





"Don't think about that!"

"Something must be wrong with me"



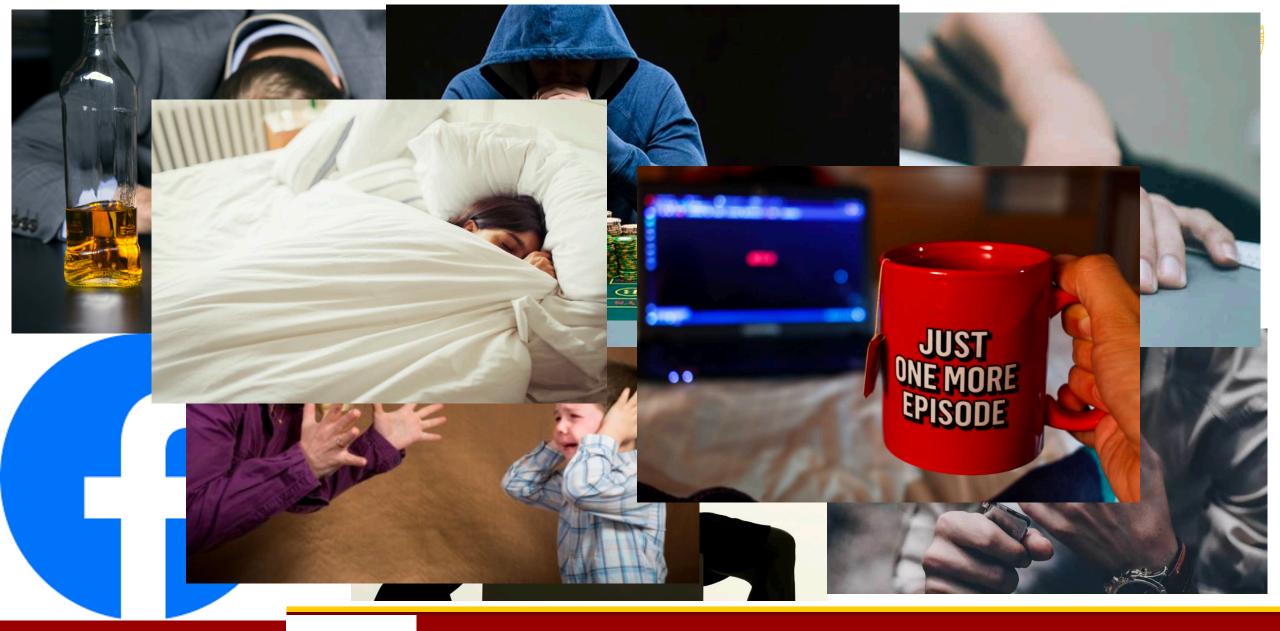
"I just don't want to feel this way right now"



"I can't do this! It's too hard! It's too much!"

