From birth to old age: Taking a Life-course Approach to Mindfulness Interventions

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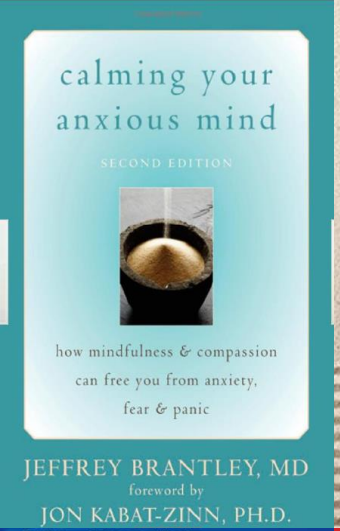
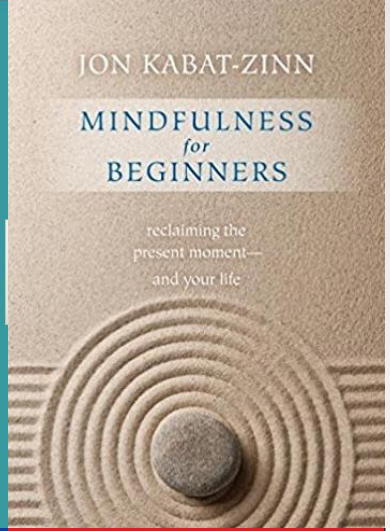
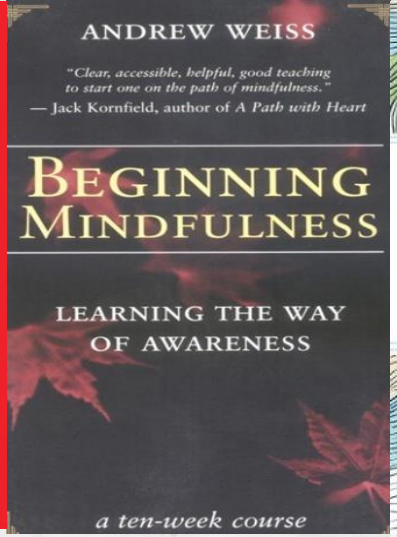
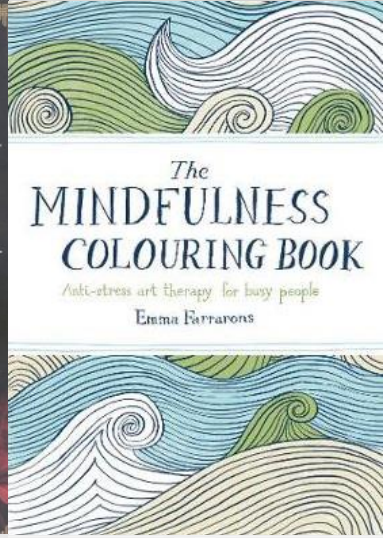
Faculty of Medicine
The Chinese University of Hong Kong

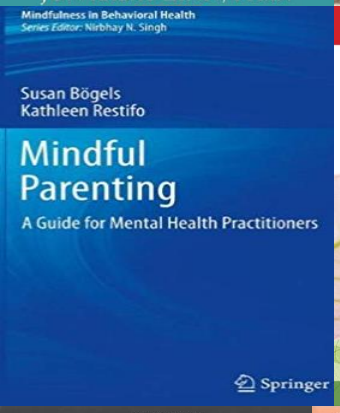

calming your anxious mind
SECOND EDITION
how mindfulness & compassion can free you from anxiety, fear & panic
JEFFREY BRANTLEY, MD
foreword by
JON KABAT-ZINN, PH.D.

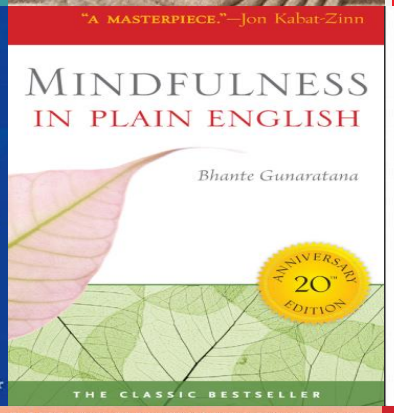

JON KABAT-ZINN
MINDFULNESS for BEGINNERS
reclaiming the present moment— and your life

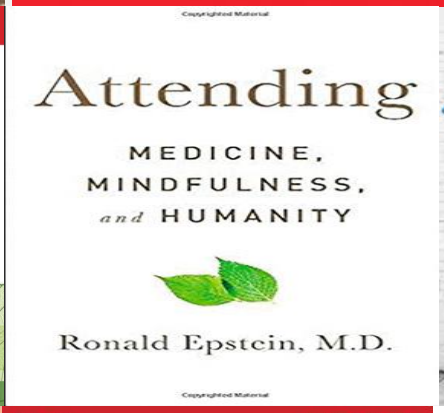

Fleeing Syria / Peyton Power / Steve McQueen
TIME
THE MINDFUL REVOLUTION
The science of finding focus in a stressed-out, multitasking culture


ANDREW WEISS
"Clear, accessible, helpful, good teaching to start one on the path of mindfulness."
— Jack Kornfield, author of A Path with Heart
BEGINNING MINDFULNESS
LEARNING THE WAY OF AWARENESS
a ten-week course

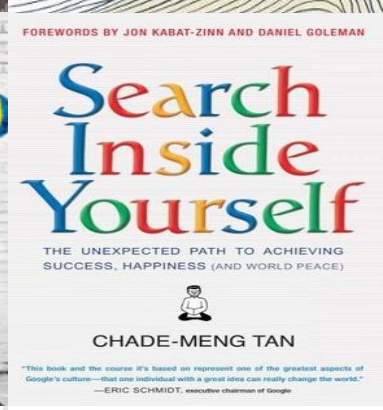

The MINDFULNESS COLOURING BOOK
Anti-stress art therapy for busy people
Emma Farrarons

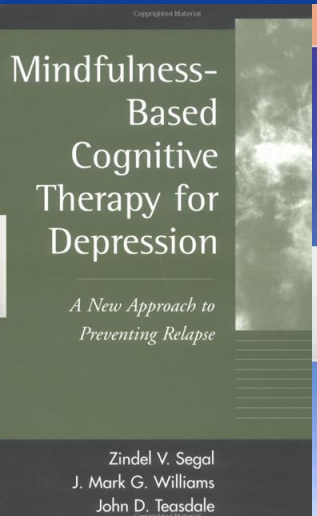

Mindfulness in Behavioral Health
Series Editor: Nirbhay N. Singh
Susan Bögels
Kathleen Restifo
Mindful Parenting
A Guide for Mental Health Practitioners
Springer

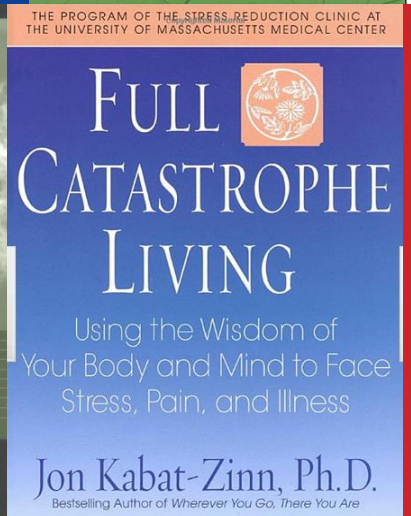

"A MASTERPIECE."—Jon Kabat-Zinn
MINDFULNESS IN PLAIN ENGLISH
Bhante Gunaratana
20th ANNIVERSARY EDITION
THE CLASSIC BESTSELLER

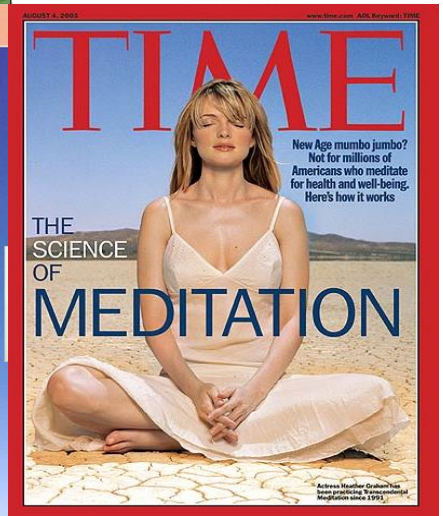

Attending
MEDICINE, MINDFULNESS, and HUMANITY
Ronald Epstein, M.D.

