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### The Healing Potential of Online, Art-DBT: Developing a Program for Rumination and Non-Suicidal Self-Injury Reduction

Lesley Howard

*Ouachita Baptist University*

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# The Healing Potential of online, Art-DBT; Developing a Program for Rumination and Non-suicidal Self-Injury Reduction

A SENIOR THESIS BY LESLEY HOWARD

DOUBLE MAJOR IN STUDIO ART AND PSYCHOLOGY

# This study was not possible without:

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- Dr. Randall Wight - materials and compensation
- Donnie Copeland - space in the art department
- Dr. Jennifer Fayard – every form of guidance possible
- All those who participated—especially those who completed the entire 6-weeks

\*\*entities that go without saying include Jesus, coffee, and cat videos\*\*



# My Research In One Sentence:

I developed and tested effectiveness of an online, 6-week art-DBT (combination of Art Therapy and Dialectical Behavioral Therapy) program aimed at reducing rumination and, if present, non-suicidal self-injury



# A Quick Overview...

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1. Rationale
2. Procedure
3. Results/Discussion
4. Future Directions



# Rationale in a nutshell

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1. Rumination contributes to Non-suicidal self-injury (NSSI)
2. Targeting rumination in the context of Dialectical Behavioral Therapy (DBT) could significantly reduce NSSI (or prevent it)
3. Including AT may increase DBT adherence/enhance treatment with benefits unique to AT

# Rumination contributes to Non-suicidal self-injury (NSSI)

## **NSSI**

- The process of injuring oneself without intent to cause one's death (e.g. cutting, burning, etc.)
- NOT self-harm (SH); SH is a wide range of behaviors
  - e.g. suicide, suicide attempts etc.
- Apart from suicidal ideation, the strongest predictor of suicide

## **Rumination**

- When an individual puts a high focus on internal, negative feelings rather than external circumstances
- Keeping them from processing adaptive ways to deal with distress

(Compas et al., 2004; Lyubomirsky & Nolen-Hoeksema, 1995, Jacobson & Gould, 2007; Nicolai et al., 2015; Klonsky et al., 2013; Swannell et al., 2014, Evans & Simms, 2019)

# Rumination contributes to Non-suicidal self-injury (NSSI)

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## **NSSI/Rumination connection**

- Some respond to this rumination-exacerbated negative state via NSSI
- Externalizes negative affect and provides temporary “relief” from internal distress
- Research support: rumination significantly moderates between high negative affectivity (experience of negative emotions) and NSSI

## **Important note:**

- Rumination is just 1 possible factor involved in this relationship
  - E.g. if you ruminate this does not mean you will develop NSSI and vice versa
- Most research of this nature are not controlled experiments (ethics); cannot assume causality

(Jacobson & Gould, 2007; Nicolai et al., 2015; Klonsky et al., 2013; Swannell et al., 2014; Evans & Simms, 2019)



# Targeting rumination in Dialectical Behavioral Therapy (DBT) could reduce NSSI

## Emotion Regulation Skills

Understanding and naming emotions  
Changing emotional responses  
  Checking the facts  
  Opposite action  
  Problem solving  
Reducing vulnerability to emotion mind  
  ABC PLEASE (Accumulate positive emotions,  
  Build mastery, Cope ahead; treat Physical  
  illness, balance Eating, avoid mood-Altering  
  substances, balance Sleep, get Exercise)  
Managing really difficult emotions  
  Mindfulness of current emotions  
  Managing extreme emotions

Skills one would learn in Emotion  
Regulation Module (skills training):

Would learn over multiple sessions  
(1 of 4 modules)

## Why DBT?

- Popular/successful in treating NSSI
- Pervasive emotion dysregulation contributes to maladaptive, self-harm behaviors
- Goal of DBT: “build a life worth living” by targeting clients’ emotion dysregulation and replace maladaptive responses
- 4 aspects of treatment: individual therapy sessions, group skills training, coaching outside of treatment sessions (e.g. telephone coaching), and therapist consultation teams

## But....

- High participant dropout rate; 51.8% (Landes et al., 2016) and similar studies

## Why?

- Strenuous nature of DBT (e.g. skills training alone: three and a half hours, minimum of six months)
- Individual characteristics: low emotional acceptance

(Broadsky, 2005; Cristea, 2017; Miller & Smith, 2008; DeCou et al, 2019; Linehan, 1993; Bohus et al., 2004; Kröger et al., 2006)

Including AT may increase DBT therapy adherence/enhance treatment with benefits unique to AT

**Art therapy (AT)** - using various artistic processes (e.g. painting, sculpture, collage) along with the guidance of a professional art therapist to assist in reaching treatment goals, reducing conflict, and fostering self-esteem

### **Emotional acceptance benefits**

- Helps patients explore, organize, and portray their emotions (Haeyen et al., 2015)

### **Mindfulness benefits**

- Art's natural, unique relationship with mindfulness
- e.g. in Douglas (2019)'s study adding AT component to mindfulness training, increased mindfulness benefits
- Can decrease and protect against NSSI and rumination

# The Study

- Effects of art-DBT (independent variable) on rumination (primary dependent variable) and NSSI (if present; second dependent variable)
- Explore the relationship between NSSI and rumination

**H1)** Art-DBT would significantly decrease rumination and NSSI (when present) in participants

**H2)** That a significant, positive relationship would exist between rumination and NSSI

# Procedure

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## **Step 1: Develop an art-DBT program**