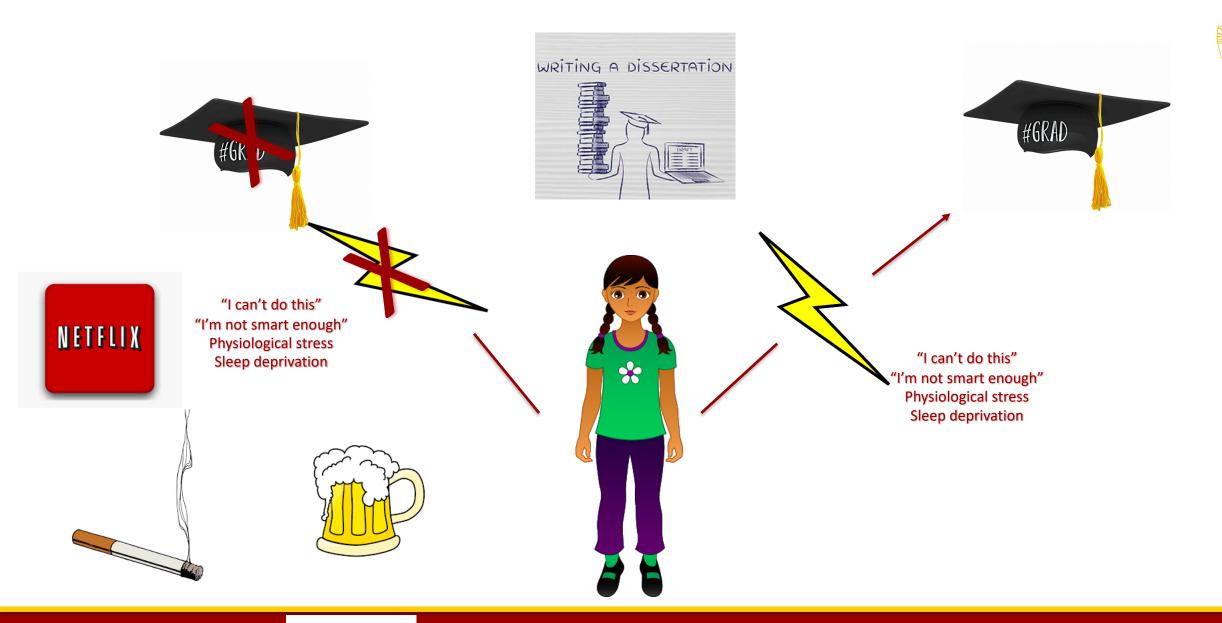






# **USC**Dornsife

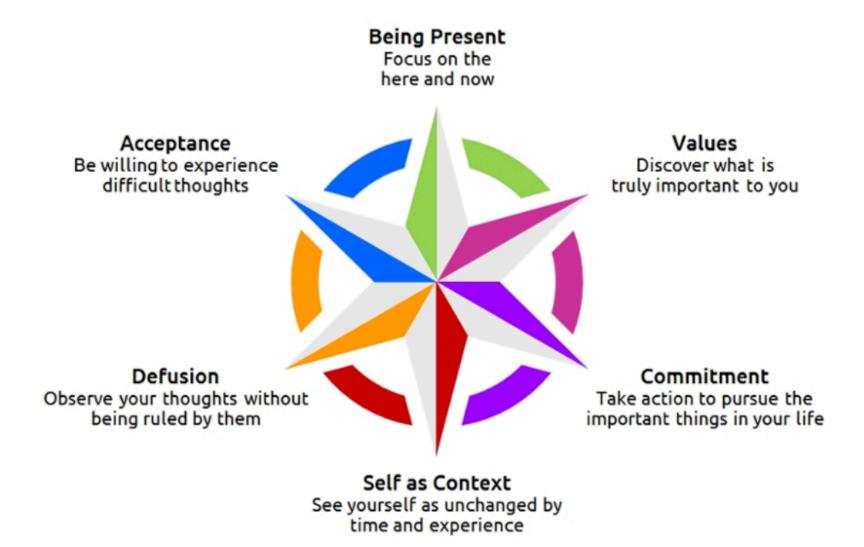








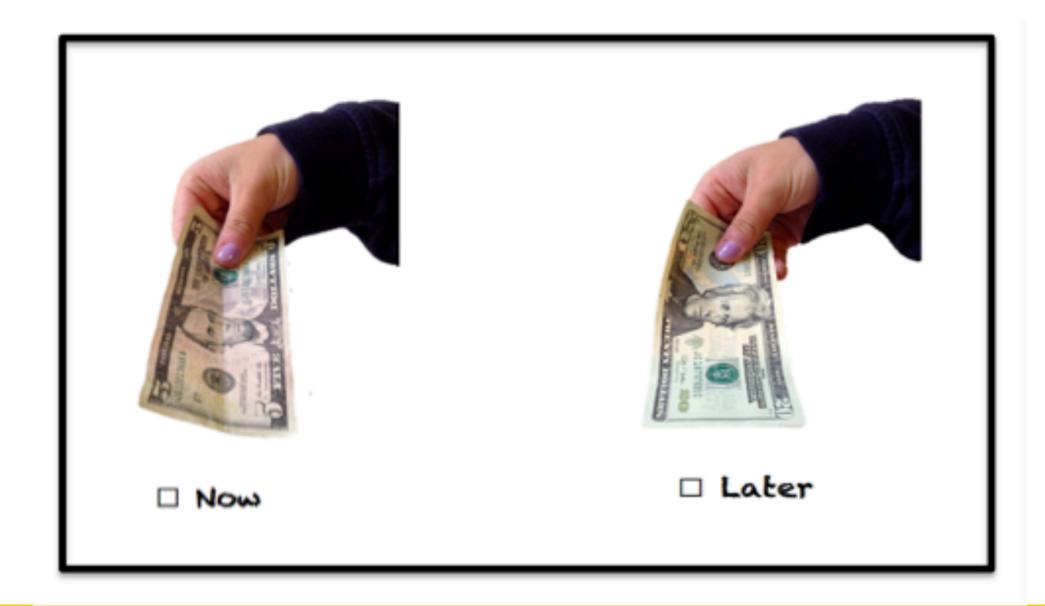




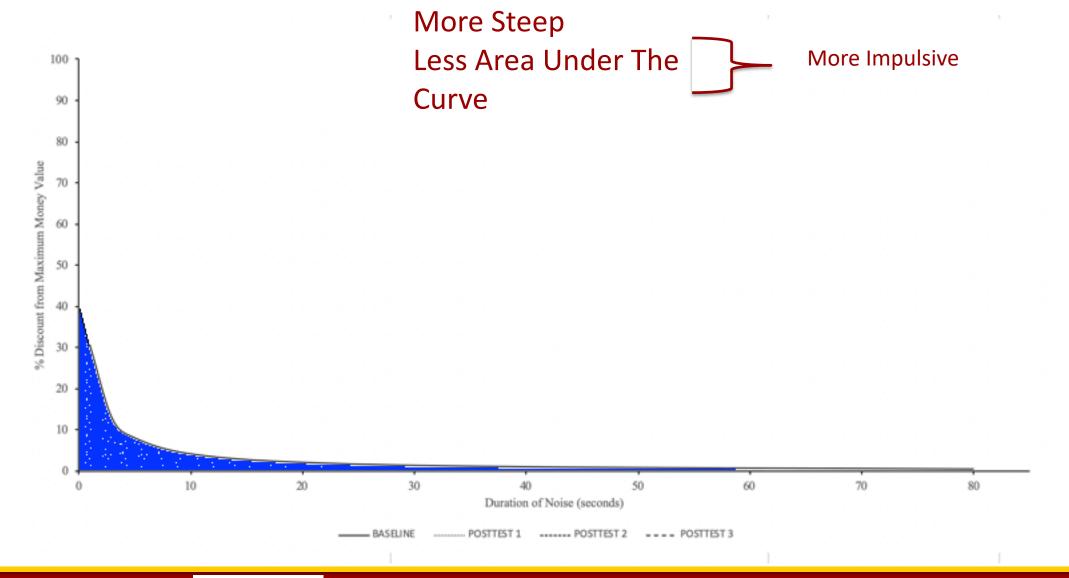






