

# DeRose Meditation

**Mindfulness for Mental Health:  
Tailoring the DeRose User Experience**

**FINAL REPORT**

Prepared by:

Annabel Sibalis, PhD  
Karen Milligan, PhD, C.Psych

Ryerson University  
September 2021

# TABLE OF CONTENTS

PROJECT DESCRIPTION_____	3
INSTRUCTOR INTERVIEWS_____	4
Overview_____	4
STUDENT SURVEY_____	5
Overview_____	5
Findings_____	6
THEORY OF CHANGE MODEL	
Overview_____	10
Model_____	11
RECOMMENDATIONS_____	12
Constructs of Interest & Measures_____	12

# PROJECT DESCRIPTION

The goal of this project was to articulate a Theory of Change for the DeRose Meditation program. A Theory of Change is a model that aims to operationalize (describe) a program or process, establish the underlying causes of change, and identify causal pathways within the process (i.e., why change happens).

Identifying these key drivers of change, as well as the intermediate and long-term outcomes we can expect students to experience, points us towards what constructs we should measure in a future empirical study investigating the efficacy of the DeRose Meditation program.

In order to construct a Theory of Change, the current project involved asking targeted questions to DeRose Meditation executives, instructors, and students. Executives and instructors attended semi-structured interviews, while students responded to an online survey. All answers were thematically coded, and the emerging themes assembled into a Theory of Change model.

Finally, to set the stage for a future empirical study, a selection of measurable constructs of interest and recommendations of ways in which these constructs might be measured within a research study (e.g., via questionnaires, physiological measures, etc.) were described.

# INSTRUCTOR INTERVIEWS

## OVERVIEW

During March and April 2021, interviews were conducted with 13 members in leadership roles at DeRose Meditation (company executives and instructors). These interviews ranged from 30 minutes to 90 minutes in length.

Interviews were semi-structured and incorporated the following guiding questions:

- What do you feel are the central purposes of the DeRose Meditation program?
- How do you think that meditation, breathwork, and movement bring about real-life positive change for a student?
- What are some facilitating factors that help a student to achieve positive change(s)? What are some barriers that may prevent them from achieving these change(s)?

The interviews were transcribed and qualitatively analyzed using thematic coding in Dedoose software and were incorporated into the Theory of Change model alongside data from the student survey. This model is available on page 11.

Complete transcripts of all interviews are included in the Supplementary Materials package.

# STUDENT SURVEY

## OVERVIEW

A survey was developed to capture opinions and feedback from DeRose Meditation students. The survey was hosted online using Qualtrics software and was available from May 10 - May 31, 2021. The online link was provided to DeRose Meditation instructors, who in turn distributed it to their students. The survey garnered 77 responses.

The survey collected the following information from respondents:

- Demographic details (e.g., age, gender)
- Information about the respondent's relationship to the DeRose Meditation program (e.g., "How long have you been attending classes with DeRose Meditation", "What type(s) of classes do you attend?")
- Open-ended responses to questions asking about the program (e.g., "Has attending DeRose Meditation classes contributed to you being able to make any positive change in your life?", "How has the program enabled you to make these changes?")
- Responses to three scientifically validated questionnaires:
  - Mindful Attention Awareness Scale (MAAS) - a 15-item questionnaire assessing how mindfully aware and attentive to the present moment a respondent is. Higher scores reflect greater mindfulness.
  - Dispositional Resiliency Scale (DRS) - a 15-item questionnaire assessing a respondent's hardiness or resilience. Higher scores reflect greater hardiness. The DRS contains three subscales: Commitment (how much meaning and purpose one finds in themselves, others, and their work), Control (how much autonomy and control one feels over their own life and future), and Challenge (how much one sees change and challenge as exciting opportunities vs. threats to their security).
  - Self-Reflection and Insight Scale (SRIS) - a 20-item questionnaire assessing how self-reflective and self-aware a respondent is. Higher scores reflect greater self-awareness. The SRIS contains three subscales: Engagement (how much one engages in self-reflection), Need (how much interest and importance one places on self-reflection), and Insight (how much clarity one has regarding their own thoughts and behaviour).

Respondents' answers to the open-ended questions were qualitatively analyzed using thematic coding and were incorporated into the Theory of Change model alongside data from the instructor interviews. This model is available on page 11.

Respondents' answers on the questionnaires were statistically analyzed in SPSS software to answer some preliminary scoping questions, which are presented in the findings section below.

The survey text and all responses are included in the Supplementary Materials package.