- An online skills-based program was considered the safest option (I am not a clinician)
- Content directly corresponded with DBT skills training handouts/manual (Lineham 2015a, 2015b)
- All activities from art-DBT book by Susan Clark (practicing art-DBT therapist)
- Structure based closely on existing online self-help program for suicidal thinking (Van Spijker et al., 2018)

# Procedure

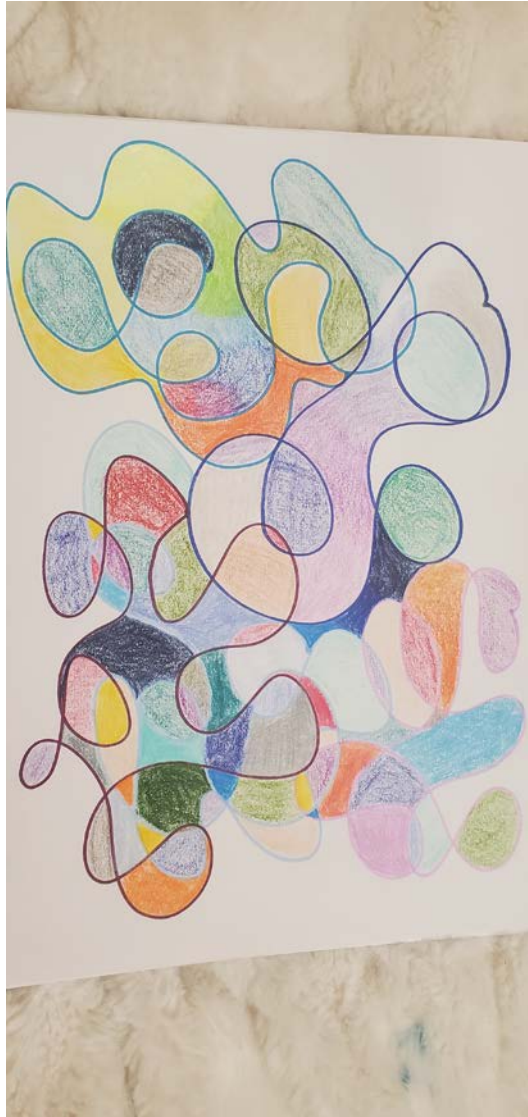
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## **Program**

- Six weeks - one hour each week
- On website Rcampus (free online classroom) submit/receive weekly materials
- Compensation: needed to complete 2/3 of activities/surveys

## **Art-DBT Structure (each week)**

- Information/reasoning behind activities
- 2 activities
- A recurring visual journal activity
- Participation survey/bi-weekly NSSI/rumination assessments



# Art Therapy Example: Loops of Containment

Use this activity as a distraction from rumination. Let yourself focus on the creative process above all else and practice mindfulness of the present moment.

1. Gather all your materials together in any space you can make art (this does not have to be in the materials room!)
2. Pick a marker to serve as your “outline” color
3. Begin drawing loopy scribbles all over your paper
4. Make sure to create many closed shapes when you are scribbling \* **this activity is meant to be soothing, so do not worry about creating the “perfect design”**
5. Once you have completed your initial scribble, use any colors you desire to color the closed shapes within your scribble created (see example D)
6. Feel free to utilize any other materials to embellish and fill your loops (e.g. watercolor, glitter, colored pencils, crayon, etc.). Enjoy yourself and let the process of creating distract you from the troubles of your day and exist in the present moment.
7. Enjoy your creation and feel free to utilize this activity in daily life whenever/wherever you need to distract yourself from rumination or negative thoughts

# Procedure

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## Step 2: Recruit participants

### Prevalence survey

- All OBU students
- Rumination (via RRS; potential scores from 22 – 88; higher scores = higher rumination)
- NSSI (via ISAS; potential scores from 13 – 65; higher scores = higher rumination)
- 171 participants

### High ruminating (HR) group

- Had to score 1 SD above normative means (Nolen-Hoeksema, 1999)
- 78 qualified; 45.61% of respondents
- Invited to participate via email

# Procedure

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29 individuals agreed to participate; 1 gave invalid email address

28 randomly assigned control (waitlist;  $N = 14$ ) and treatment groups (art-DBT program;  $N = 14$ )

## **Final participants who completed the study**

- 11 total
- Control group;  $N = 8$
- Treatment group;  $N = 3$

Both groups assessed bi-weekly on rumination and NSSI (weeks 2, 4, 6)



# Results and Discussion

## Prevalence survey

- Rumination:  $M = 49.46$  (median = 48;  $SD = 14.45$ ; scores ranged from 23 – 86)
- NSSI: 17.23 (median = 15;  $SD = 6.13$ ; scores ranged from 13 – 44)
- 53.8% of respondents say they have engaged in NSSI at some point in life, 67.39% of these within the last year ( $N = 92$ )
- Significant positive correlation between NSSI/Rumination:  $r = .42, p < .01$
- **Supports** hypothesis

## HR group (females needed a score of at least 52; males needed at least 49)

- Rumination:  $M = 62.44$  (median = 59.5;  $SD = 9.62$ ; scores ranged from 49 - 86)
- NSSI:  $M = 20.01$  (median = 17;  $SD = 7.21$ ; scores ranged from 13 – 44)
- 82.1% had a history of self-harm
- No significant NSSI/Rumination correlation: ( $r = .163, p > .05$ ).
- **Does not support** hypothesis