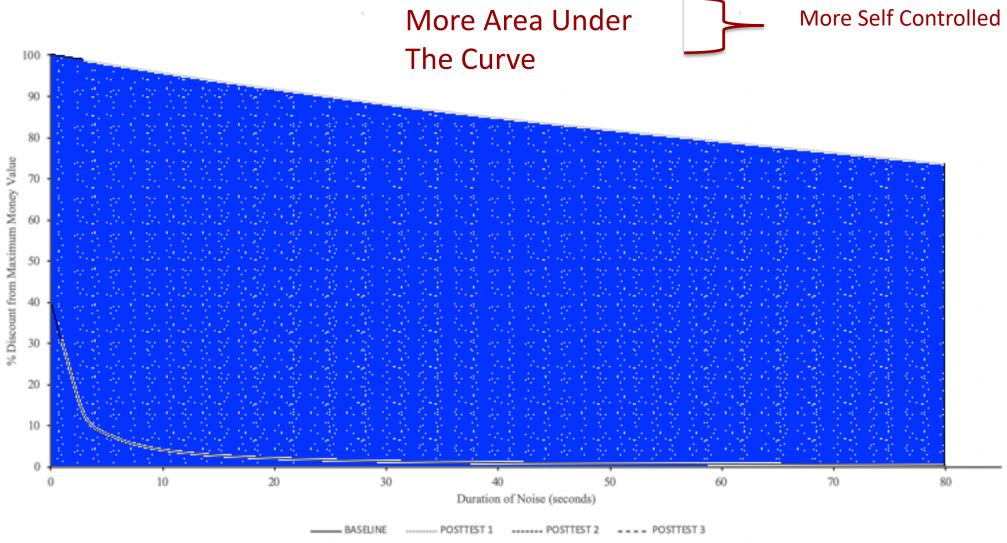












**Less Steep** 









#### ORIGINAL ARTICLE



#### An Examination of the Transdiagnostic Role of Delay Discounting in Psychological Inflexibility and Mental Health Problems