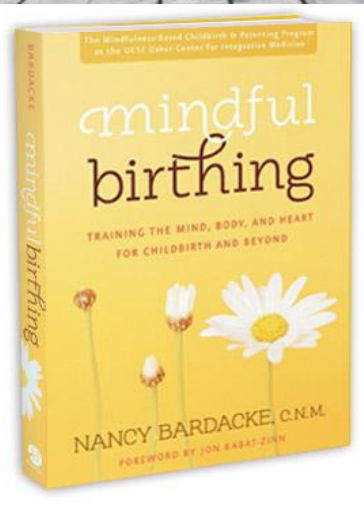

SUSAN M. BÖGELS
MET TEKENINGEN VAN CHAÏEN BÖGELS
MY MIND
MIJN MINDFULNESS-AANDACHTSBOEK
WERKBOEK

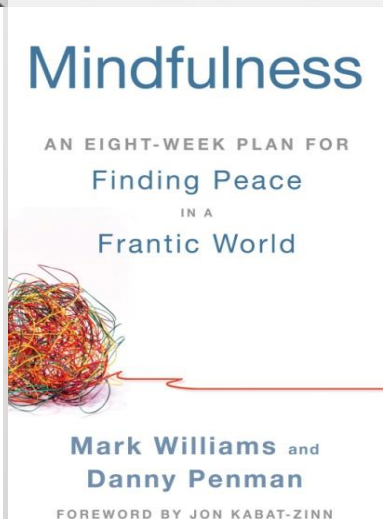

FOREWORDS BY JON KABAT-ZINN AND DANIEL GOLEMAN
Search Inside Yourself
THE UNEXPECTED PATH TO ACHIEVING SUCCESS, HAPPINESS (AND WORLD PEACE)
CHADE-MENG TAN
—ERIC SCHMIDT, executive chairman of Google


Mindfulness-Based Cognitive Therapy for Depression
A New Approach to Preventing Relapse
Zindel V. Segal
J. Mark G. Williams
John D. Teasdale

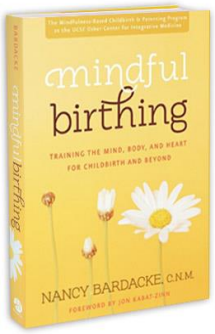

THE PROGRAM OF THE STRESS REDUCTION CLINIC AT THE UNIVERSITY OF MASSACHUSETTS MEDICAL CENTER
FULL CATASTROPHE LIVING
Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness
Jon Kabat-Zinn, Ph.D.
Bestselling Author of Wherever You Go, There You Are

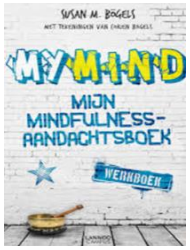

TIME
New Age mumbo jumbo? Not for millions of Americans who meditate for health and well-being. Here's how it works
THE SCIENCE OF MEDITATION


mindful birthing
TRAINING THE MIND, BODY, AND HEART FOR CHILDBIRTH AND BEYOND
NANCY BARDACKE, C.N.M.
FOREWORD BY JON KABAT-ZINN


Mindfulness
AN EIGHT-WEEK PLAN FOR
Finding Peace
IN A
Frantic World
Mark Williams and
Danny Penman
FOREWORD BY JON KABAT-ZINN

Content of Presentation





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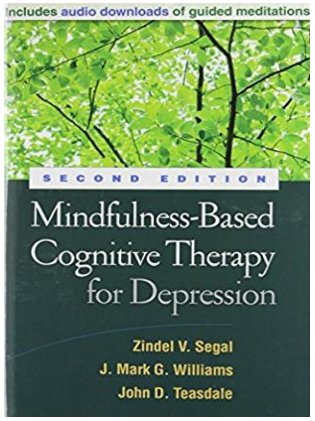
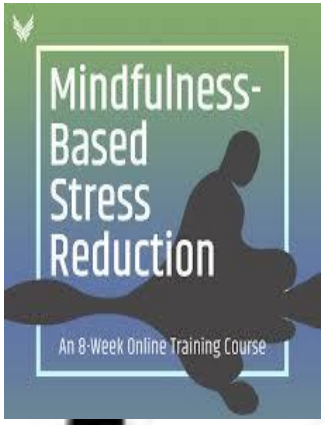
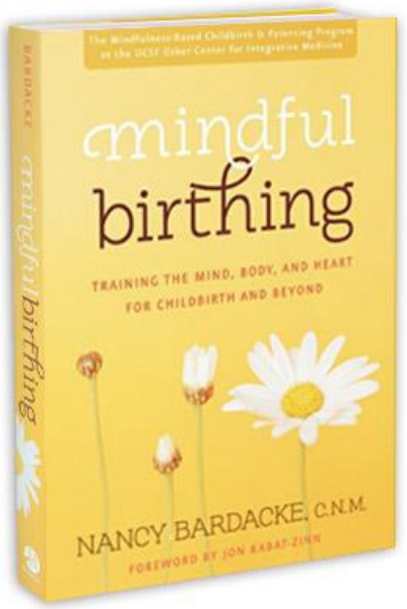
The Mindfulness in Schools Project
www.mindfulnessinschools.org





Mindful Childbirth



MBCP Course

- Aim: to **cultivate mindfulness** to cope with the **stress, fear and pain** related to pregnancy, childbirth and parenting.

- Actively encourages partner participation and intentionally builds a sense of **community**

- ~34 hours
  - 9 week ~3hrs for both pregnant woman and her partner
  - Silent day long session
  - Reunion around 2 months after birth

- Daily home practice 30min/ day, 6 days/ week

MBCP Research in Hong Kong

Study Design

- Randomised controlled trial
- Active control group
  - Antenatal Childbirth Education & Support (ACES)
    - Instructor, contact time
    - Course duration
    - Home assignment
    - Snack & community building

Subjects (N=183)

Inclusion Criteria

1. **Singleton** pregnancy at **second trimester**
2. resident of Hong Kong who will be living in Hong Kong for at least one year after childbirth
3. able to communicate in Cantonese
4. able to give informed consent
5. no previous meditation experience
6. no daily practice with other mind–body techniques (e.g. yoga, tai-chi); and
7. willing and able to attend all the sessions

Exclusion Criteria

1. Having a concurrent DSM-IV Axis diagnosis or recent diagnosis of depression during the last 12 months;

2. Currently seeing a psychiatrist or mental health professional or receiving any form of treatment for any mental condition.

Primary Outcome

Mental Health

Chinese (HK specific) version of Short Form-12 Health Survey (SF-12)

- Mental component summary (MCS)

Main Secondary Outcomes

Depression

- Edinburgh Postnatal Depression Scale (EPDS)
- Center for Epidemiologic Studies Depression Scale for Adults (CES-D)

Stress

- Perceived Stress Scale (PSS-14)

Anxiety

- State Trait Anxiety Inventory (STAI)
- Prenatal Pregnancy Anxiety (PPA)

Pain

- Pain Catastrophizing Scale (HK-PCS)

Mother-infant bonding disturbances

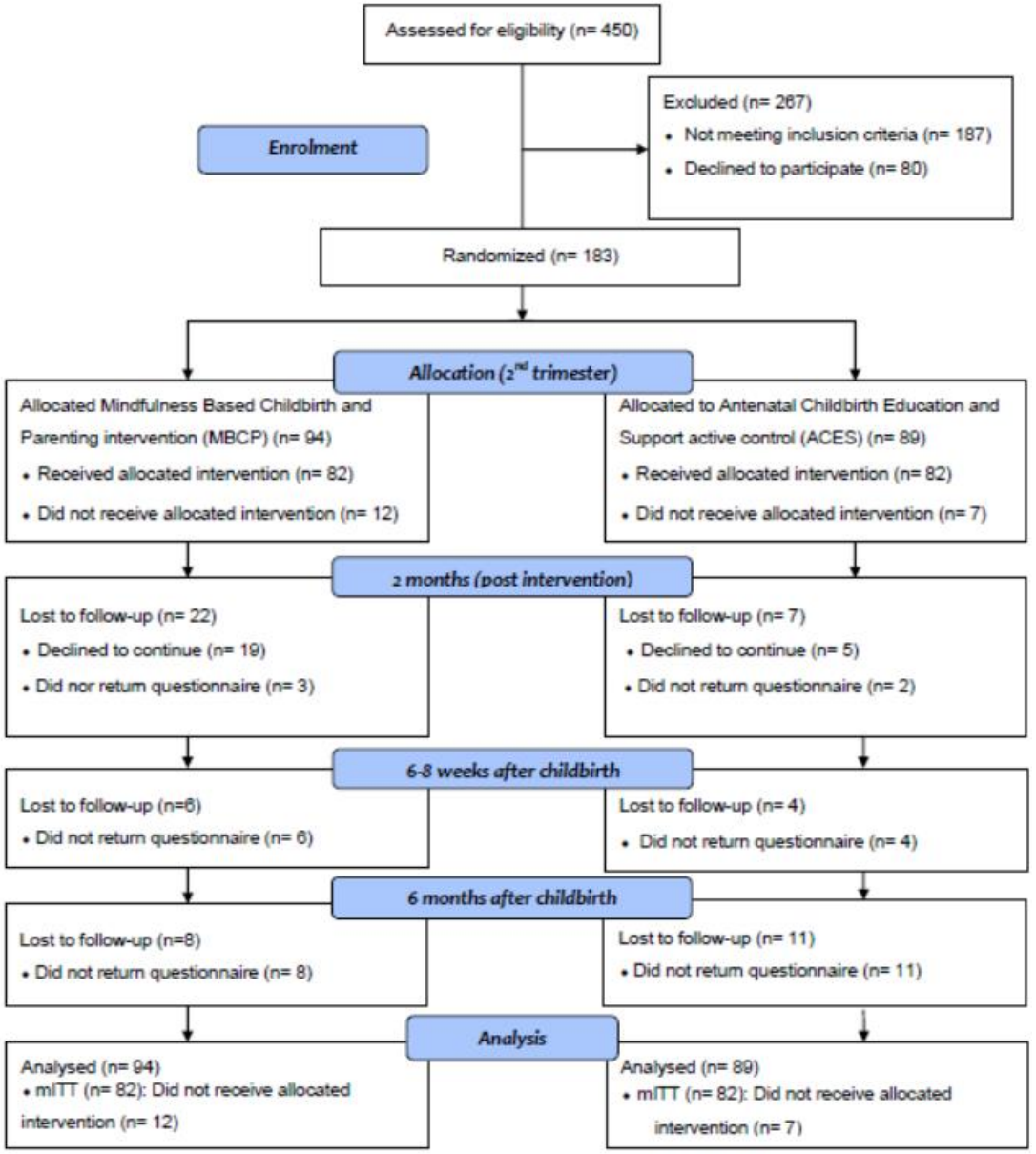
- Postpartum Bonding Questionnaire (PBQ)

Mindfulness Level

- Five Facets Mindfulness Questionnaire Chinse Version (FFMQ-C)

Figure 1

The CONSORT flow diagram



- In addition, **linear mixed model & per protocol analyses** showed **similar results** for pregnant women

- No beneficial effects were seen among their partners in MBCP group at 6 months after childbirth comparing to ACES.