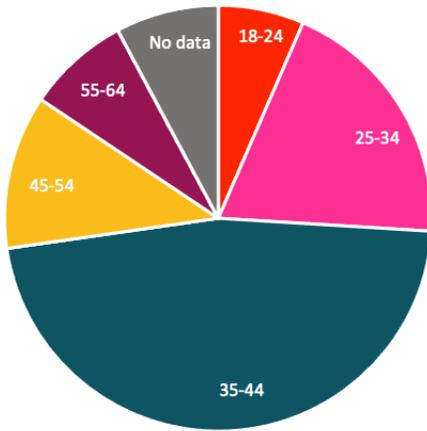
## FINDINGS

### 1) Who completed the survey?

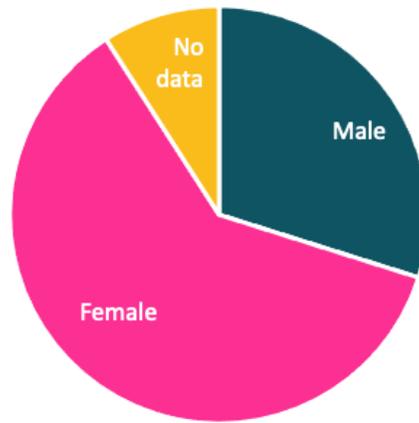
- Of the 77 survey respondents, the majority were 35-44 years old, female, and had attended DeRose classes for longer than one year. Meditation & Movement classes were the most popular class type, followed by Meditation & Breathwork classes.

	Number	Percent
<i>Age</i>		
18-24 years	5	6.5%
25-34 years	15	19.5%
35-44 years	36	46.8%
45-54 years	9	11.7%
55-64 years	6	7.8%
65+ years	0	0%
No data	6	7.8%
<i>Gender</i>		
Male	23	29.9%
Female	47	61.0%
No data	7	9.1%
<i>Number of Years with DeRose</i>		
≤ 1 year	15	19.5%
1-3 years	18	23.4%
4+ years	22	28.6%
No data	22	28.6%
Note: Answers ranged from 2 months to 20 years.		
<i>Types of Class(es) Attended</i>		
Breathwork	10	13.0%
Meditation & Breathwork	38	49.4%
Meditation & Movement	51	66.2%
Mindfulness Design Workshops	31	40.3%
Note: Participants could select more than one option		

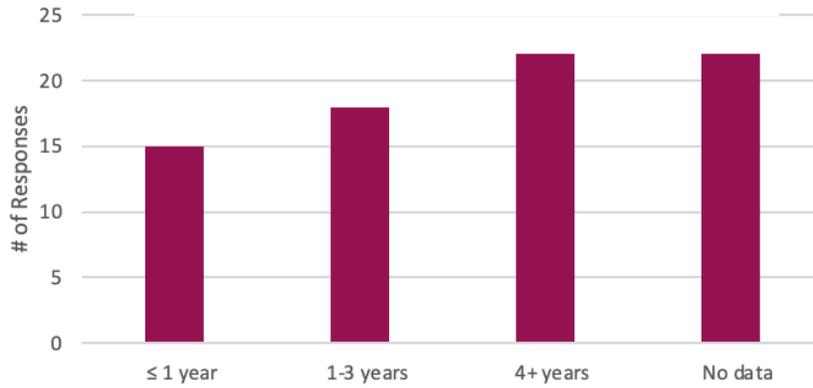
Survey Respondent Age



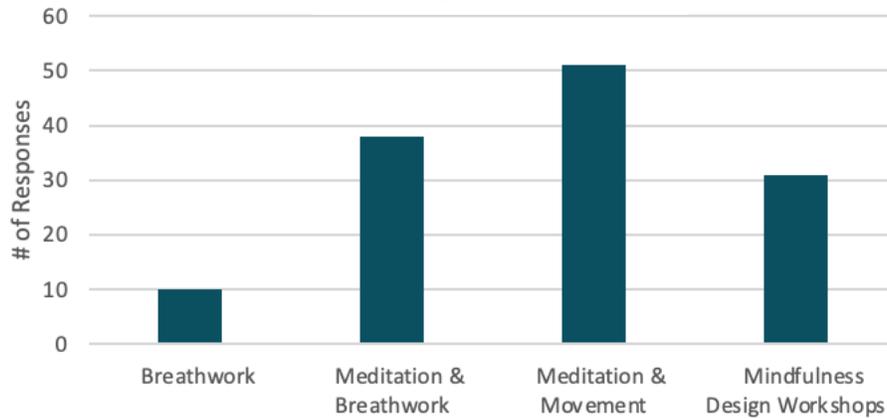
Survey Respondent Gender



Number of Years with DeRose Meditation



Class Type(s) Attended



## 2) Is length of time in the program related to greater mindfulness, resilience, and/or self-reflection?

- Students who attended DeRose Meditation classes for longer reported greater mindfulness (MAAS score) and a greater interest in self-reflection (Need subscale of the SRIS). Resilience (DRS score) was not associated with the amount of time spent in the program.