Michael E. Levin 1 · Jack Haeger 1 · Clarissa W. Ong 1 · Michael P. Twohig 1

Published online: 22 March 2018

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#### **Abstract**

Delay discounting is a basic behavioral process that has been found to predict addictive behaviors and, more recently, other mental health problems. Acceptance and commitment therapy (ACT) is a transdiagnostic treatment that appears to alter delay discounting, possibly through reducing psychological inflexibility. The current study sought to further bridge research on delay discounting and ACT by examining the relation of delay discounting to a broad range of self-reported mental health problems and measures of psychological inflexibility. A cross-sectional online survey was conducted with 389 college students. Small negative correlations ranging between .09 and .15 were statistically significant between delay discounting and self-reported depression, anxiety, eating concerns, hostility, academic distress, and student functioning (only general social functioning and social anxiety were non-significant). Similar negative correlations were also found between delay discounting and measures of psychological inflexibility. Psychological inflexibility statistically mediated all of the relations between delay discounting and mental health problems such that delay discounting was no longer related to mental health problems when including the mediator. Overall, these results suggest that delay discounting is a transdiagnostic process relevant to a range of mental health problems, potentially through its impact on psychological inflexibility.

Keywords Delay discounting · Depression · Anxiety · Transdiagnostic · Psychological inflexibility · Acceptance and commitment therapy







doi: 10.1016/j.brat.2013.04

### Effects of Min **Probability Di** and Healthy-1

Kelsie L Hendrickson <sup>1</sup>, Eı

Affiliations + expand PMID: 23685325 DOI: 1(

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#### **HHS Public Acce**

Author manuscript Behav Ther. Author manuscript; availab

Published in final edited form as: Behav Ther. 2014 September; 45(5): 630-639. doi:1

#### ALTERING IMPULSIVE DECISION ACCEPTANCE-BASED PROCEDU

Kate L. Morrison, Gregory J. Madden, Amy L. **Twohig** 

Department of Psychology, Utah State University

#### **Abstract**

Delay discounting is one facet of impulsive decisi delayed outcome. Steeply discounting delayed rev other problematic behaviors. To the extent that ste disorders, it would be advantageous to find psych Acceptance-based interventions may prove useful arises while waiting for a delayed outcome. The c 90 minute acceptance-based training would change undergraduate university students in comparison to post-training included a hypothetical monetary- d Questionnaire-II, and the Distress Tolerance Scale decreased their discounting of delayed money, bu inflexibility when compared to the Waitlist Control group received the intervention. Combining all pa acceptance-based treatment significantly decrease distress tolerance. The difference in AAQ-II appro treatments may be a worthwhile option for decrea affecting the choices that underlie addiction and c

Journal of Contextual Behavioral Science 11 (2019) 15-20



#### Journal of Contextual Behavioral Science

journal homepage: www.elsevier.com/locate/jcbs



#### The effect of brief mindfulness training on momentary impulsivity



Mark R. Dixon\*, Dana Paliliunas, Jordan Belisle, Ryan C. Speelman, Karl F. Gunnarsson, Jordan L. Shaffer