# Results and Discussion

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## Final participants

- Rumination:  $M = 63.91$  (median = 59;  $SD = 10.00$ ; scores ranged from 55 - 84)\*\* comparable to HR
- NSSI:  $M = 25.64$  among (median = 24;  $SD = 10.41$ ; scores ranged from 14 – 44) \*\*slightly higher than HR
- Relatively representative of HR
- No significant NSSI/Rumination correlation:  $r = .096, p > .05$
- **Does not support** hypothesis

**BUT:** Restriction of range: smaller, specific subset of population = less diverse

**Ultimately, hypothesis 2 was partially supported:** significant correlation between NSSI and Rumination did occur with a diverse sample, however, correlations were not observed in smaller, less-diverse samples

# Treatment effects - Disclaimers

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- Correlational in nature: cannot infer causality
- Incredibly small final sample: we cannot run traditional statistical analyses
- The treatment group: only three participants we cannot assume any effects/lack of effect without larger sample sizes

\*\*\*any effects observed should be considered with these things in mind\*\*\*

## Treatment effects: NSSI

### How effects were calculated

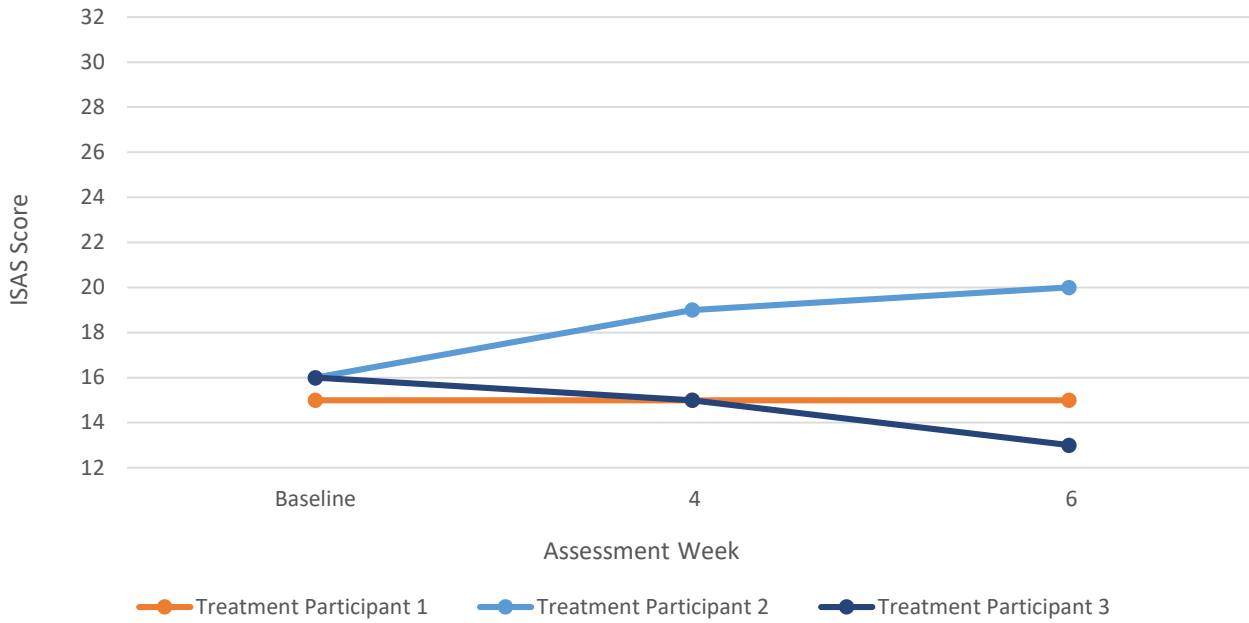
Calculated each groups average NSSI scores at baseline and their averages at week 6

Compared differences of each group to one another

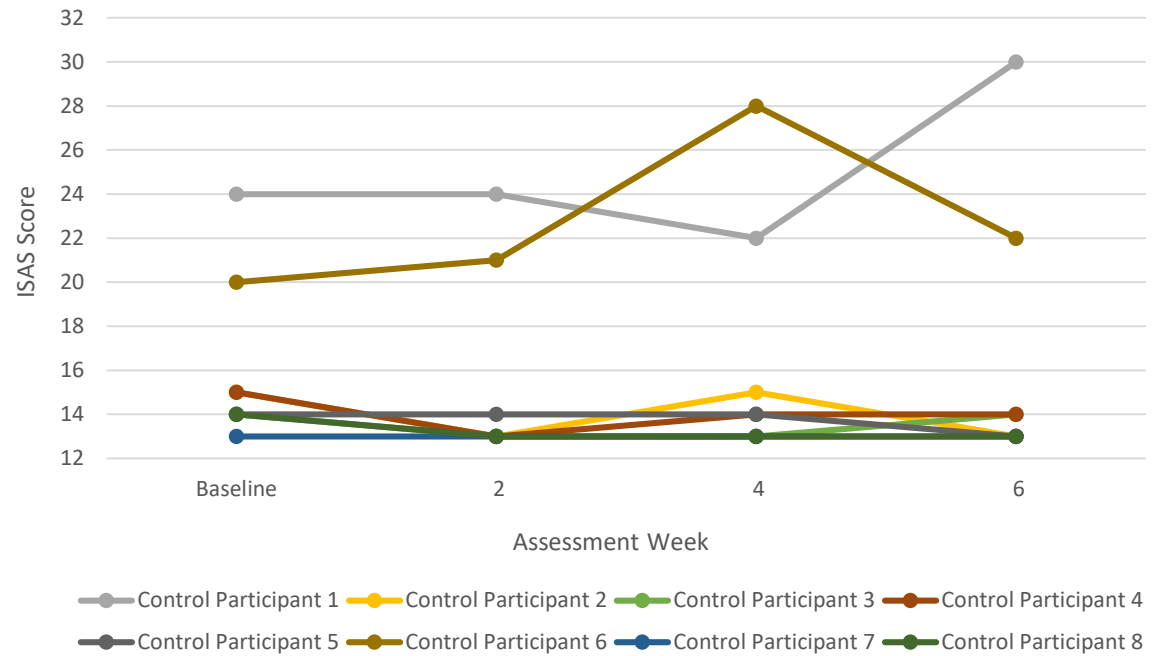
### Hypothesis that NSSI would decrease in treatment group NOT supported