**This means that students who spend more time in the program report greater mindfulness and greater interest in self-reflection.** This reflects a *correlation*, not *causation* - we cannot say that the DeRose Meditation program *causes* greater mindfulness or greater interest in self-reflection (this could be the case, or it could be the case that individuals who inherently show greater mindfulness and interest in self-reflection are likelier to stay in the program longer). An empirical study would be needed to determine causation.

- Female students who attended DeRose Meditation classes for longer reported a greater sense of purpose (Commitment subscale of the DRS) and a greater sense of control in life (Control subscale of the DRS).

**This means that female students who spend more time in the program report a greater sense of purpose and a greater sense of control in life.** Similarly, this reflects a correlation, but not causation - we cannot say that the DeRose Meditation program causes these characteristics.

### KEY FINDING:

Students who attend DeRose Meditation classes for longer report greater mindfulness and greater interest in self-reflection.

While time spent in the program is correlated with mindfulness and interest in self-reflection, we cannot yet say whether the program causes these characteristics.

**3) Are there benefits in mindfulness, resilience, and/or self-reflection that arise only for long-term students of the program?**

- Students who had attended the program for 4+ years reported significantly greater mindfulness (MAAS score) than students who had attended the program for one year or less. Students who had attended the program for 4+ years also reported significantly greater resilience (DRS total score) than students who had attended the program for one year or less.

This means that students who have attended DeRose Meditation classes for 4+ years report greater mindfulness and resilience, compared to students who have attended classes for one year or less. Once again, this reflects a correlation, but not causation - we cannot say that the DeRose Meditation program *causes* greater mindfulness or resilience (this could be the case, or it could be the case that individuals who inherently show greater mindfulness and resilience are likelier to stay in the program longer).

**KEY FINDING:**

Students who attend DeRose Meditation classes for 4+ years report greater mindfulness and resilience than students who attend for one year or less.

While time spent in the program is correlated with mindfulness and resilience, we cannot yet say whether the program causes these characteristics.

**4) Is attending a certain class type associated with greater mindfulness, resilience, and/or self-reflection compared to the other class types?**

- Our analyses revealed that no, the class type(s) a student attends does not have an effect on their self-reported mindfulness, resilience, and/or self-reflection.