Southern Illinois University, Carbondale, USA

#### ARTICLE INFO

Keywords: Mindfulness Impulsivity Delay discounting ACT

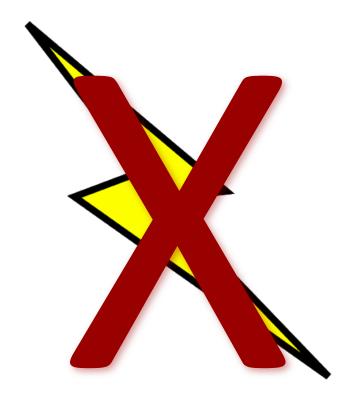
#### ABSTRACT

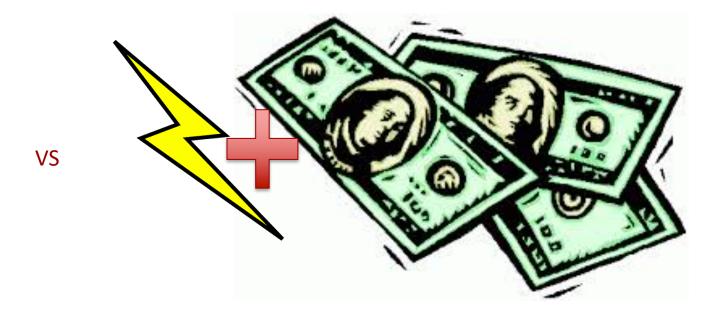
Delay discounting describes the tendency to select smaller-sooner rewards over larger-later rewards, which has been proposed as a behavior analytic model of impulsivity. Framed in this way, impulsivity is problematic because it results in the sub-optimization of rewards and is related to several addictive behaviors. The present study evaluated the efficacy of a brief, 5-min mindfulness exercise on participants' momentary state impulsivity using a monetary delay discounting questionnaire. Twenty-three participants were randomly assigned to either an experimental (n = 11) or control group (n = 12). Both groups completed delay discounting surveys before and after their respective interventions, where the experimental group watched a brief mindful breathing video and the control group watched a contemporary music video of approximately the same duration. Decreases in impulsive responding were seen in the experimental group and no significant changes were observed in the randomized control group. These results have implications for applying brief mindfulness-based strategies that can reduce the probability of impulsive choice behavior.

**SCD**ornsife









Smaller – Sooner Reinforcer

Larger-Later Reinforcer





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**SCD**ornsife



## Chastain, Tarbox, Meshes, & Yang (in preparation for submission)



## **Purpose**

 To evaluate the effects of defusion on choices between delayed positive reinforcement + aversive vs. immediate negative reinforcement

# Design

Nonconcurrent multiple baseline across participants

# **Dependent Variable**

- Responses to a delay discounting computer program developed by Meshes et. Al (in preparation)
- Area under the curve scores calculated with Mazur's Equation





## Chastain, Tarbox, Meshes, & Wang (in preparation for submission)



### **Materials**

- Macbook Pro Laptop
- Cowin E7 Noise cancelling headphones
- E-giftcards

# Participants (3 college students)

- At least 18 years of age
- No reported hearing loss
- Fluent in English
- No previous exposure to ACT
- Overt negative reaction to the sound.



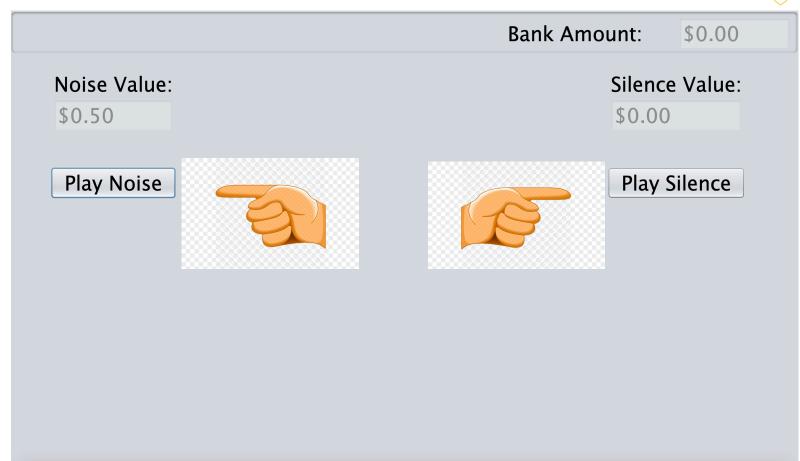








Pretraining Baseline Defusion Training- Round 1 Posttest Defusion Training –Round 2 Posttest **Defusion Training- Round 3** Posttest Follow Up -1 week Follow Up- 2 weeks







| Pretraining                |
|----------------------------|
| Baseline                   |
| Defusion Training- Round 1 |
| Posttest                   |
| Defusion Training –Round 2 |
| Posttest                   |
| Defusion Training- Round 3 |
| Posttest                   |
| Follow Up -1 week          |
| Follow Up- 2 weeks         |