- Control group averages for baseline and week 6 NSSI scores: **16.13** and **16.5** respectively
- Treatment group averages for baseline and week 6 NSSI scores: **15.67** and **16** respectively

Treatment Group NSSI Scores Across 6 Weeks



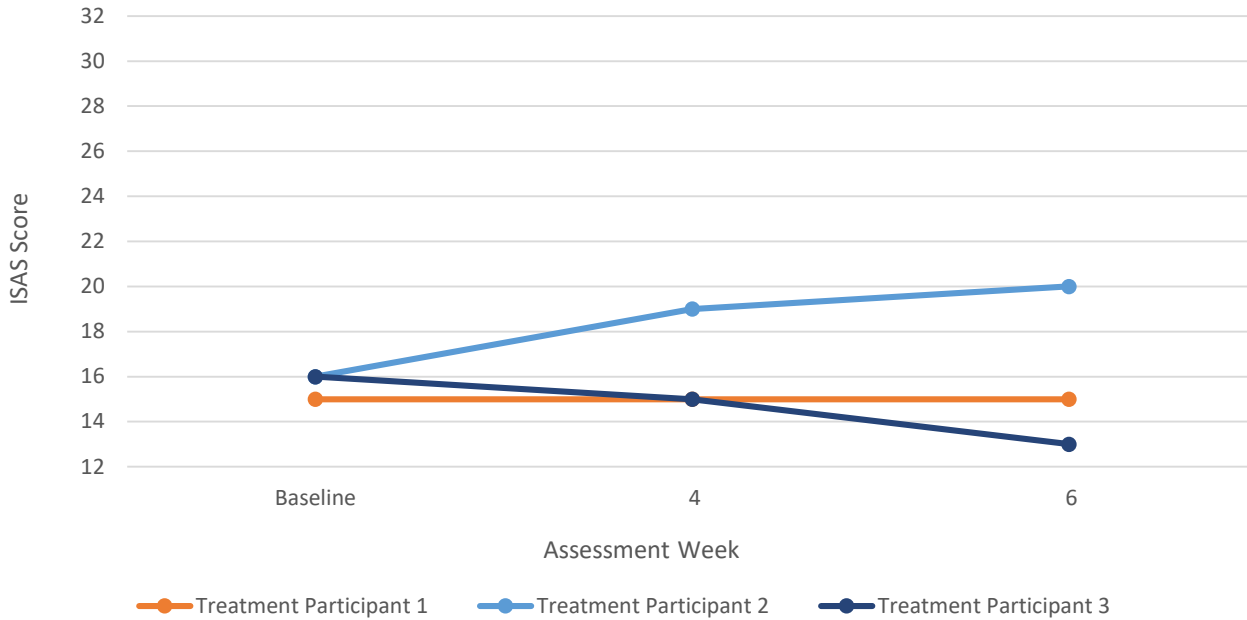
Control Group NSSI Scores Across 6 Weeks



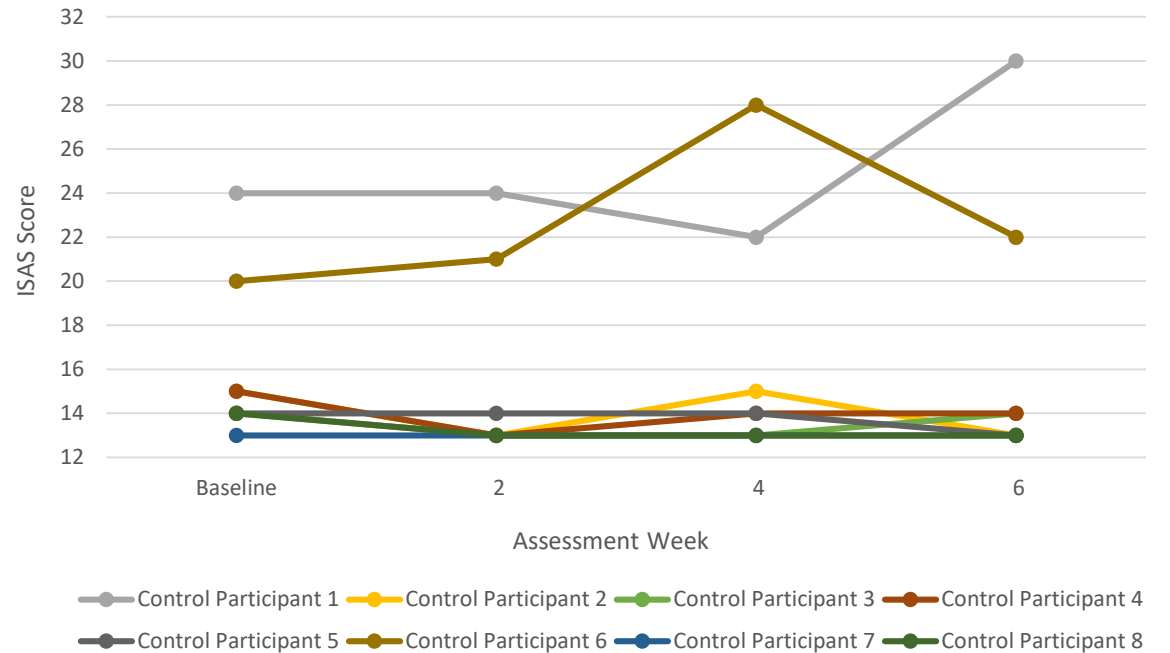
We don't see any effects; visually observe flat data

