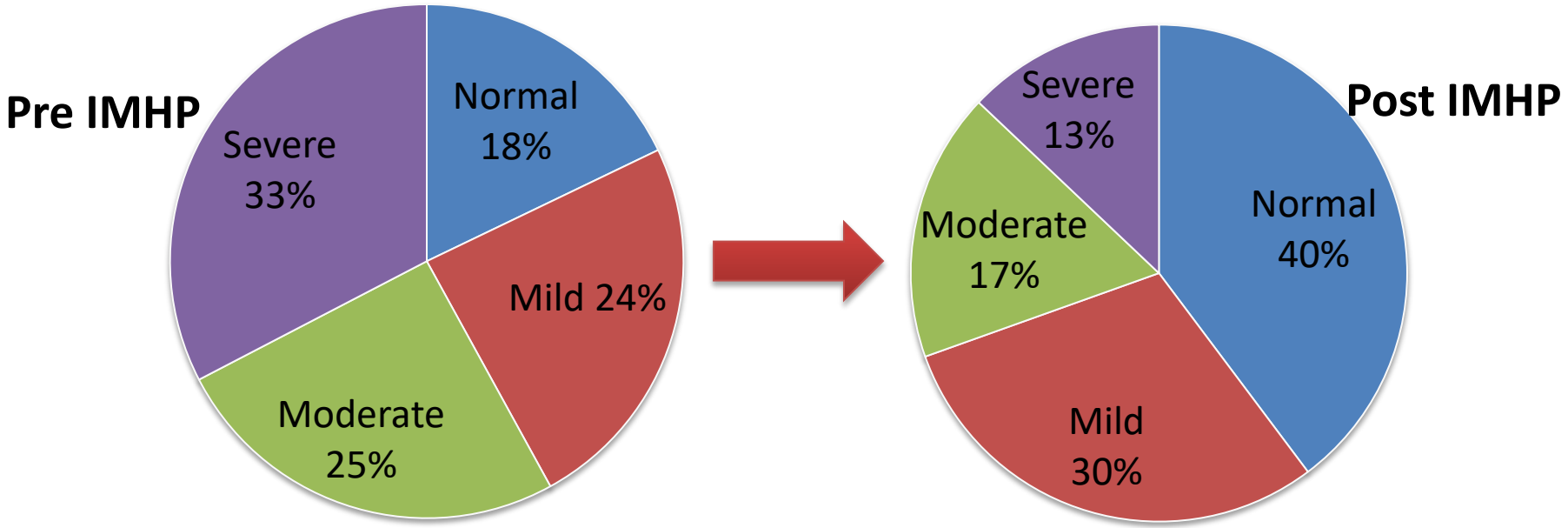
Outcomes: Proportion of severity - PHQ 9 (Pre vs Post)

Proportion of moderate to severe patients dropped by 28%



Outcomes: Proportion of severity - GAD 7 (Pre vs Post)

Proportion of moderate to severe patients dropped by 28%



Outcomes: Referrals to Psychiatry SOPD

- **Despite a significant growth in the number of patients with psychiatric symptoms, referrals from NTEC GOPCs to Psychiatry SOPD ⬇ by 3.4%**
  - **663 referrals in 2010/2011 vs 640 referrals in 2013/2014**

Treating Subthreshold Depression in Primary Care: A Randomized Controlled Trial of Behavioral Activation With Mindfulness

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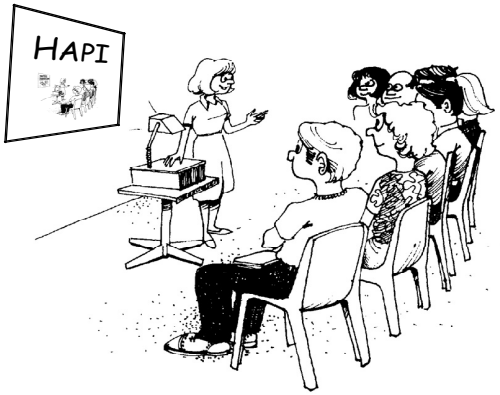
Alma M. L. Au, PhD[8]

Benjamin H. K. Yip, MS, PhD[1]

Ann Fam Med 2018;16:111-119. https://doi.org/10.1370/afm.2206.