Attendance & adherence of mothers per week

	MBCP-P	ACES-P	P value
Attendance (n, %)			**0.002**
0 to 3 classes	30 (31.9)	11 (12.4)	
4 classes or above	64 (68.1)	78 (87.6)	
Adherence of Practice per week (mean, sd)			
Frequency of Practice	4.2 (4.1)	5.2 (2.4)	0.074
Duration of Practice (hours)	0.8 (0.8)	1.0 (0.5)	0.134

- *Better attendance in ACES*
- *No differences in adherence of practice*

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Discussion

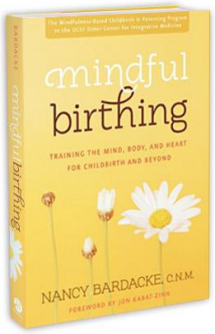
Key findings:

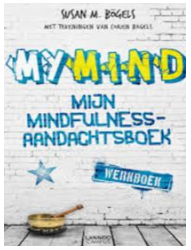
- MBCP is beneficial for improving mental well-being among expectant mothers when compared to conventional antenatal classes.

- No beneficial effects on obstetrical outcomes such as improved coping with labour pain or duration of labour were detected.

- Moreover, MBCP is more effective among mothers with higher levels of depression and stress at baseline.
  - *A recent systematic review on the effects of mindfulness interventions on prenatal well-being suggested that effects might be more pronounced for vulnerable groups such as those with current low prenatal well-being*

Content of Presentation





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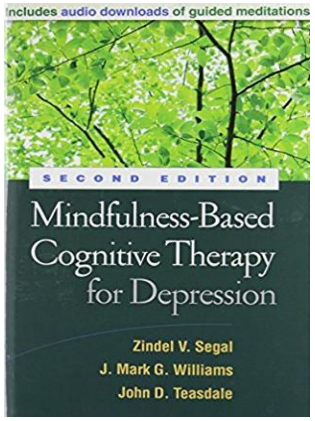

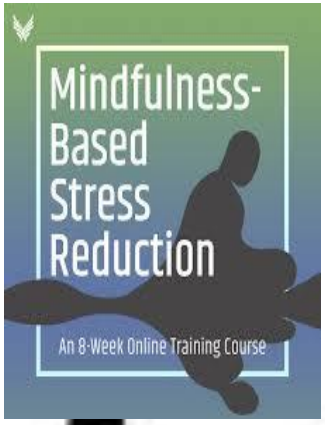

THE EVIDENCE FOR MINDFULNESS IN SCHOOLS FOR CHILDREN AND YOUNG PEOPLE

Katherine Weare (July, 2018)

Review the results of 3 recent systematic reviews, and 5 meta-analyses, with 43 individual studies identified in school contexts which were published in peer-reviewed journals and scientific books

Findings suggested that MBIs in school settings:

- Are **popular ("acceptable")** with students and teachers and show very little evidence of any adverse effects.
- Can reliably and positively impact on a wide range of indicators: **psychological, social and physical wellbeing and flourishing** in children and young people.
- Have **small to medium impacts** on **psycho-social health and wellbeing / mental health, and aspects of cognition**.
- Show promising preliminary evidence for **impacts on academic grades**, **problem behaviour**, and **physical health and wellbeing**

The MiSP Curriculum

- Mindfulness in Schools Project (MiSP) is a national, not-for-profit charity, whose aim is to improve the lives of children by making a positive difference to their mental health and wellbeing

- It introduced 2 leading mindfulness curriculum in UK schools
  - "**Paws b Curriculum**" for **7-11 years olds**
    - The number of lessons are varied and can be taught as twelve 30 minute lessons
  - "**.b Curriculum**" for **11-18 year olds**
    - It is a ten lesson course and each lesson lasts for between 40 minutes and 1 hour

Paws .b Curriculum

Lesson	Topic	Description
1	Our Amazing Brain	• Exploring how mindfulness can help us to train our minds to change our brain • Introducing 4 key areas of the brain, beginning with the Prefrontal Cortex
2	Making Choices	• Learning how mindfulness can help us to concentrate when we need to • Recognizing the choices we make each day and the impact these have on our lives
3	Puppy Training	• Exploring how the attention can move around, narrow down or broaden out in focus. • Learning about how the attention is also like a puppy, but can be trained with an attitude of kindness, patience and repetition
4	Everyday Mindfulness	• Understanding what it means to be on 'autopilot' • Learning about the role of the hippocampus and how it links new experiences to old ones

Paws .b Curriculum

Lesson	Topic	Description
5	Noticing The Wobble	• Recognising that we all 'wobble', and explore ways to steady ourselves • Learning about the Insula's role in recognising different body states in ourselves and others and how they relate to mood
6	Finding A Steady Place	• Exploring practices that steady our attention in the lower half of the body • Learning to recognise moods in ourselves and others
7	Working With Difficulty	• Exploring the idea of reactivity – what looks and feels like • Learning about the amygdala and its role in 'fight, flight or freeze'
8	Choosing Your Path	• Learning how to nurture attitudes of curiosity, kindness, and openness to experiences • Understanding the importance of keeping the mind and body safe and healthy through noticing choice points, and choosing to respond where appropriate

Paws .b Curriculum

Lesson	Topic	Description
9	The Storytelling Mind	• Discussing what a thought is, and learning to recognise them as they arise • Noticing some of the habits of our mind – e.g. ways the mind tries to fix difficulties by over-thinking
10	Stepping Back	• Learning about how thoughts can be connected to body, emotions and urges/actions • Exploring ways to step back and be present moment-focused when the mind is telling us stories
11	Growing Happiness	• Discussing how we can best nurture ourselves and others • Understanding how we can sometimes create space and choices around happiness
12	The Yum Factor	• Exploring specific ways to savour happiness • Learning about how happiness, kindness and gratitude are connected

Mindfulness Training in Primary Schools Decreases Negative Affect and Increases Meta-Cognition in Children

Charlotte E. Vickery*, Dusana Dorjee

The study assessed acceptability and emotional well-being outcomes of Paws b curriculum for children aged 7–9 years.

Method

- 71 participants aged 7–9 years were recruited from 3 primary schools
  - Intervention group (Paws b curriculum) n=33; Waitlist control group n=38
- Outcomes were measured using self-report questionnaires at baseline, post-training and 3 months follow-up, and informant reports were collected at baseline and follow-up.

Result

- **Acceptability of the program** was **high**.
- Compared to control group,
  - Intervention group showed **significant decreases in negative affect** at follow-up, with a large effect size ($p = 0.010$, $d = 0.84$).
  - Teacher reports of **meta-cognition** also **showed significant improvements** at follow-up with a large effect size ($p = 0.002$, $d = 1.08$).

frontiers in Psychology

ORIGINAL RESEARCH
published: 12 January 2016
doi: 10.3389/fpsyg.2015.02025

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.b Curriculum

Lesson	Topic	Description
1	An Introduction to Mindfulness	An introductory lesson persuades young people that mindfulness is worth learning about by making it relevant to their lives.
2	Playing Attention	Introduces students to this thing we call our “attention” which, like a puppy, needs to be trained.
3	Taming the Animal Mind	Explores different mind states and teaches that ‘anchoring’ attention in the body, alongside the cultivation of curiosity and kindness, can be calming and nourishing.
4	Recognizing Worry	Explains the tricks our mind plays that lead to stress and anxiety, and gives us techniques to deal with them.
5	Being Here Now	Comes to the heart of mindfulness and teaches us how to respond, rather than react, to whatever happens in our lives.

.b Curriculum

Lesson	Topic	Description
6	Moving Mindfully	Shows us that mindfulness is not just something we do sitting or lying down. It also looks at high performance in sport.
7	Stepping Back	Offers us a new way of relating to our thoughts. We don't have to let them carry us away to places we'd rather not be.
8	Befriending the Difficult	Deals with the greatest challenge of all: dealing with difficult emotions.
9	Taking in the Good	Focuses on gratitude and the 'heartfulness' of taking in & savoring what is 'good' in life.
10	Pulling it all Together	Consolidates the key techniques from .b and inspires students to use what they have learned in the future.

Effectiveness of the Mindfulness in Schools Programme: non-randomised controlled feasibility study

Willem Kuyken, Katherine Weare, Obioha C. Ukoumunne, Rachael Vicary, Nicola Motton, Richard Burnett, Chris Cullen, Sarah Hennelly and Felicia Huppert

Method

- 522 participants aged 12–16 were recruited from 12 secondary schools
  - Intervention group (.b curriculum) n=256; Control group (usual school curriculum) n=266
  - Outcomes were measured using self-report questionnaires at baseline, post-training and 3 months follow-up

Result

- **Rates of acceptability** were **high**.
- Compared to control group, intervention group reported:
  - **Fewer depressive symptoms** at post-treatment ($p = 0.004$) and follow-up ($p = 0.005$);
  - **Lower stress** ($p = 0.05$) and **greater well-being** ($p = 0.05$) at follow-up.
  - The degree to which **students in the intervention group practiced the mindfulness skills was associated with better well-being** ($p < 0.001$) and **less stress** ($p = 0.03$) at 3-month follow-up.