Note: technical difficulties prevented treatment group's Week 2 measures from being completed

Treatment Group NSSI Scores Across 6 Weeks



Participant 1 NSSI Scores Across 6 Weeks



### Why?

Lower baselines begin with (all at lower end)

Art-DBT did not specifically target NSSI

Not enough time to effect NSSI; may take longer to reduce these behaviors

Rumination/NSSI not correlated at baseline; targeting rumination did not affect NSSI

# Treatment effects: Rumination

## How effects were calculated

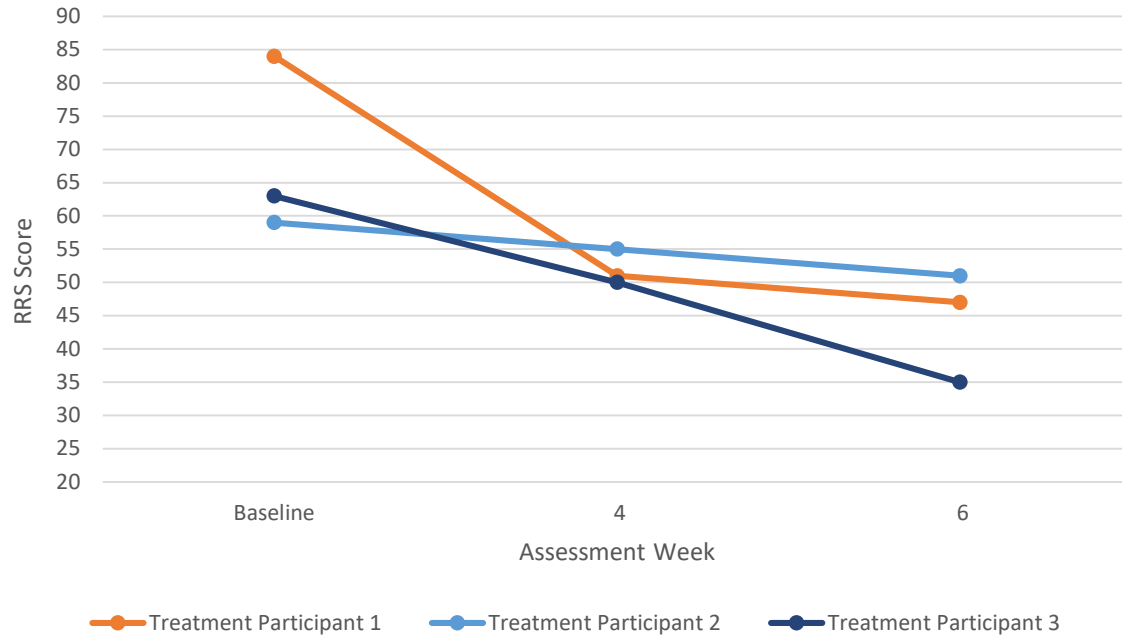
- Calculated each groups average rumination scores at baseline and their averages at week 6
- Compared differences of each group to one another