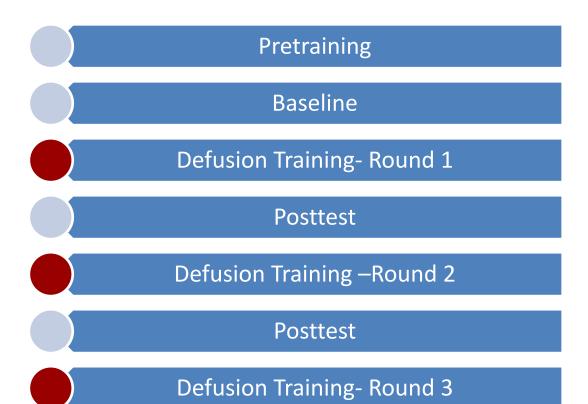




|  | Pretraining                |
|--|----------------------------|
|  | Baseline                   |
|  | Defusion Training- Round 1 |
|  | Posttest                   |
|  | Defusion Training –Round 2 |
|  | Posttest                   |
|  | Defusion Training- Round 3 |
|  | Posttest                   |
|  | Follow Up -1 week          |
|  | Follow Up- 2 weeks         |











Follow Up- 2 weeks







### **Intervention Round 1**

- The Cards Activity (Hayes, Strosahl, & Wilson, 1999 p.162)
- Thanks Mind (Harris, 2009 p.177)

### **Intervention Round 2**

- I'm Having the Thought That (Healy, H.A., et al, 2008)
- Word Repetition (Titchener, E.B., 1910)

### **Intervention Round 3**

- Silly Voices (Hayes et al., 1999)
- Labeling Your Story (Hayes, 2005, pp. 154-156)