BJPsych The British Journal of Psychiatry (2013) 203, 126–131. doi: 10.1192/bjp.bp.113.126649

Mindfulness
August 2017, Volume 8, Issue 4, pp 859–872

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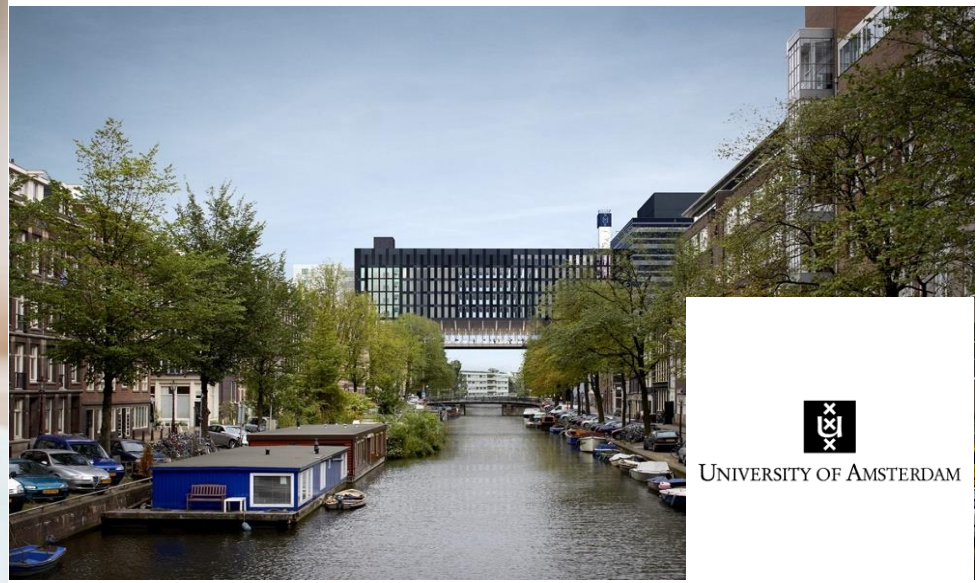
Mindfulness-Based Intervention for Chinese Children with ADHD and Their Parents: a Pilot Mixed-Method Study

Authors | Authors and affiliations

Dexing Zhang, Stanley Kam Chung Chan, Herman Hay Ming Lo, Christina Ying Ha Chan, Jenny Ching Yin Chan, Ka Tsun Ting, Tiffany Ting Gao, Kelly Yee Ching Lai, Susan M. Bögels, Samuel Yeung Shan Wong



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Treatments for AD/HD

- Behavioral intervention for AD/HD
  - Less effective, but still helpful. Esp. in social skills, relationship, positive functioning outcomes
  - Re-analysis of the MTA study
    - Superiority of medication to behavioral therapy is greater in Predominantly Hyperactive-Impulsive Presentation
    - For children at lesser degrees of severity, choice of first-line treatment is more evenly balanced
  - Very little physical hazard
- Medication adherence rate in AD/HD youth in HK
  - 50-80% after 1 year and 36- 46% after 5 years
  - Concern about side effect and stigma related to medication
- Prevalence of ADHD medication among children
  - Lower than other countries like Canada and United States
  - Conservative approach in Chinese culture
- Psychological intervention is deemed necessary

Mechanism	Exemplary instructions	Self-reported and experimental behavioral findings	Associated brain areas
1. Attention regulation	Sustaining attention on the chosen object; whenever distracted, returning attention to the object	Enhanced performance: executive attention (Attention Network Test and Stroop interference), orienting, alerting, diminished attentional blink effect	Anterior cingulate cortex
2. Body awareness	Focus is usually an object of internal experience: sensory experiences of breathing, emotions, or other body sensations	Increased scores on the Observe subscale of the Five Facet Mindfulness Questionnaire; narrative self-reports of enhanced body awareness	Insula, temporo-parietal junction
3.1 Emotion regulation: reappraisal	Approaching ongoing emotional reactions in a different way (nonjudgmentally, with acceptance)	Increases in positive reappraisal (Cognitive Emotion Regulation Questionnaire)	(Dorsal) prefrontal cortex (PFC)
3.2 Emotion regulation: exposure, extinction, and reconsolidation	Exposing oneself to whatever is present in the field of awareness; letting oneself be affected by it; refraining from internal reactivity	Increases in nonreactivity to inner experiences (Five Facet Mindfulness Questionnaire)	Ventro-medial PFC, hippocampus, amygdala
4. Change in perspective on the self	Detachment from identification with a static sense of self	Self-reported changes in self-concept (Tennessee Self-Concept Scale, Temperament and Character Inventory)	Medial PFC, posterior cingulate cortex, insula, temporo-parietal junction

BK Hölzel, SW Lazar, T Gard, Z Schuman-Olivier, DR Vago, U Ott. (2011). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. Perspectives on Psychological Science 6 (6), 537-559

MYmind - Pilot study in Hong Kong

- Adapted based on MBCT & MBSR by Prof. Susan Bögels and her team in the Netherlands

- 8 weekly 90-minute group sessions for children with ADHD and their caregivers

Intervention – MYmind in Hong Kong

- Adapted based on MBCT & MBSR by Prof. Susan Bögels and her team in the Netherlands
  - 8 weekly 90-minute group sessions

- Localization of the treatment manual in Hong Kong by
  - 3 psychologists, 1 social worker and 1 public health academic

- Therapists:
  - had experiences in caring for children with special needs and their families, and in providing mindfulness group interventions
  - trained by Prof. Susan Bögels during a week-long intensive advanced teacher training
  - Children were rewarded for good performances in the course
  - Two helpers helped in each of the child group

MYmind Pilot in Hong Kong

- Participants:
  - aged 8-12 years (n = 11)
  - one of their parents (n = 11)

- Outcomes:
  - feasibility/acceptability
  - objective measures of children's attention, parent-reported child executive function & behavior problems and parental stress

MYmind

Sessions	Children - theme	Children - exercise	Parents - theme	Parents - exercise
1	From Mars	**With parents**: "raisin" exercise Child session: sensory awareness exercises; "raisin" exercise with chips; breathing meditation	From Mars	**With children**: "raisin" exercise Parental session: psycho-education on ADHD/ mindfulness, breathing meditation, doing homework for yourself & helping child with home-work
2	My body	Breathing meditation, body awareness exercises, body-scan, yoga-exercises	My body	Breathing meditation, bodyscan
3	My Breath	Breathing meditation, body awareness exercises, body-scan, yoga-exercises	My Breath	Bodyscan, breathing space, breath & body awareness meditation
4	Distraction	Breathing meditation, body awareness exercises, body-scan, yoga-exercises	Automatic responding	Breath & body awareness meditation, psychoeducation stress & automatic responding, exercise awareness of positive interaction with child, breathing space

MYmind

Sessions	Children - theme	Children - exercise	Parents -theme	Parents - exercise
5	Automatic responding	**With parents:** breathing meditation, group evaluation Child session: breathing space, awareness of automatic responding exercises, body-scan, yoga-exercises	Habits & Automatic responding	With children: breathing meditation, group evaluation Parent session: breath & hearing meditation, psycho-education responding to stressful situations with child & using breathing space in stressful situations
6	Up to now	Breathing meditation, repetition learned skills, breathing space in difficult situations, body-scan by one of the children, hearing meditation with bell, yoga-exercises	Communication with your child	Breathing meditation, exercise breathing space in stressful situation with your child, body-scan
7	Practice	Breathing meditation, meditations & yoga with children as instructors, looking meditation, body-scan	Accepting your child	Breathing meditation, exercise breathing space in stressful situation with your child
8	On my own	**With parents**: breathing meditation, body-scan, yoga & meditation with children as instructors, meditation schedule for next 2 months, evaluation training	On your own Letting go	With children: breathing meditation, body-scan, yoga & meditation with children as instructors, meditation schedule for next 2 months, evaluation training

Qualitative Results

– *"Previously, I got angry easily with him. But now, when I see him behave this way, I will stop, and think ……. Furthermore, I will think more from his angle, and (I am) more accepting of him……."*

– *"My Mom and Dad quarreled less…… I could not fall asleep before, if I was scolded by teachers in school. Now it is okay. I will do breathing before sleep."*

– *"I feel I can concentrate more."*

MYmind Pilot in Hong Kong

- The MYmind program appears to be **feasible and acceptable** among Chinese children with ADHD and their parents

- It showed **potential beneficial effects** on improving children's behavior and attention. Unlike studies in Caucasians, increased parental stress was found which might be due to the start of a new school term at the time of post-intervention assessment, though the results should be interpreted with caution.

- **Further larger studies are warranted** among this population where there are limited psychological interventions available.

The effects of a mindfulness based intervention - MYmind - for children with ADHD and their parents: a randomised controlled trial

- Improving children's attention, behaviour and executive function as well as reducing impulsivity in children diagnosed with ADHD aged 8 to 12 years
- 140 families in RCT comparing with active control (group CBT for children and psycho-education for parents)

Research Grants Council 研究資助局

The effects of a mindfulness based intervention for children with ADHD and their parents: A randomized controlled trial

Hypotheses:

- Children and adolescents in the mindfulness intervention group would have improved attention, as well as reduced behavioural problems than the active control group at post-intervention.
- Parents of children or adolescents with ADHD in mindfulness intervention would report significantly greater reduction in parental stress, and better well-being than the active control group at post-intervention.

Source of funding

- General Research Fund
- Project duration: 36 months

Study Design

Two-arm randomised controlled trial

Mindfulness training for children and mindful parenting (MYmind intervention) vs CBT (active control) for children and psychoeducation for parents.

Assessments at: baseline (T0); immediately after the 8-week intervention (T1); and at 5 months post-randomization (T2).

The effects of intervention will be evaluated using between subjects (comparing two arms) and within subject comparisons (comparing measurements at
T0, T1, and T2).