## Hypothesis that rumination would decrease in treatment group **WAS** supported

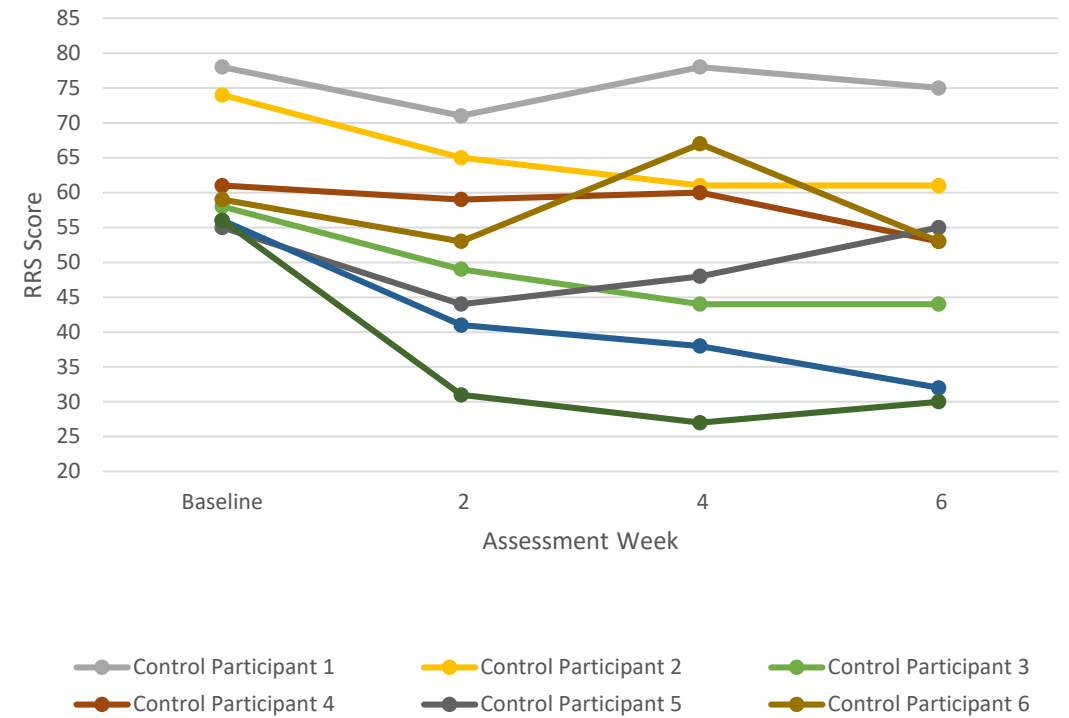
- Control group averages for baseline and week 6 NSSI scores respectively: **62.13 and 50.38**
- Treatment group averages for baseline and week 6 NSSI scores respectively: **68.67 and 44.33**

Both groups had reduced scores, but treatment group reductions = more dramatic

Treatment Group Rumination Scores Across 6 Weeks



Control Group Rumination Scores Across 6 Weeks

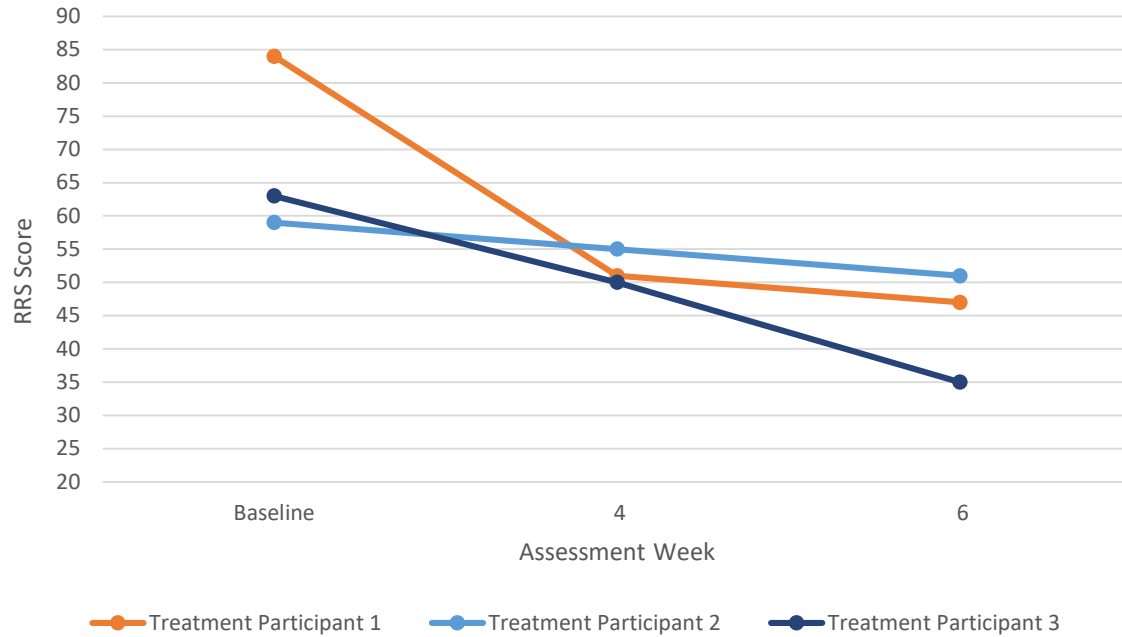


We can visually observe a downward trend in the treatment group  
Treatment group: **24.34**; Control group difference: **11.75**