Defusion Training- Round 1

Posttest

Defusion Training –Round 2

Posttest

Defusion Training- Round 3

Posttest

Follow Up -1 week

Follow Up- 2 weeks









Baseline

Defusion Training- Round 1

**Posttest** 

Defusion Training –Round 2

**Posttest** 

Defusion Training- Round 3

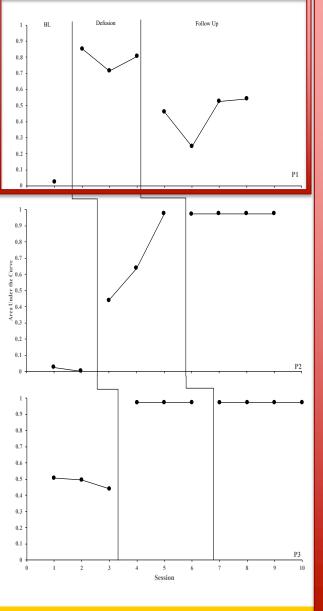
Posttest

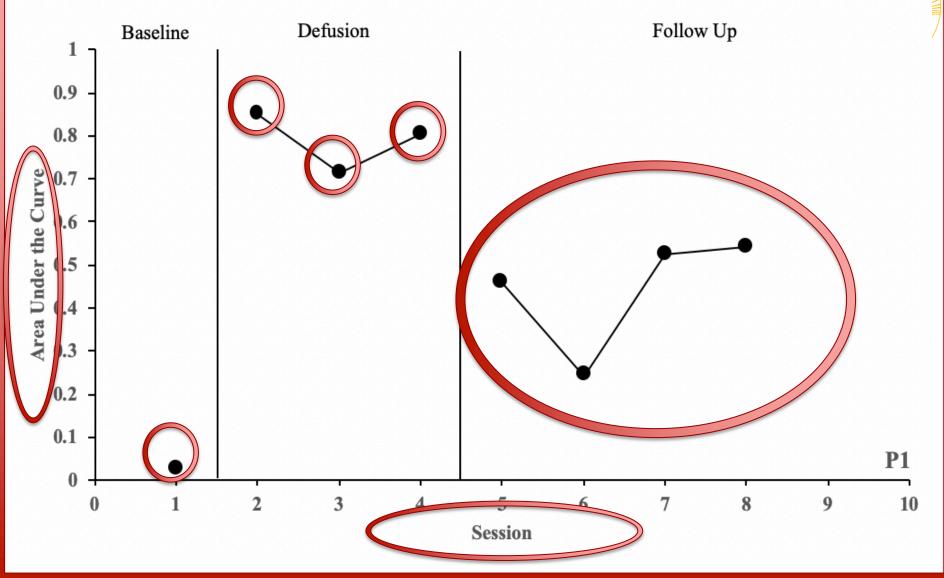
Follow Up -1 week

Follow Up- 2 weeks



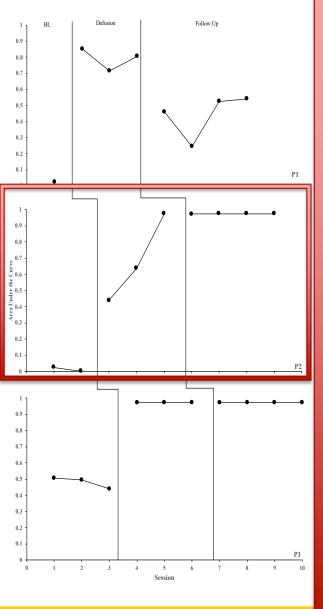


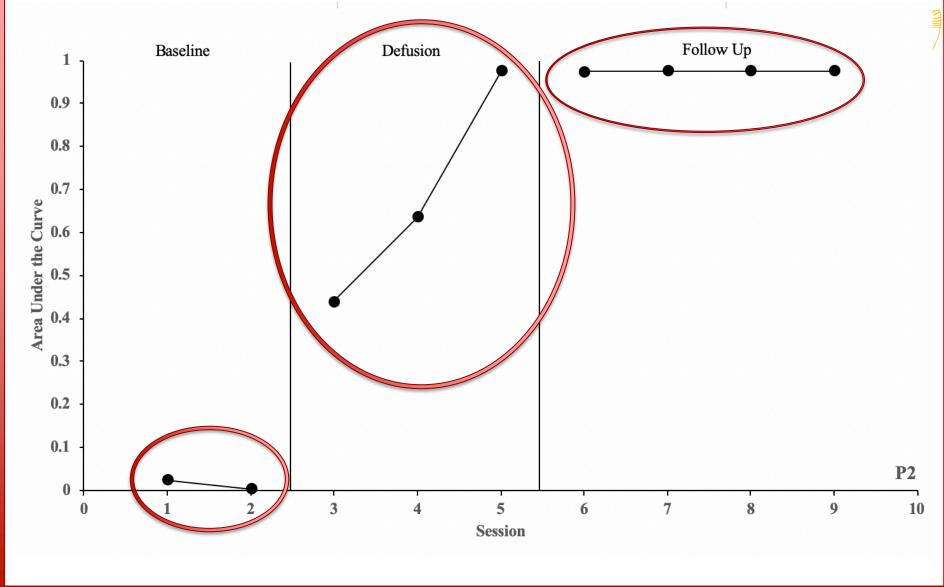




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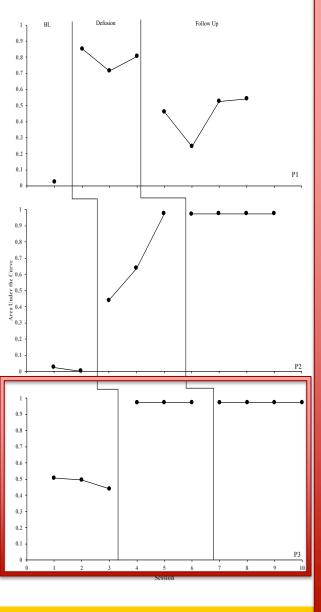