Participants

Inclusion criteria:

- Children aged 8 -12 with psychiatrist or psychologist diagnosed ADHD according to the DSM-5, or equivalent. The ADHD status will be reconfirmed by clinically elevated inattentive and/or hyperactive-impulsive symptoms as indicated by T-scores of either parent and teacher versions of SWAN at or above 95th percentile, or both parent and teacher versions of SWAN at or above 85th percentile;
- With normal intellectual ability;
- Children either not taking any medication or taking a stable dosage of the same medication for ADHD for at least 3 months prior to study enrolment and having no plan for changing medication during the study period.

Participants

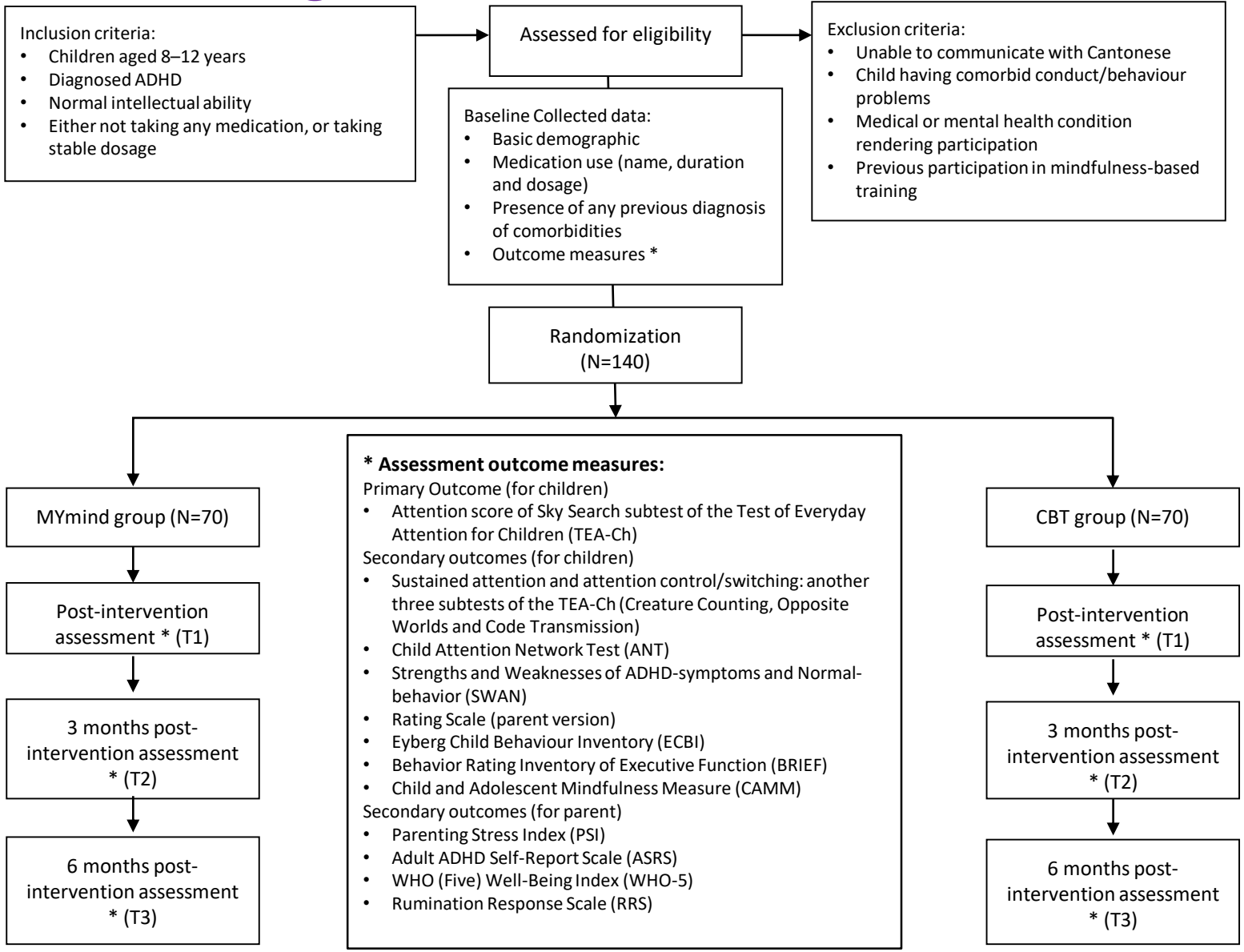
Exclusion criteria for children:

- Being unable to communicate and understand Cantonese;
- Having comorbid conduct/behavior problems which are so severe, which makes it impossible for the child to participate in a group training;
- Having a medical or mental health condition rendering him/her to be incapable of participating in the study;
- Previous participation in mindfulness-based training.

Exclusion criteria for parents:

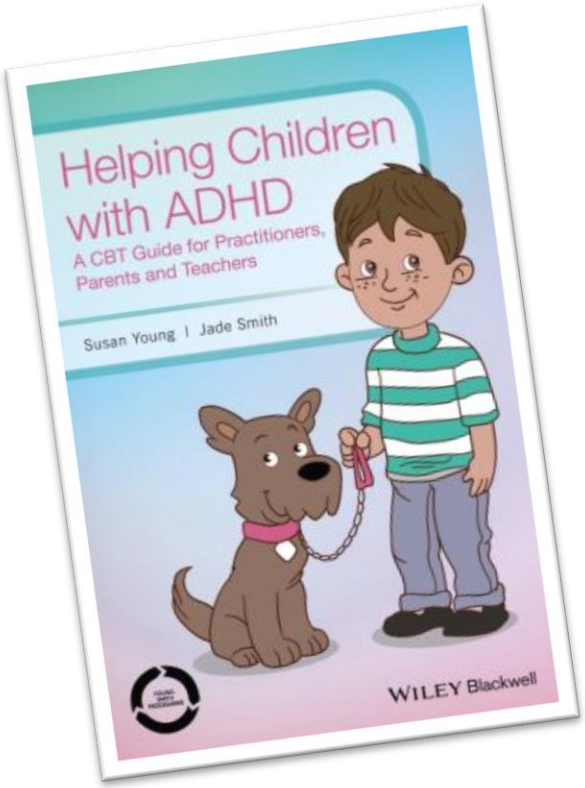
- Being unable to communicate and understand Cantonese;
- Having a medical or mental health condition rendering him/her to be incapable of participating in the study;
- Previous participation in mindfulness-based training.

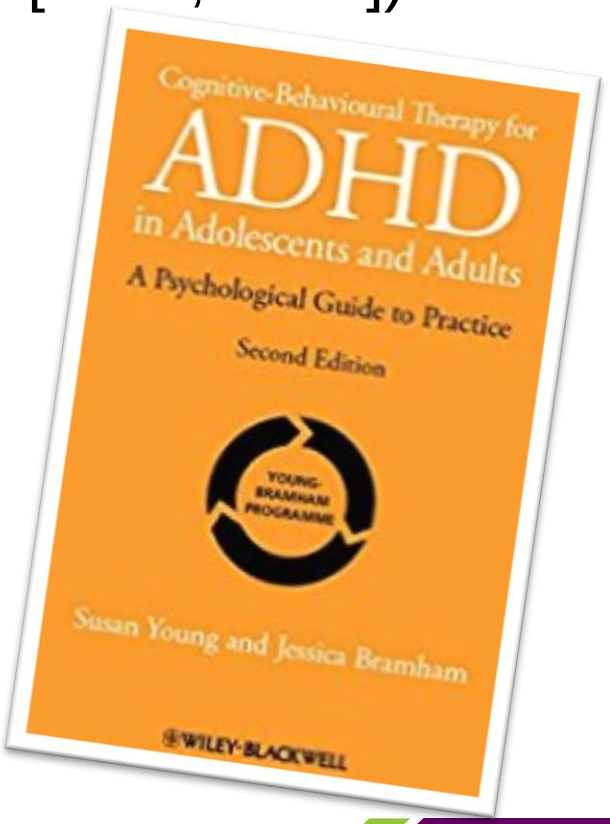
Flow Diagram



Design of Materials

Designing the materials of CBT program based on NICE guidelines, with the program by Susan Young (member of the NICE ADHD Clinical Guideline Development Group [2009; 2013]) as reference





準時出席可獲5個印章

第一節：解難聯盟
工作紙 1.1

姓名：_____ 日期：_____

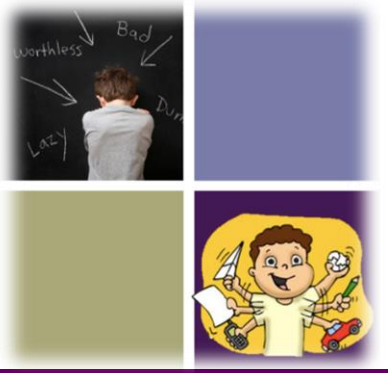
請借助解難工作紙協助坤仔。

第一步 *問題是什麼？*	坤仔面對的問題是？ 上學時忘記帶八達通	
第二步 列出可行方法	他有甚麼可行方法？	
第三步 想想各個方法的好壞	方法 1:	好處： 壞處：
	方法 2:	好處： 壞處：
	方法 3:	好處： 壞處：
	方法 4:	好處： 壞處：
第四步 我的選擇		

Outcome measures

Outcome measures:

- Objective test
  - The Test of Everyday Attention for Children (TEA-Ch)
    - Totally 4 subtests with HK norm will be used
    - The attention score of “Sky Search” will be used as primary outcome measure.
  - The attention network test (ANT)
- Self-report questionnaires
  - Child behaviors
  - Executive functions
  - Parenting stress
  - Parents’ well-being



Statistical analysis

Primary analysis: ANCOVA

- Independent variable: group status with two levels
- Dependent variable: attention score in TEA-Ch measured at 5 months post randomization
- Covariates: baseline measure of attention score.