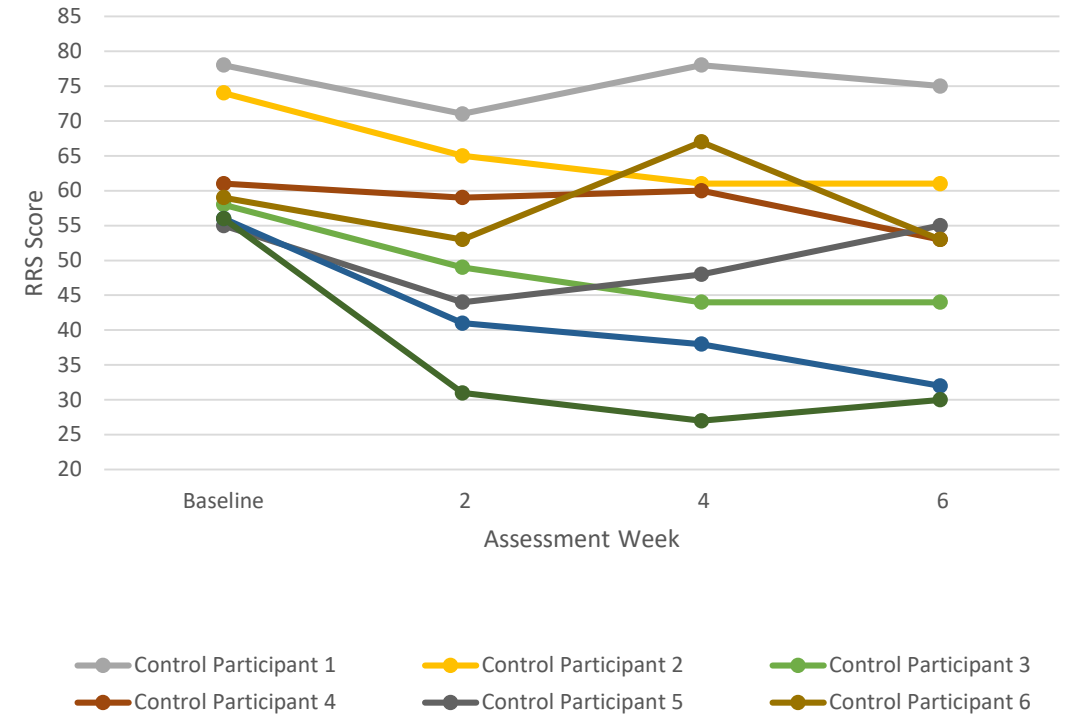
**Treatment group rumination decreased just over twice the amount of the control group**



Treatment Group Rumination Scores Across 6 Weeks



Control Group Rumination Scores Across 6 Weeks



### Why?

Specifically targeted rumination

Utilized DBT and AT techniques aimed at decreasing rumination

**\*\*However, due to the small sample size, correlational nature, and method of analysis we cannot draw any definite conclusions of efficacy\*\***

# Limitations

## **COVID-19**

- Had to leave campus at the beginning of week 3; added external stress, anxiety, discomfort, etc...
- Environment changes; conditions at home may be better or worse at home
- **History effects**

## **Material distribution change**

- Rcampus.com policy change at time of coronavirus; addition of a fee
- Shifted to email distribution of weekly materials; may account for high dropout rate
- Emails getting lost, too tedious to find activities, bad internet connection, etc...
- All respondents to the exit survey expressed distaste for the email distribution method and Rcampus format

**Small sample size, correlational study, etc...**

# Future directions

## Overall

- Results indicate a relationship between NSSI/Rumination
- Suggest that an online, rumination-targeted, art-DBT program can potentially decrease rumination
- Whether such a treatment could also reduce NSSI remains to be seen

Study these variables with larger, more diverse populations

- Will a larger population reflect what we have seen in the present study?

Effect of using different online platforms such as Rcampus, dropbox, etc.

- Which is best?

Online art-DBT vs in-person art-DBT

- Which format is best for which variables?
- What would promote treatment adherence

# Key for Future Research

- To provide high-quality, empirical data
- Identify and target factors underlying NSSI

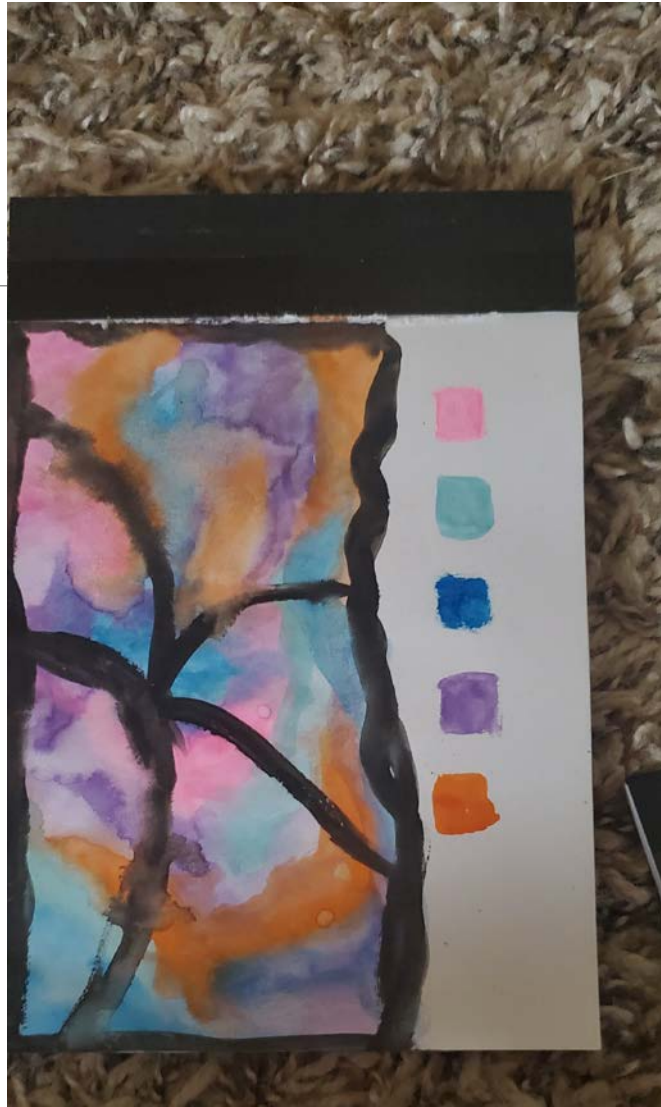
## **So that...**

- Develop interventions that maximize benefits of treatment and promote effective healing among those who struggle with NSSI and high rumination