BAM intervention outline



SESSION 1: Wellbeing and happiness

SESSION 2: Identifying happiness boosting activities and finding time to do them

SESSION 3: Identifying happiness boosting activities and finding time to do them

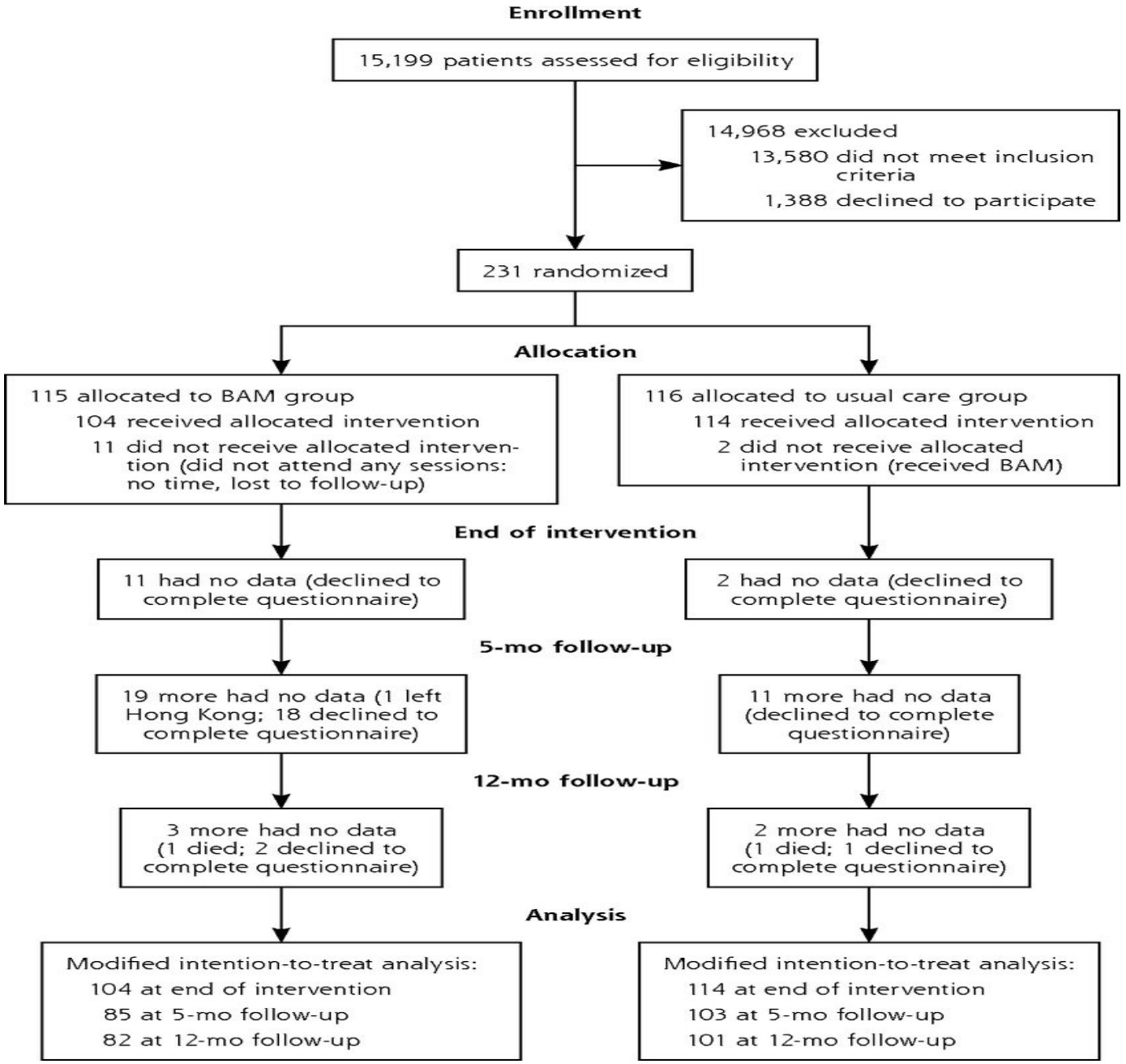
SESSION 4: Managing procrastination and staying motivated review and maintenance

