Predicting Coping Strategies and Support Preferences

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Introduction: Mood Disorders

- Mood disorders have a high prevalence in Canada’s population
- Traditional psychotherapy delivery changed by lockdowns
Introduction: Mental Health apps

• Apps are marketed to help people cope with intense emotions
• Mental health apps are relatively novel treatment options [1]
• Overcome common barriers to treatment [2]

1. Wasil et al., 2020
2. Giota & Kleftaras, 2014
Introduction: Emotion Regulation

• One way to conceptualize mental wellness is through adaptive emotion regulation (ER)
• People cope in multiple different ways [3]

3. Aldao & Nolen-Hoeksema, 2012b
Emotion Regulation Strategies

- Cognitive Reappraisal
- Acceptance
- Rumination
- Self-Criticism
- Hiding Expressions
- Experiential Suppression
Introduction: Treatment Preferences

- Preferences for treatment matters
- We are unsure of the rationale people use to choose apps
- Is there a relationship between the ER strategies people use and what intervention they may choose?
Research Questions
Research Question 1
What emotion regulation (ER) strategies do individuals report using during recent, intense emotionally challenging experiences?

Research Question 2
What type of mental health app will individuals find most appealing for helping with emotion regulation issues?

Research Question 3
Do individuals differ in their preferences for ER interventions based on their self-identified coping strategy usage?
Methodology
Study Design

- Cross-Sectional
- Sample: Undergraduate PSYA02 students (no inclusion or exclusion criteria)
- Recruited from SONA
- N = 125
Willingness to use apps

RECALL: Anger
RECALL: Anxiety
RECALL: Sadness
Vignette
ER Strategy Usage
ER Strategy Usage

• **ER strategies**: acceptance, cognitive reappraisal, self-criticism, hiding expressions, experiential suppression, rumination

• Participants rate their use of these strategies on a Likert-type scale
A-App*

- Focuses on improving users’ approach to feeling internal experiences from a more neutral perspective
- Similar to Calm and Headspace
- Specific features:
  - Mindfulness practice
  - Daily guided meditation
  - Body awareness

R-App*

- Focuses on identifying and re-evaluating thoughts associated with negative emotions
- Similar to MoodNotes and CBT Thought Diary
- Specific features:
  - Journaling
  - Thought tracking

Choice Between Interventions
Expectancy of Treatment Outcome [ETO] (Adapted)

- Questionnaire assessing strength of treatment preference [4]
- Included a few more questions to adapt to the purpose of this study
- Sample item: “How successful do you think that the A-app will be in reducing your intense emotions?”

4. Holder et al., 2019
Hypotheses & Analyses
Research Question 1
What emotion regulation (ER) strategies do individuals report using during recent, intense emotionally challenging experiences?

Hypothesis 1a
Participants will report using more positive ER strategies than negative ER strategies in their recollection of intense emotional events [5].

Hypothesis 1b
Participants will report greater use of acceptance [3].

3. Aldao & Nolen-Hoeksema, 2012b; Dixon-Gordon et al., 2015
5. Aldao & Nolen-Hoeksema, 2012a; Dixon-Gordon et al., 2015; Hiekkaranta et al., 2021
Research Question 2
What type of mental health app will individuals find most appealing for helping with emotion regulation issues?

Hypothesis 2
Due to the reach mindfulness-based apps have, participants will find this type of app more appealing to help any difficulties in emotion regulation [1].

1. Wasil et al., 2020
Research Question 3
Do individuals differ in their preferences for ER interventions based on their self-identified coping strategy usage?

Hypothesis 3*
Participants’ self-reported ER strategy usage will predict their preferred app.
Results
Hypothesis 1a
Participants reported using more negative ER strategies across all scenarios,
$t(124) = -2.64, p = .012, 
 d = 0.24, CI [-0.35, -0.06]$

Hypothesis 1b
Participants reported greater use of acceptance across all scenarios,
$t(124) = -7.64, p = <.001, 
 d = 0.68, CI [-0.86, -0.50]$
ER Strategy Use Across Scenarios

The diagram illustrates the mean strategy use across different scenarios: Anxiety, Anger, Sadness, and Vignette. Various strategies are compared, including Acceptance, Hiding Expressions, Reappraisal, Ruminative Worry, Self-criticism, and Suppression. The error bars indicate the variability in strategy use across different conditions.
Hypothesis 2

There was no strong preference for either app,

\[ t(123) = -0.145, p = .443. \]

However, there was an interesting trend…
Hypothesis 3
Certain aspects of ER strategy use significantly predicted app preference*
Primary Model

For this regression model, we looked at composite reappraisal and composite acceptance as predictors of final MH app preference.

The global model was not significant, $F(2, 121) = 2.85$, $p = .062$).

However, when looking at the bootstrap model, there is a trend suggesting composite acceptance is predictive of lower scores on the MH app preference variable, $t = -1.92$, $p = .036$, CI [-29.70, -2.01]

This meant greater use of acceptance is indicative of a stronger preference towards the A-app.
Discussion &
Conclusion
Overall, these findings suggest...

In any given situation, people use multiple coping strategies to regulate their intense emotions.

People tend to implement acceptance to a greater degree than cognitive reappraisal.

Coping strategy usage may predict preferences for MH apps.
Improving MH App Outcomes

- Apps should capitalize on what people already report doing
- Apps should be constructed using empirical research (see Wasil et al., 2020)
Thank you!
References