Secondary analysis: Split-plot ANOVA

- TEA-Ch, ANT, SWAN, BRIEF, ECBI, PSI, ASRS, and WHO-5
- Within-subjects factor: “time”
- Between subjects factor: “treatments”.

Intention to treat principle and per protocol analyses (defined as attendance rate more than 75%)

The protocol has been published

Open access Protocol

BMJ Open

Effects of a mindfulness-based intervention (MYmind) for children with ADHD and their parents: protocol for a randomised controlled trial

Stanley Kam Chung Chan,[1] Dexing Zhang,[2] Susan M Bögels,[3] Christian Shaunlyn Chan,[4] Kelly Yee Ching Lai,[5] Herman Hay Ming Lo,[6] Benjamin Hon Kei Yip,[2] Elsa Ngar Sze Lau,[7] Tiffany Ting Gao,[2] Samuel Yeung Shan Wong[2]

To cite: Chan SKC, Zhang D, Bögels SM, *et al*. Effects of a mindfulness-based intervention (MYmind) for children with ADHD and their parents: protocol for a randomised controlled trial. *BMJ Open* 2018;8:e022514. doi:10.1136/bmjopen-2018-022514

► Prepublication history and additional material for this paper are available online. To view these files, please visit the journal online (http://dx.doi.org/10.1136/bmjopen-2018-022514).

Received 23 February 2018

ABSTRACT

Introduction Mindfulness is one of the potential alternative interventions for children with attention-deficit hyperactivity disorder (ADHD). Some evidence suggests that mindfulness is related to changes in brain regions associated with ADHD. The potential benefits of mindfulness on children with ADHD, as well as the feasibility of this intervention approach, are warranted through prior local and foreign studies. This study aims to evaluate the effect of mindfulness-based group intervention for children with ADHD and their respective parents through a robust research design.

Methods and analysis This study will adopt a randomised controlled trial design including 140 children aged 8–12 years with ADHD together with one of their parents (n=140). These families will be randomised into intervention group (n=70) who will be offered the

Strengths and limitations of this study

- A randomised controlled trial with a relatively large sample size and long follow-up period, as well as an active control group to control for non-specific effects.
- Both children with attention-deficit hyperactivity disorder and their respective parents undergo intervention at the same time that may benefit them directly and indirectly, and the intervention is group based, which might be more cost-effective than one-on-one intervention.
- Both objective and subjective measures are applied to test attention.
- Only children aged 8–12 years with normal intelligence are included.

Progress of data collection

89 families finished the groups and data collection process

- T0 = 89
- T1 = 78
- T2 = 53
- T3 = 54 (25 MYmind vs 29 CBT)

20 families are attending the groups

- All groups will be finished by mid-Dec
- Will proceed to T1 data collection

Future plan

Target: recruit 30+ families

- There will be classes opening in March, 2020.
- Families need to fulfill the following criteria to participate in the research
  - Child age 8-12
  - Normal intelligence (IQ>80)
  - Diagnosed as ADHD
  - Able to understand and speak in Cantonese (including parent)
  - Able to attend at least 6 classes
- Families are randomized into either 8-week 90 minutes **MYmind** or **CBT** group.
- Families will be doing assessments 4 times.
- For more details or inquiry, please contact **2252 8742** or email: app.mindfulness@cuhk.edu.hk

MYmind Pilot for Autistic Spectrum Disorder in Hong Kong

- Randomized controlled trial with pre-post design
  - MYmind group (n=19); Waitlist control (n=18)
  - 9 weekly 90-minute group sessions
- Participants:
  - aged 10-18 years
  - one of their parents
- Outcomes:
  - Primary: Feasibility
    - Recruitment rate, attendance rate, dropout rate and response rate in the MYmind group;
    - Course evaluation filled by parents
  - Secondary: Effectiveness
    - Children' s problematic behaviors, social responsiveness and executive function;
    - Parental stress, parenting style, rumination, mindfulness level and mental well-being

Quantitative results

- Primary outcomes:
  - The recruitment rate was adequate, which was about 30%
  - The overall attendance rate in the MYmind group was 80%
  - The dropout and response rates were 0% and 89% respectively
  - The program was regarded as comprehensible and parents were reasonably satisfied

- Secondary outcomes:
  - **Positive results with large effect sizes seen in:**
    - **0.85 in Self-regulation subscale in Interpersonal Mindfulness in Parenting (IM-P)**
    - **1.16 in Rumination Response Scale (RRS)**
  - **Mindfulness training had a marginally significant effect (p = 0.052) on reducing children's anxiety problems, based on the Child Behavior Checklist (CBCL)**

- No statistically significant changes seen in other measures:
  - Social Responsiveness Scale (SRS)
  - The Eyberg Child Behaviour Inventory (ECBI)
  - The Behaviour Rating Inventory of Executive Function (BRIEF),
  - Parenting Stress Index (PSI),
  - Parenting Scale (PS)
  - WHO-5 well-being Index (WHO-5)

MYmind Pilot in Hong Kong

- The MYmind program for children with ASD and their parents was **feasible**. To increase the recruitment rate, it is suggested to recruit participants from clinics and NGO organizations, which provide service for children with ASD and have a long-term good relationship with the families.

- Mindfulness training had **a strong tendency to reduce anxiety problems of children with ASD**. There were consistent findings reporting children with ASD experienced their worries less negatively after completion of MBIs.

- Future studies with larger sample size are suggested to explore the effectiveness of mindfulness training on reducing anxiety symptoms of children with ASD by using CBT as an active control.

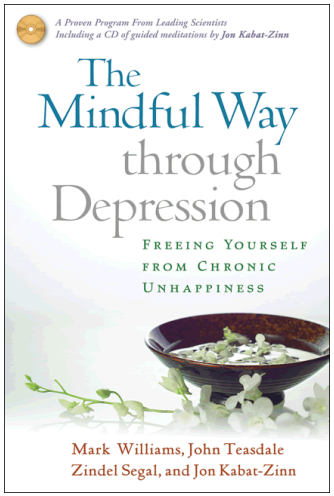
Current projects at CUHK

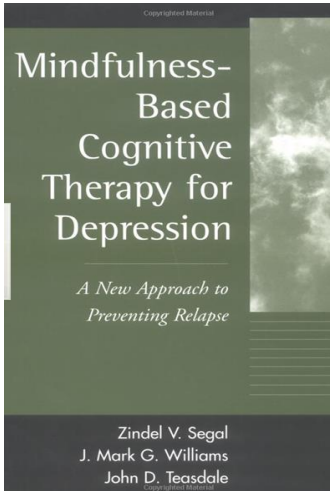
Resilience in Youth: The Mindful Awareness Project for Youth & their Families (MAP for Youth & Families)

- Foster mindfulness through education and research to promote mental well-being and health among children and their families and to develop resilience among children population with the ultimate goal to create a more compassionate and harmonious society
  - Train-the-trainer workshop
  - MYmind program to children with special needs, children with internalizing problems and their caregivers in community
  - 179 families recruited so far….

Mindfulness Based Cognitive Therapy

- By Segal ZV, Williams JM, Teasdale JD 2001 at Toronto, Oxford and Cambridge
- Based on empirical work showing depression relapse is related to reinstatement of automatic modes of thinking and feeling of the depressed state
- Monitoring & observing thinking patterns when sad to enable development of skills in meta-cognition or de-centering
- 8 week programme with incorporation of cognitive behavioral components for depression