SESSION 5: BA review and mindfulness

SESSION 6: BA maintenance and mindfulness

SESSION 7: BA maintenance and mindfulness

SESSION 8: BA and mindfulness review, conclusion



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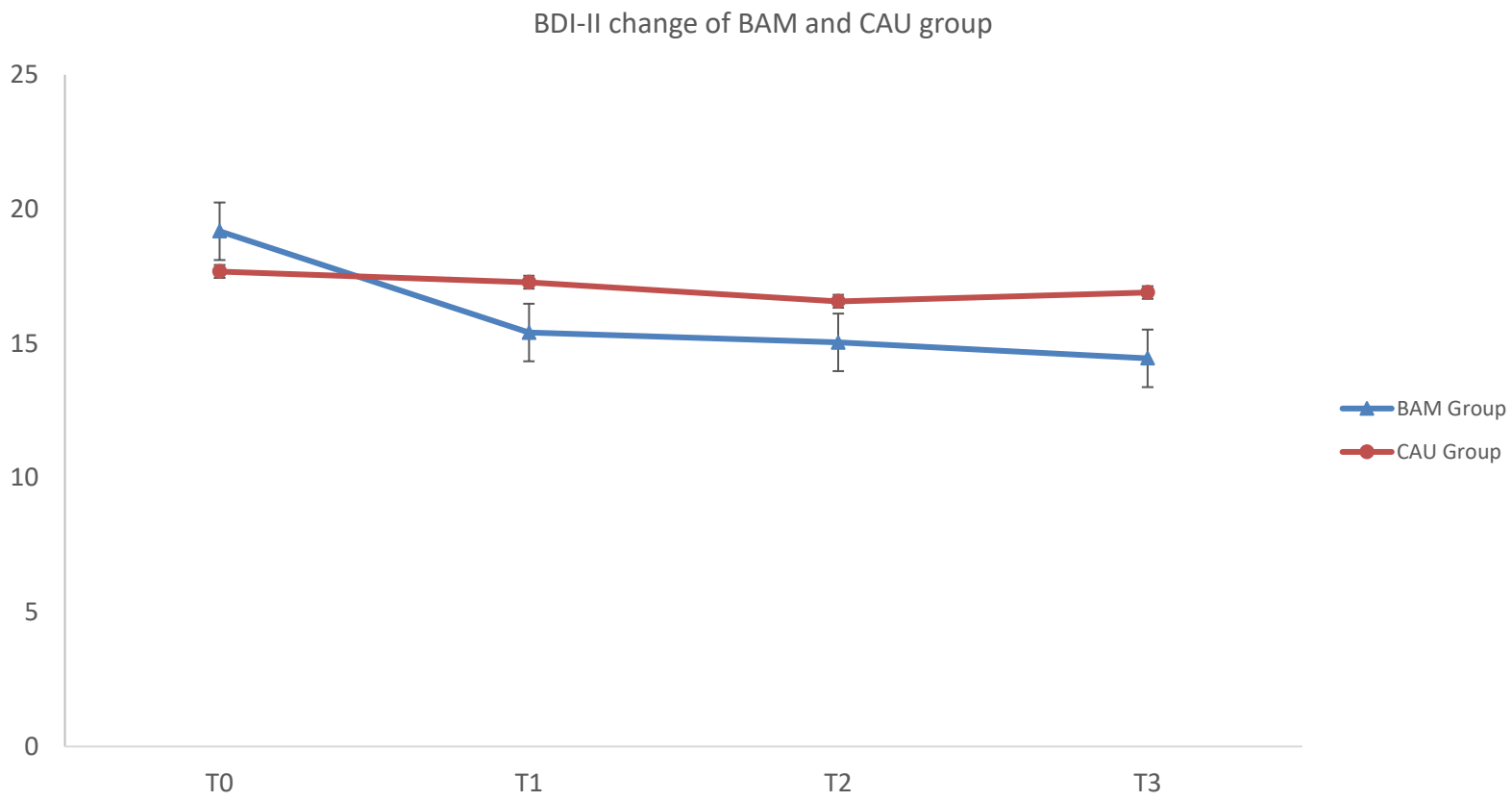
Results - Primary Outcome