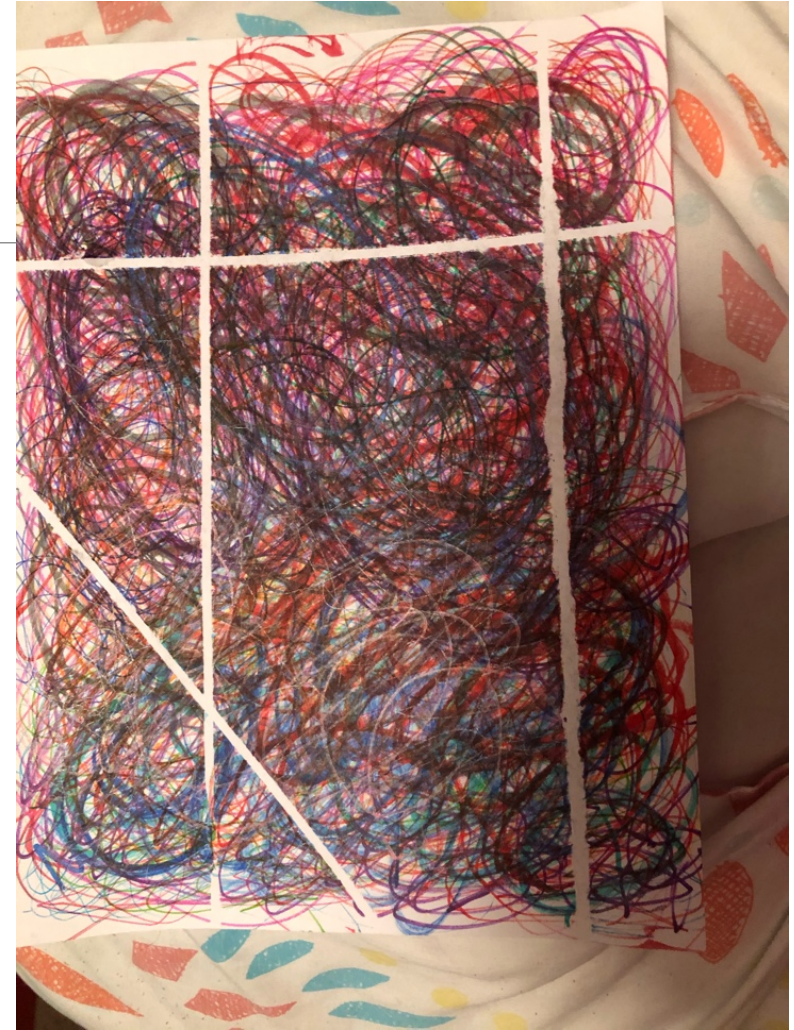
Questions?



“Painting Without Brushes”



“Visual Journal” entry



“Scribbling with Both Hands”

# Participant Feedback about Art-DBT

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## **In exit survey, comments supported positive effects of art-DBT**

- One participant noted that after a few weeks into the study, they tended to make more art when stressed or bored than they would have otherwise
- Respondents indicated they liked the anonymous, online format—one noting their lack of art background would have deterred them otherwise
- Respondents felt the length of the program was appropriate; one noted they were sad for it to end

# Art-Therapy extras

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## **Emotional acceptance benefits**

- (Haeyen et al., 2015)'s study on cluster B/C personality disorders
- Helped patients explore, organize, and portray their emotions
  - elicited security/freedom to regulate emotions without an art present
  - Reported AT felt safer to explore and communicate emotions over traditional therapies

## **Versatility of AT**

- Many different types of art therapy (cognitive-behavioral AT, humanistic AT, etc.) that treat variety of mental illnesses
- In general, quite successful though high quality research is lacking

(About Art Therapy, n.d.; Wolkin, 2015; Jain et al., 2007; Ramel et al., 2004; Teasdale et al., 1995)





# NSSI extras

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## **NSSI**

- Lifetime prevalence rate among young adults of 13.4%
- Apart from SI, the strongest predictor of suicide

## **Nicolai et al. (2015)**

- Found that rumination significantly moderated the relationship between high negative affectivity (NA; experience of negative emotions) and NSSI
- NA + high rumination = higher rates of NSSI

**Suicidal Ideation** - planning, considering, or thinking about suicide (Klonsky et al., 2016)

## **Connection between NSSI and Suicide - Evans and Simms (2019):**

- Different dimensions on a “tendency to self harm continuum”
- Much overlap between behaviors however, “low attraction to life” accounted for differences in suicidal individuals
- Suicidal Ideation — characterized by a low attraction to life (Li et al., 2017)
- On same continuum; if NSSI if loose will to live (e.g. SI) have greater chance of suicide completion



# NSSI and SI Extras

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## SI and Rumination

- Many find rumination as a significant contributor to SI development, strong correlations

Rumination plays a role in both NSSI and SI engagement: developing an intervention targeting rumination may help lower NSSI and protect against SI development—ultimately preventing suicides

(Compas et al., 2004; Lyubomirsky & Nolen-Hoeksema, 1995; Nicolai et al., 2015; Krajniak et al., 2013; Miranda & Nolen-Hoeksema, 2007)