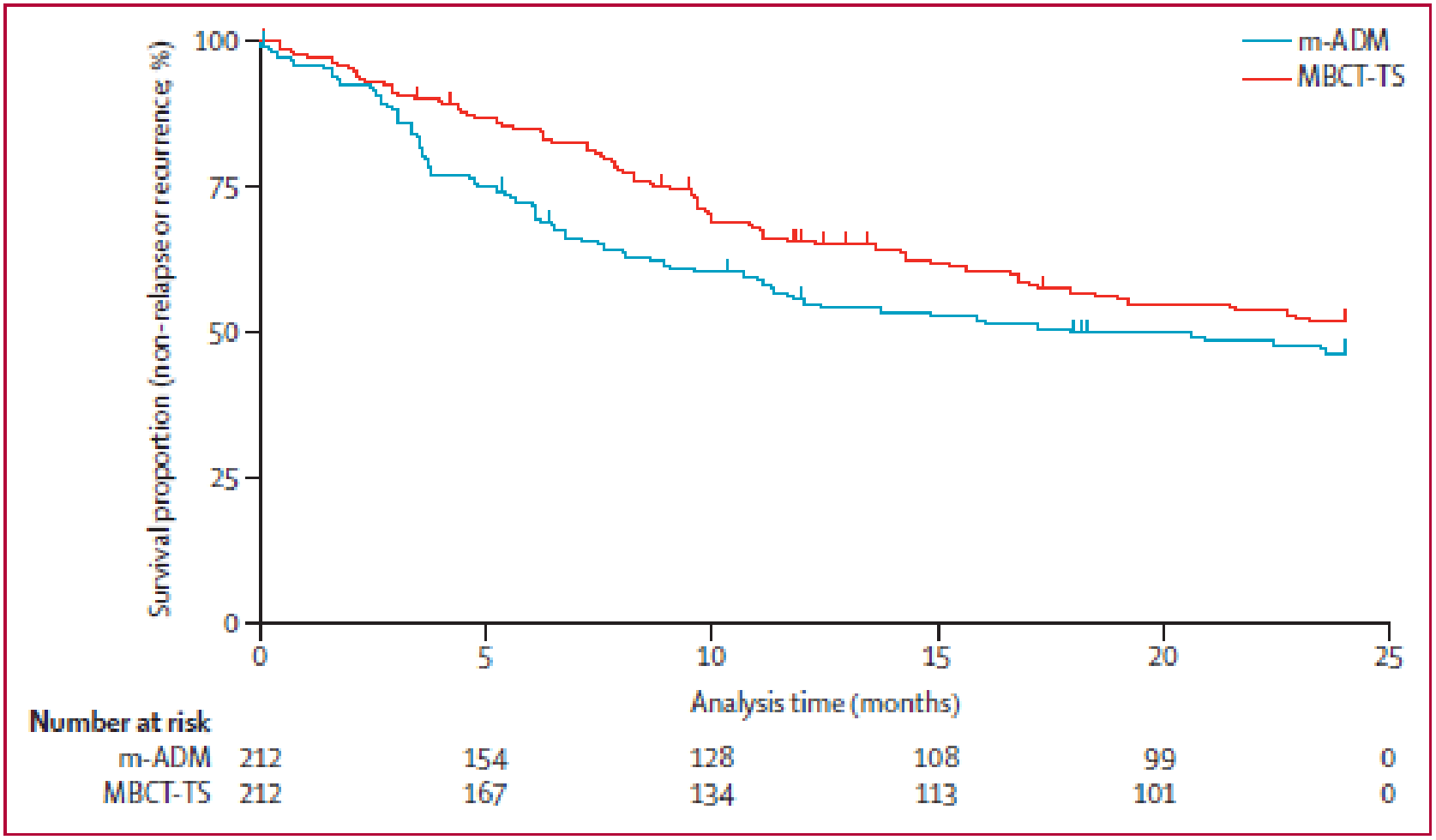


Figure 2: **Survival curves (of not relapse or recurrence) over a 24-month follow-up period for the intention-to-treat population**

m-ADM=maintenance antidepressant medication. MBCT-TS=mindfulness-based cognitive therapy with support to taper or discontinue antidepressant medication.

Original Investigation | META-ANALYSIS

Efficacy of Mindfulness-Based Cognitive Therapy in Prevention of Depressive Relapse
An Individual Patient Data Meta-analysis From Randomized Trials

Willem Kuyken, PhD; Fiona C. Warren, PhD; Rod S. Taylor, PhD; Ben Whalley, PhD; Catherine Crane, PhD; Guido Bondolfi, MD, PhD; Rachel Hayes, PhD; Marloes Huijbers, MSc; Helen Ma, PhD; Susanne Schweizer, PhD; Zindel Segal, PhD; Anne Speckens, MD; John D. Teasdale, PhD; Kees Van Heeringen, PhD; Mark Williams, PhD; Sarah Byford, PhD; Richard Byng, PhD; Tim Dalgleish, PhD

JAMA Psychiatry Published online April 27, 2016

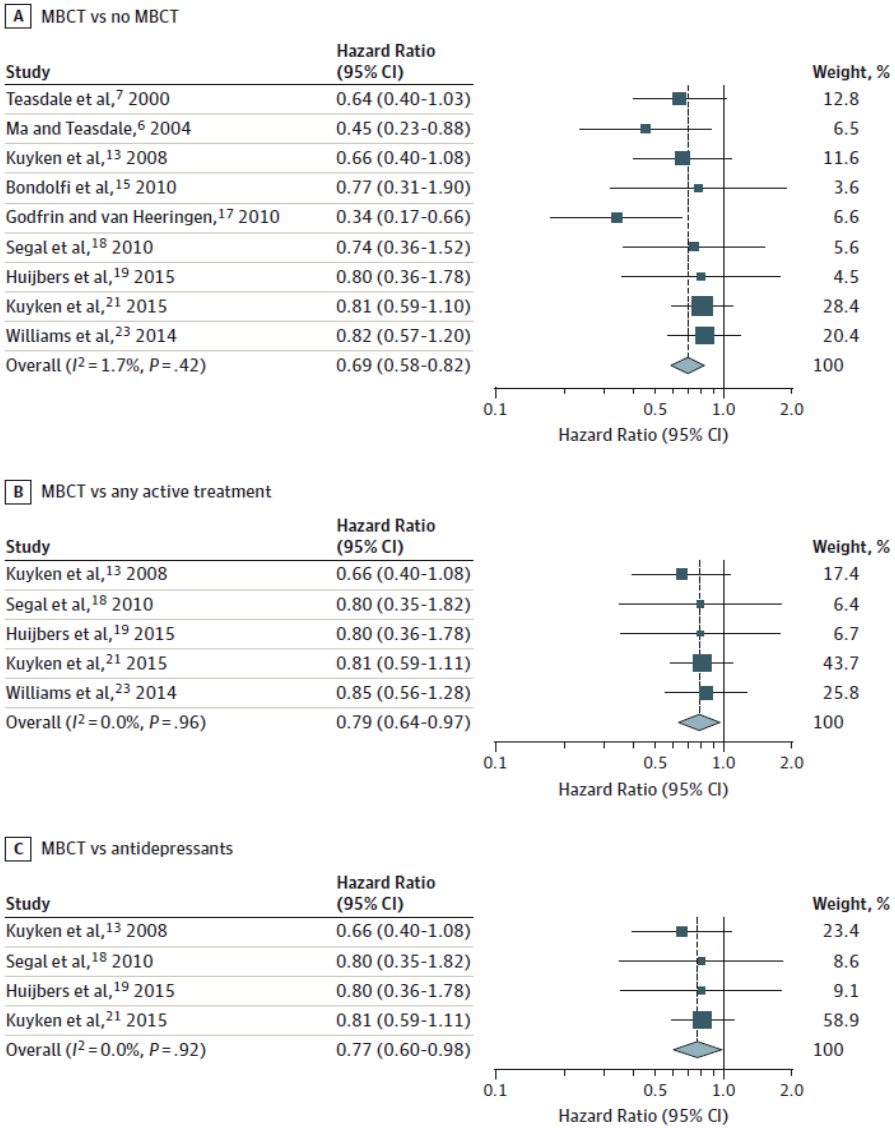
Methods

- **Meta-analysis** on **individual patient data**
- English-language studies published or accepted for publication in peer-reviewed journals
- **Randomized trials of manualized MBCT for relapse prevention in recurrent depression**
- Compared MBCT with at least 1 **non-MBCT treatment**

Results

- 1258 subjects included (9 studies)
- **MBCT had a reduced risk of depressive relapse within a 60-week follow-up period compared with those who did not receive MBCT (hazard ratio, 0.69; 95%CI, 0.58-0.82)**
- **Comparisons with active treatments suggest a reduced risk of depressive relapse (hazard ratio, 0.79; 95%CI, 0.64-0.97).**

Figure 2. Random Effects Meta-analyses Comparing Mindfulness-Based Cognitive Therapy (MBCT) With Other Variables



Forest plot of 2-stage meta-analysis of aggregate data on hazard ratio scale comparing
(A) risk of relapse of depression in participants receiving MBCT with participants not receiving MBCT;
(B) risk of relapse of depression in participants receiving MBCT with participants receiving an alternative active therapy; and
(C) risk of relapse of depression in participants receiving MBCT with participants receiving antidepressant medication.
Weights are from random effects analyses.

Community Partnership Programme on Mental Health Promotion in Hong Kong (Elderly)
促進精神健康–社區夥伴計劃（長者）

- Initiated under the “Joyful@HK Campaign” which aims to promote the adoption of “SME”, i.e. “sharing (S)”, “mind (M)” and “enjoyment (E)”, in daily life as well as to increase awareness and knowledge of dementia.

- Randomized controlled trial (RCT) with waitlist control (N=220)

- Mindfulness intervention: 8 sessions, 120 minutes group sessions for 8 weeks

Community Partnership Programme on Mental Health Promotion in Hong Kong (Elderly)
促進精神健康–社區夥伴計劃（長者）