Changes in levels of depressive symptoms (Beck Depression Inventory-II)



Note:
BDI-II: Beck Depression Inventory-II
BAM: Behavioral Activation with Mindfulness
CAU: Care As Usual

Results – Secondary Outcomes

- **Incidence of major depressive disorder was lower with BAM**
  - **(10.8% vs 26.8%, *P* = .01)**

- BAM have short-term effects on QoL (mental component) and activity and circumstantial change
  - The SF-12 MCS score was higher post intervention but not at 5 or 12-month follow-ups
  - The Activity and Circumstantial Change Questionnaire (ACCQ) score was higher poster intervention, but not at follow-ups

- BAM might reduce anxiety
  - STAI-T score was lower at 12-month follow-up in modified intention to treat analysis, but not in imputed or per protocol analysis.
  - a marginal difference in STAI-S score post intervention (p=0.059) but not follow-ups or in imputed or per protocol analysis.

- No effects on disability
  - No differences in SDS score

Is BAM cost effective?

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journal homepage: www.elsevier.com/locate/jpsychires

Short communication

Behavioral activation with mindfulness in treating subthreshold depression in primary care: A cost-utility and cost-effectiveness analysis alongside a randomized controlled trial

Yuying Sun [a,b], Samuel Y.S. Wong [a], Dexing Zhang [a], Cynthia H.J. Chen [c], Benjamin H.K. Yip [a,*]

[a] The Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong SAR, China
[b] School of Public Health, The University of Hong Kong, Hong Kong SAR, China
[c] Saw Swee Hock School of Public Health, National University of Singapore, Singapore

estimate the probability of cost-effectiveness of the estimated incremental cost effectiveness ratios (ICER) of BAM versus CAU. A total of 115 and 116 participants were included in the BAM group and CAU respectively. The estimated CUA ICER was US5,979 per QALY and had a probability of 0.93 that BAM was cost-effective when compared to CAU. Furthermore, when compared to CAU, BAM was cost-effective in preventing progression of major depression: the estimated CEA ICER was US$1046 per preventable case of major progression with a probability of 0.99 to be cost-effective. Group-based BAM is considered as a cost-effective alternative treatment for treating subthreshold depression by preventing major depressive disorder.

THE JOURNAL OF CLINICAL PSYCHIATRY

META-ANALYSES

Computer-Assisted Cognitive-Behavior Therapy for Depression: A Systematic Review and Meta-Analysis

Jesse H. Wright, MD, PhD; Jesse J. Owen, PhD; Derek Richards, PhD; Tracy D. Eells, PhD; Thomas Richardson, PhD; Gregory K. Brown,PhD; Marna Barrett,PhD; Mary Ann Rasku, MD; Geneva Polser, MEd; and Michael E. Thase, MD

Wright JH, Owen JJ, Richards D, et al. Computer-assisted cognitive-behavior therapy for depression: a systematic review and meta-analysis. *J Clin Psychiatry*. 2019;80(2):18r12188.

2019

40 RCTs

Conclusions:

1. CCBT with a modest amount of support from **a clinician or other helping person** was found to be efficacious with relatively large mean effect sizes on measures of depressive symptoms.
2. Self-guided CCBT for depression was considerably less effective.

