SUPPLEMENTAL MATERIALS FOR

Parker L, Bero L, Gillies D, et al. Mental health messages in prominent mental health apps. *Ann Fam Med*. 2018;16(4):338-342.

Supplemental Appendix

Sample selection process

The app store 'crawling' program interacted directly with the iTunes and Google Play app stores' application programming interface and extracted meta-data on the top 100 apps in the Health and Fitness and Medical store categories in the US, UK, Canada, and Australia.

We ran this program weekly and included apps that were present in the top 100 for at least two of the four sampled weeks in any country or any store.

We additionally sampled any mental health app that was endorsed in selected mainstream media (*The New York Times*, *BBC* and *The Guardian*), digital health blogs (*MobiHealth news* and *RockHealth weekly,* both US based, covering the international app market from an industry perspective) or social media (Twitter), or prominent Australian government, public health or mental health organisation websites.

Table A1. Content analysis data collection form

App name(s):
Developer name(s):
Materials for analysis:
Store description:
Developer website:
1. In a sentence, summarize the key focus (i.e. condition, health or life problem) of the app and the key strategies used to address it. *e.g. To promote mental health using mindfulness meditation.*

2. What are the app's key claims? *What are the key promotional messages in the app store description or linked website designed to attract consumers? What are the key mental health claims?*

3. What are the app's key messages about mental health? *How are mental health conditions referred to? Nature of diagnostic categories? Definitions of mental illness or symptoms? Who is responsible for the user's mental health? Determinants of mental health or illness?*

4. Does the app make any scientific claims? Yes / No

> **4.1 If yes, what are they and what effect do they have?** *Describe the scientific claims and copy and paste relevant quotations (e.g. "a science-based approach," "proven to," "developed with clinicians"); What is there effect on the app's credibility?*

> **4.2 If yes, how are they backed up?** *(e.g. citations, name dropping research institutions, research partnerships, use of DSM)*; *copy and paste relevant "evidence" and describe it's effect*

5. Does the app make any kind of disclaimer? Yes / No

> **5.1 If yes, please copy and paste and describe it's impact.** *E.g. "Please do not take any action based on the content of this app"*

6. Does the app project a particular kind of user? If so, what is this person like? *Take note of gendered or raced messages or images; accessibility accommodations; age groups; sexuality references etc.*

Table A2. List of included mental health apps

App name (Google Play)	App name (iTunes)	Developer name (Google Play)	Developer name (iTunes)	Source
ACT Companion	ACT Companion: The Happiness Trap App	Berrick Psychology	Berrick Psychology	Top 100

Not available	Anorexia Bulimia Binge Eating Test By PocketShrink	Not available	PocketShrink	Top 100
Anxiety Release based on EMDR	Anxiety Release based on EMDR	Mark Grant	trauma and pain management services pty ltd	Top 100
Anxiety Test	Anxiety Screening Test	MoodTools	Eddie Liu	Top 100
At Ease Anxiety & Worry Relief	At Ease: Anxiety & Worry Relief	Meditation Oasis	Meditation Oasis	Top 100
Not available	Beat Panic	Not available	Jane Anderson-Hawkes	ReachOut toolbox
Beat Social Phobia	Beat Social Phobia with Andrew Johnson	HiveBrain Software	Michael Schneider	Top 100
BeyondNow suicide safety plan	BeyondNow suicide safety plan	beyondblue	beyondblue	Top 100; beyondblue
Black Dog Snapshot	Black Dog Snapshot	Black Dog Institute	Black Dog Institute	Black Dog Institute
Breathe2Relax	Breathe2Relax	T2	The National Center for Telehealth and Technology	ReachOut toolbox
Breathing Zone	Breathing Zone: Guided Breathing for Mindfulness	Breathing Zone	Breathing Zone	Top 100
Bust PTSD	Bust PTSD	CCEI Psychotherapy & Research Inc.	CCEI Psychotherapy & Research Inc.	Top 100

Calm Down Now: Panic & Anxiety	Calm Down Now	June Tomaso-Wood	Calm Down Now LLC	Top 100
Calm - Meditate, Sleep, Relax	Calm: Meditate & relax with guided mindfulness meditation for stress reduction	Calm.com, Inc.	Calm.com	Top 100
Cognitive Diary CBT Self-Help	Not available	Excel At Life	Not available	Top 100
Not available	DBT Diary Card and Skills Coach	Not available	Durham DBT, Inc.	Top 100
Depression CBT Self-Help Guide	Not available	Excel At Life	Not available	Top 100
Anxiety Relief Hypnosis Free	End Anxiety Hypnosis - Guided Meditation for Relaxation, Relief of Chronic Stress & Panic Attack Symptoms	Surf City Apps	Surf City Apps LLC	Top 100
Anxiety Relief Hypnosis Pro	End Anxiety Hypnosis PRO - Guided Meditation for Relaxation, Relief of Chronic Stress & Panic Attack Symptoms	Surf City Apps	Surf City Apps LLC	Top 100
Happify	Happify -- Activities &	Happify, Inc.	Happify, Inc.	ReachOut toolbox