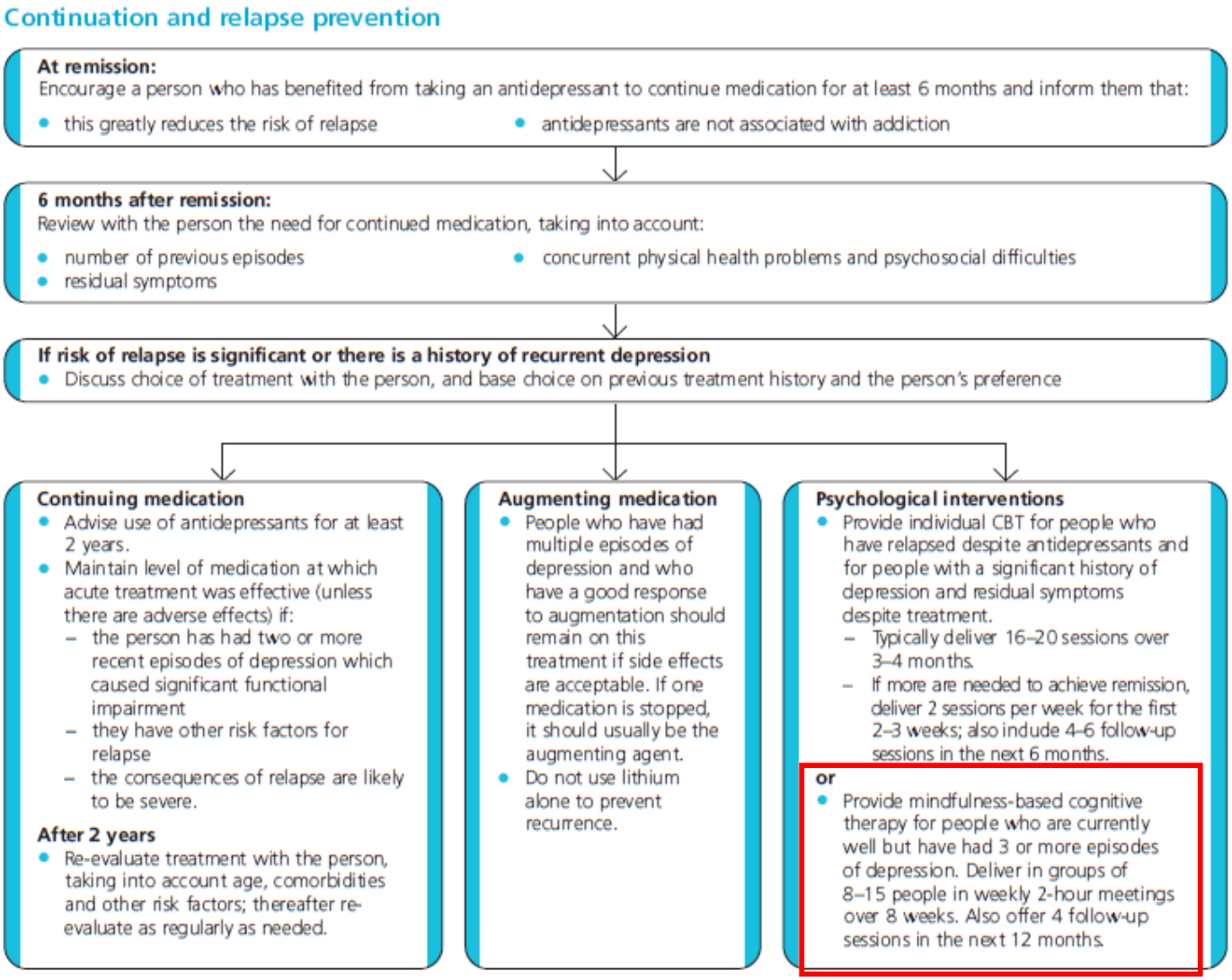
- Participants were assessed at 3 time points: baseline, 2 months after randomization (immediately after mindfulness of intervention group), and 4 months after randomization (immediately after mindfulness of waitlist control group) using self-administrated questionnaire

- Primary outcome measure: SWEMWBS [a]

- Secondary outcome measures: FFMQ [b], MoCA-5 [c], VFT [d], ISLT [e], SCS [f], POM [g], GDS [h], PSQI [i]

[a] Chinese Short Warwick-Edinburgh Mental Well-being Scale; [b] Five Facet Mindfulness Questionnaire Short Form; [c] Montreal Cognitive Assessment 5-minute version; [d] Verbal Fluency Test; [e] International Shopping List Test; [f] Self Compassion Scale; [g] Peace of Mind Scale; [h] Geriatric Depression Scale; [i] Pittsburgh Sleep Quality Index

NICE Guideline on Depression



Summary

- Strongest evidence for **recurrent major depression in adults**
- Need more studies using active control to even **current evidence-based treatments as comparisons** for younger populations including school aged children
- **Large heterogeneity** among studies (design, intervention, outcomes, duration….)
- Comparisons on **compliance** (with evidence-based interventions) and individual/ trainer/ setting as **predictors (who benefits the most and why)** of compliance and effectiveness
- May be **qualitative studies** are needed for mechanisms

CUHK Thomas Jing Centre of Mindfulness Research & Training

Research

- ***Clinical interventional studies***
- ***Complex interventions***

Training & Services

- Public education on evidence-based mindfulness interventions
- mindfulness-based programmes for CUHK's medical and public health undergraduate students and staff
- train the trainer workshops and classes to train health professionals on mindfulness skills
- mindfulness classes to the general public and patients of special populations (socially disadvantaged, chronic disease, pregnant women, people with addiction problems, caregivers and other people with special needs) and across the lifespan for a substantially reduced cost or for free
- classes and workshops for students and adolescents to improve their resilience in dealing with stress

Website: https://www.cuhkcmrt.cuhk.edu.hk/en-gb

Facebook individual page: https://www.facebook.com/cuhk.mindfulness.center

Facebook educational page for center: https://www.facebook.com/centerformindfulnessresearch/?modal=admin_todo_tour

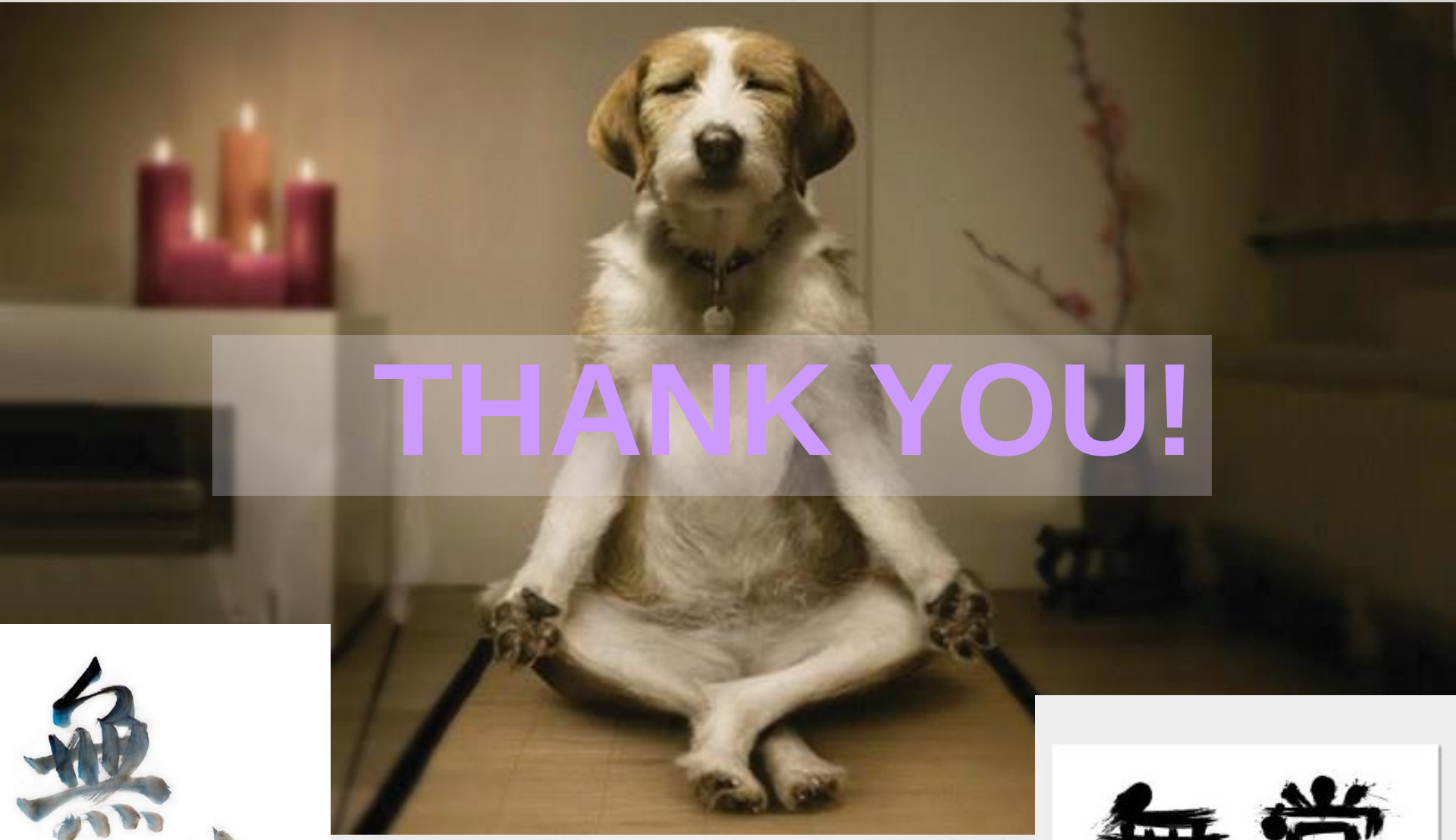
Instagram: https://www.instagram.com/cuhk_mindfulness_research/

Twitter: https://twitter.com/MindfulnessCUHK

Acknowledgements

- Mr. Peter Chan (Psychologist, HKSKH Welfare Council)
- Ms. Nancy Bardacke (Midwife, UCSF, USA)
- **Prof Susan Bogels (Professor, Psychology, U Amsterdam, the Netherlands)**
- Prof Larissa Duncan (Professor, U Wisconsin, USA)
- Ms. Anchor Fung (Social Worker, HK Rehabilitation Society)
- Dr. Rebecca Hou (Family Medicine Dr an PhD graduate, CUHK)
- Dr. Herman Lo (Assistant Professor, Social Work, City U.)
- Ms. Wacy Lui (Senior Psychologist, Hospital Authority)
- **Dr. Helen Ma** (Director, Centre of Mindfulness, HK)
- Dr. Winnie Mak (Professor, Psychology, CUHK)
- Prof Stewart Mercer (Professor, General Practice & Primary Care, U. of Glasgow)
- Prof WK Tang (Professor, Psychiatry, CUHK)
- **Miss Tiffany Ding (Research Associate, CUHK)**
- Dr. Katrina Tsang (A. Professor, SPHPC, CUHK)
- Dr. Benjamin Yip (A. Professor, SPHPC, CUHK)
- **Dr. Daisy Zhang** (Post-doctoral, SPHPC, CUHK)
- Ms Molly Chan (Social Worker)

Thank you!


THANK YOU!

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IMPERMANENCE