What is the best course of action/treatment for her?

- She has been having problem sleeping, feeling tired and but still able to go swimming although less often.
- She enjoyed a recent travel with her son to Japan but felt a bit sad when she was back to Hong Kong, living alone in her flat.
- She has no suicidality although she questions the purpose of life sometimes.
- She has no history of psychiatric illnesses

Future Research Directions

- **Personalised Preventive Mental Health** i.e. who, what and when (not all need to be treated)

- **Cost-effective studies** on **when** and at **what severity** best for **what prevention** and at what **long term costs**?

The effectiveness of an online exercise intervention for improving depressive symptoms among patients with subthreshold depression in primary care: a randomized controlled trial

- **Who:** 260 adults in primary care
- Screened positive for subthreshold depression defined by PHQ-9 and persists for more than 3 months
- **What:** Intervention (working with Fitness Association of HK): 12-week Exercise Is Medicine (EIM) zoom physical activity intervention (twice a week lasting 1 hour) by trained physical trainers
- Control: Usual Care
- **What are the effects:** Primary Outcome: Depressive symptoms at 4-month assessment

Acknowledgement: Health and Medical Research Fund to start in 07/2024

Acknowledgements

- Dr. Eric Lee, Associate Professor (mindfulness teacher), School of Public Health and Primary Care, CUHK
- Professor Stanley Hui and team, Professor, Department of Sports Science and Physical Education, CUHK
- Dr. Maria Leung, Chief of Service, NTEC Department of Family Medicine and Primary Care, Hospital Authority
- Dr. Benjamin Yip, Associate Professor, School of Public Health and Primary Care, CUHK
- Dr. Sun Yu Ying, Assistant Professor, School of Nursing and Health Studies, Hong Kong Metropolitan University
- Dr. Dexing Zhang, Research assistant professor, School of Public Health and Primary Care, CUHK

- Health and Medical Research Fund

INTERNATIONAL CONFERENCE ON MINDFULNESS-ASIA PACIFIC HONG KONG 2025

CONFERENCE SPEAKERS

Prof. Willem Kuyken
Director, Oxford Mindfulness Centre, University of Oxford

Stephen Batchelor
Scottish Buddhist author and teacher

Prof. Christine Wamsler
Sustainability Science Professor, Lund University Centre for Sustainability Studies

Dr. Zheng Ruimin
Researcher, Center for Women and Children's Health, National Health Commission of China

Prof. Ramaswami Mahalingam
Psychology Professor, University of Michigan

Prof. Chris Krageloh
Psychology and Neuroscience Professor, Auckland University of Technology

Prof. Rhonda Magee
Law Professor, University of San Francisco

Prof Liu Xinghua
Associate Dean for Department of Clinical and Health Psychology, Peking University

(Zoom Speaker)
Prof. Mark Williams
Founding Director, Oxford Mindfulness Centre, University of Oxford

(Zoom Speaker)
Christina Feldman
Core teacher, Bodhi College

Venerable Hin Hung Sik
Honorary Assistant Professor and Senior Fellow, Centre of Buddhist Studies, University of Hong Kong

Rev. Fr. Kwan Tsun Tong
Honorary Professional Consultant, Department of Educational Administration and Policy, Chinese University of Hong Kong

Prof. Winnie Mak
Psychology Professor, Chinese University of Hong Kong

Kevin Fong
Co-founder, GAIA Tree Centre for Mindfulness

Prof. Poman Lo
Adjunct Professor, Department of Management, Hong Kong University of Science and Technology

Prof. Herman Lo
Associate Professor, Department of Applied Social Sciences, Hong Kong Polytechnic University

Prof. Samuel Wong
Professor and Director, School of Public Health and Primary Care, Chinese University of Hong Kong

Save the Date

26 -30 JUNE 2025

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Thank You!

Discussion and Q & A Session