	Games for Stress & Anxiety			
Headspace - meditation	Headspace: Guided meditation and mindfulness techniques	Headspace, Inc.	Headspace meditation limited	Top 100
High Res	High Res	Australian Government, Dept. of Veterans' Affairs	Australian Government, Department of Veterans' Affairs	Department of Defence
Not available	In Hand - A tool to focus where you're at and bring back the balance.	Not available	Red Ninja Limited	ReachOut toolbox
Meditation Studio by Gaiam, Inc.	Meditation Studio - Guided meditations for relaxation, less stress, better sleep, and a healthy mind	Gaiam, Inc.	Meditation Studio LLC	Top 100
Mindfit	Mindfit	Mindfit	Mindfit AS	Top 100
Not available	Mindfulness Daily	Not available	inward inc	Top 100
Mindfulness: Brain-based	Mindfulness Meditation: Brain-based	MyBrainSolutions	BRC International Pty Ltd	Top 100
Mindfulness: The Art of Being	Mindfulness: The Art of Being Human	Mindful Creation	Lowe, Reuben	Top 100

Mindgauge	Mindgauge	Positive Computing Lab, University of Sydney	The University of Sydney	University of Sydney
MindShift	MindShift	Anxiety Disorders Association of British Columbia	Anxiety Disorders Association of British Columbia	Top 100; ReachOut toolbox
Not available	MoodKit - Mood Improvement Tools	Not available	Thriveport, LLC	ReachOut toolbox
Not available	Moodnotes - Thought Journal / Mood Diary	Not available	Thriveport, LLC	Top 100
MoodTools - Depression Aid	MoodTools - Depression Aid	MoodTools	Eddie Liu	Top 100
OMG. I Can Meditate!	OMG. I Can Meditate! - Meditation and Mindfulness	OMG. I Can Meditate!	OMG. I Can Meditate! Inc.	Top 100
Operation Life	Operation Life	Australian Government, Dept. of Veterans' Affairs	Australian Government, Department of Veterans' Affairs	Department of Defence
Not available	Optimism	Not available	Optimism Apps Pty Ltd	ReachOut toolbox
Pacifica - Stress & Anxiety	Pacifica - Anxiety, Stress, & Depression relief based on CBT & Mindfulness	Pacifica Labs Inc.	Pacifica Labs Inc.	Top 100; University of Sydney

Panic Attack Aid	Panic Attack Aid	MVM	Michael Madew	Top 100
Panic Attack Aid Lite	Panic Attack Aid Lite	MVM	Michael Madew	ReachOut toolbox
Panic Relief- stop anxiety now	Panic Relief	Psychiatrist, MD PhD Marianne Geoffroy, Denmark	Geoffroy Aps	Top 100
Positivity with Andrew Johnson	Positivity with Andrew Johnson	HiveBrain Software	Michael Schneider	Top 100
PTSD Coach Australia	PTSD Coach Australia	Australian Government, Dept. of Veterans' Affairs	Australian Government, Dept. of Veterans' Affairs	Department of Defence
Qi Gong Meditation Relaxation	Not available	Excel At Life	Not available	Top 100
Not available	ReachOut Breathe	Not available	ReachOut Australia	ReachOut toolbox
ReachOut WorryTime	ReachOut WorryTime	ReachOut Australia	ReachOut Australia	ReachOut toolbox
Relax with Andrew Johnson	Relax with Andrew Johnson	HiveBrain Software	Michael Schneider	Top 100
Relieve Depression Hypnosis	Relieve Depression Hypnosis - Mental Health Program for Treatment of Depression & Anxiety Symptoms	Surf City Apps	Surf City Apps LLC	Top 100

Rise Up: Eating Disorder Help	Rise Up + Recover: An Eating Disorder Monitoring and Management Tool for Anorexia, Bulimia, Binge Eating, and EDNOS	Recovery Warriors	Recovery Warriors L.L.C.	ReachOut toolbox
RR Eating Disorder Management	Recovery Record - Eating Disorder Management	Recovery Record	Recovery Record, Inc	ReachOut toolbox
Self-help Anxiety Management	Self-help Anxiety Management	University of the West of England	University of the West of England	ReachOut toolbox
Smiling Mind	Smiling Mind	Smiling Mind	Smiling Mind Pty. Ltd.	Top 100; ReachOut toolbox
Stop Fears! Hypnosis	Stop Fears! Overcome Fear and Anxiety by Hypnosis	Kim Fleckenstein	Kim Fleckenstein	Top 100
Stop Panic & Anxiety Self-Help	Not available	Excel At Life	Not available	Top 100; ReachOut toolbox
Stop Breathe & Think: Meditate	Stop, Breathe & Think: Meditation and Mindfulness	Tools for Peace	Stop, Breathe & Think, PBC	Top 100; ReachOut toolbox
SuperBetter	SuperBetter	SuperBetter, LLC	SuperBetter, LLC	ReachOut toolbox
The Mindfulness App	The Mindfulness App: Guided & Silent	MindApps	MindApps	Top 100

	Meditations to Relax			
Think Anxiety-free! Hypnosis	Not available	Kim Fleckenstein	Not available	Top 100
WellMind	WellMind	Blue Step Solutions	Blue Step Solutions	ReachOut toolbox
What's Up?	What's Up?	Jackson Tempra	Jackson Tempra	ReachOut toolbox
Worry Box–Anxiety Self-Help	Not available	Excel At Life	Not available	Top 100
Youthbeyondblue The Check-in	Youthbeyondblue The Check-in	beyondblue	Beyond Blue Limited	beyondblue