# THEORY OF CHANGE MODEL

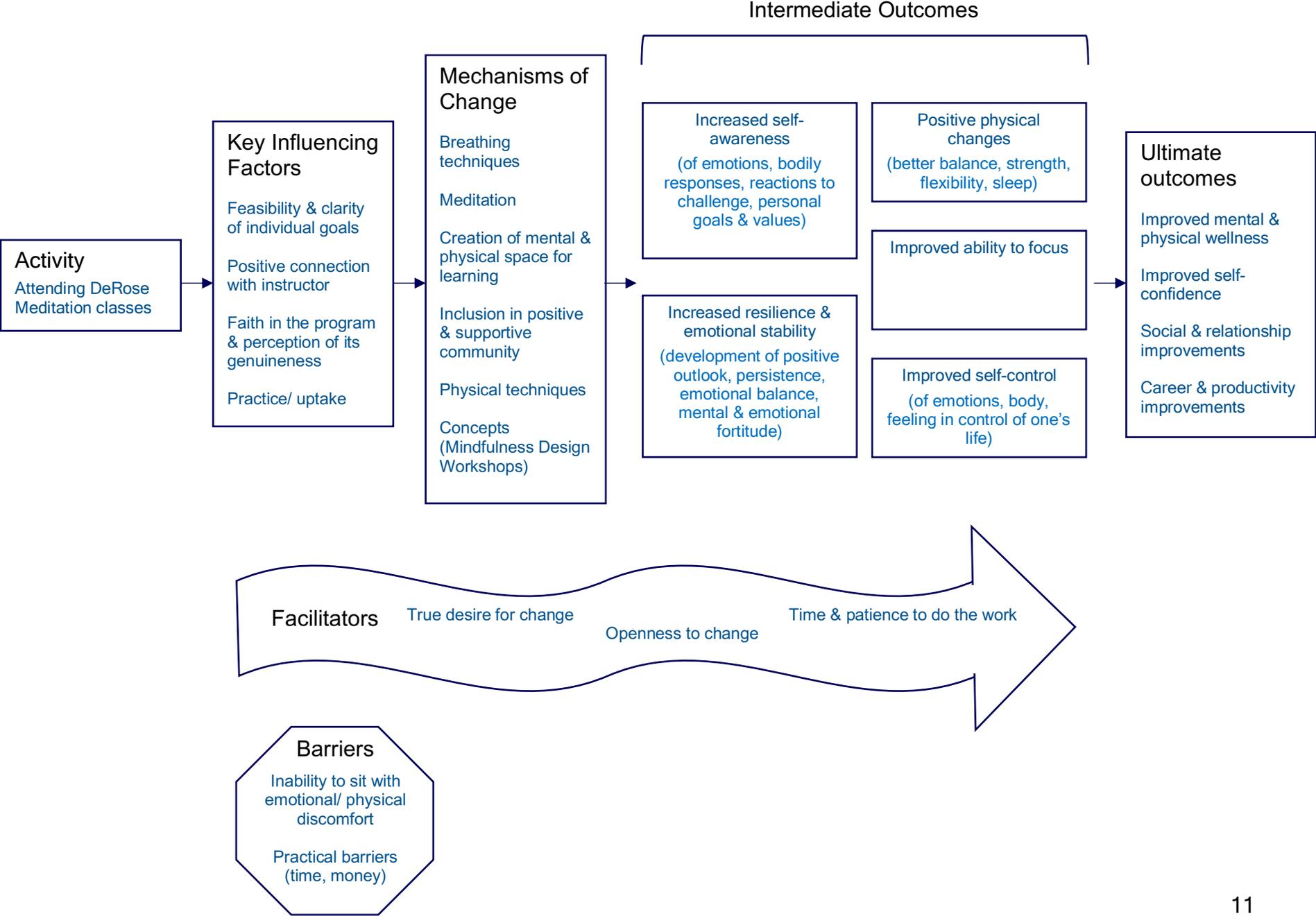
## OVERVIEW

This model operationalizes the DeRose Meditation program, describing key features of the program, identifying outcomes of the program, and connecting the two.

The model has 7 components:

- Activity - the process that is being operationalized (i.e., the DeRose Meditation program).
- Key Influencing Factors - factors that moderate the impact of the program. The stronger these factors, the greater the likelihood that the program will have an impact.
- Mechanisms of Change - the key features of the activity that drive change and produce the outcomes.
- Intermediate Outcomes - medium-term changes that may arise after engaging in the activity regularly for some time, that contribute towards producing the ultimate outcomes.
- Ultimate Outcomes - long-term changes that may arise after engaging in the activity for a significant period of time.
- Facilitators - factors that allow change to occur more easily and quickly.
- Barriers - factors that inhibit or hinder the progress of change.

# DeRose Meditation Theory of Change Model



# RECOMMENDATIONS

## CONSTRUCTS OF INTEREST & MEASURES

Based on the findings of this study, it is recommended that a future empirical study measure the following constructs. Some recommended measures that gauge each construct are outlined below. A copy of all questionnaire measures is available in the Supplementary Materials package.

### 1 Construct: Self-awareness

Justification: Self-awareness was consistently identified as both a central concept within the program and an outcome of the program in instructor interviews as well as the student survey. It was also described as an early outcome that enables further change and development (e.g., in mental wellness).

#### Recommended measures:

- Psychological Insight Questionnaire (Davis et al., 2021)
- Private Self-Consciousness Subscale of the Self-Consciousness Scale (Scheier & Carver, 2013)
- Five Facet Mindfulness Questionnaire (Baer et al., 2006)

### 2 Construct: Emotional resilience/ stability

Justification: Instructor interviews identified emotional resilience and emotional stability as early outcomes that enable further change and development (e.g., in mental wellness and social relationships). Further, students who attended classes for 4+ years were found to report greater resilience, suggesting that this construct may be central to the process of change.

#### Recommended measures:

- Emotion Reactivity Scale (Nock et al., 2008)
- Resilience Scale for Adults (Friborg et al., 2005)
- Measurement of heart rate variability (HRV) via electrocardiograph or personal device such as Apple Watch (See paper by Appelhans & Luecken, 2006, in Supplementary Materials package for further description of HRV as a measure of regulated emotional responding)

### 3 Construct: General well-being

Justification: The broad program outcomes of ‘improved physical/ mental well-being’, ‘general wellness’, and ‘feeling better overall’ were consistently identified in instructor interviews as well as the student survey. In addition, measuring a broad indicator of overall health is advantageous in a treatment study, particularly a study of a program that includes physical exercise as a central component.

#### Recommended measures:

- General Well-Being Schedule (Fazio, 1977)
- World Health Organization Quality of Life - Abbreviated (WHOQOL - BREF) (The WHOQOL Group, 1998)

### 4 Construct: Focus/ Attention

Justification: Improved ability to focus was consistently identified as an early outcome in instructor interviews. Additionally, attentional ability is central to many of the ultimate outcomes identified by this study (e.g., career and productivity improvements, relationship improvements).

#### Recommended measures:

- World Health Organization Adult ADHD Self-Report Scale (Kessler et al., 2005)
- Behavioural performance on a Continuous Performance Test (CPT) (examples include: Conners CPT 3, Test of Variables of Attention [TOVA])
- Measurement of neural attention via in-laboratory electroencephalography or personal mobile EEG devices such as Muse EEG headband, Emotiv EEG headset, Neurosky headset