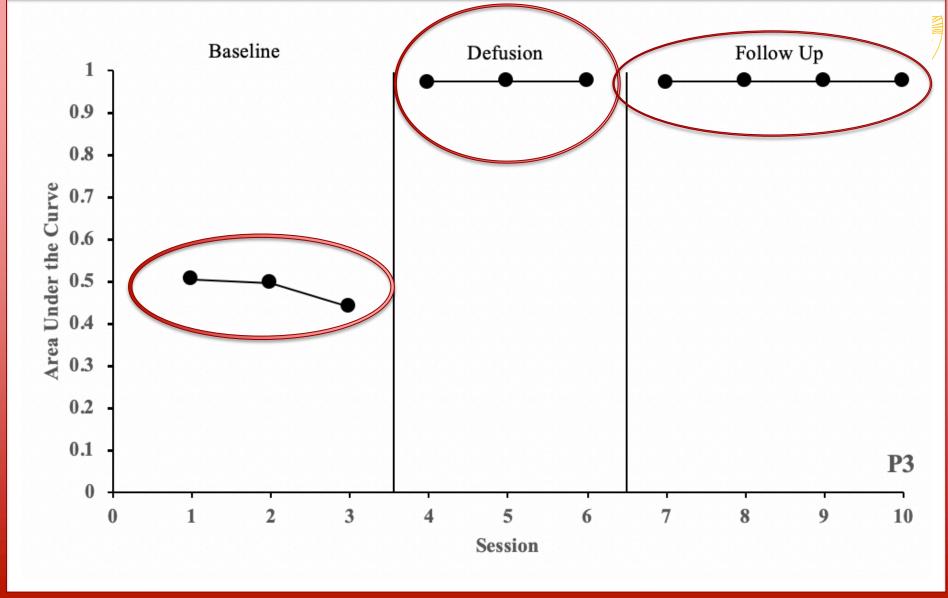




# **USC**Dornsife











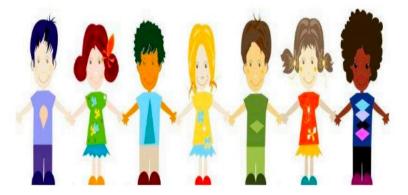


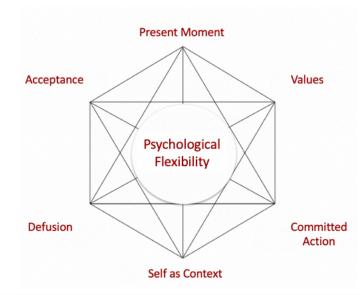


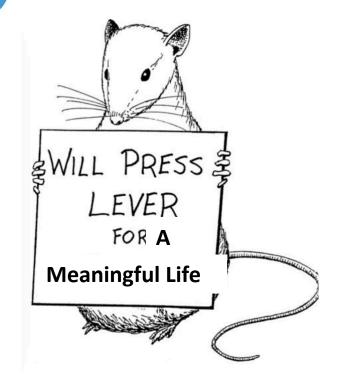
"It's just a thought"















### Leung, Tarbox, & Cameron (Thesis)



## **Purpose**

Evaluate the effects of values-based interventions on persistence with an aversive task

# Design

Nonconcurrent multiple baseline design

# **Dependent Variable**

Duration of attending to sound clip





## **Leung & Tarbox**



## **Materials**

- Laptop
- Cowin E7 Noise cancelling headphones
- E-giftcards
- The Value Assessment Rating form (Russ Harris, 2008)

# **Participants**

• 2 college students













Follow-Up





Space

**USC**Dornsife



#### **Values Assessment Rating Form**

Read through the accompanying values sheet. For each of the ten domains, write a few words to summarize your valued direction, E.g. 'To be a loving, supportive, caring, partner.' Rate how important this value is to you on a scale of 0 (low importance) to 10 (high importance). It's okay to have several values scoring the same number. Rate how successfully you have lived this value during the past month on a scale of 0 (not at all successfully) to 10 (very successfully). Finally rank these valued directions in order of the importance you place on working on them right now, with 10 as the highest rank, and 9 the next highest, and so on.

|  | Baseline                     |  |
|--|------------------------------|--|
|  |                              |  |
|  | Values-Based<br>Intervention |  |
|  |                              |  |
|  | Posttest                     |  |
|  | Follow-Up                    |  |
|  | Tollow op                    |  |
|  |                              |  |

| Domain                          |  |  |  |
|---------------------------------|--|--|--|
| Couples/ intimate relationships |  |  |  |
| Parenting                       |  |  |  |
| Family relations                |  |  |  |
| Social relations                |  |  |  |
| Employment                      |  |  |  |
| Education and training          |  |  |  |
| Recreation                      |  |  |  |
| Spirituality                    |  |  |  |
| Citizenship/ community          |  |  |  |
| Health/ Physical well- being    |  |  |  |

| Valued direction<br>(Write a brief summary, in one or two sentences,"<br>or a few key words.) | Importance | Success | Rank |
|---|------------|---------|------|
|   |            |         |      |
|   |            |         |      |
|   |            |         |      |
|   |            |         |      |
|   |            |         |      |
|   |            |         |      |
|   |            |         |      |
|   |            |         |      |
|   |            |         |      |
|   |            |         |      |



#### VALUES WORKSHEET (Adapted from Kelly Wilson's Valued Living Questionnaire)

Deep down inside, what is important to you? want to cultivate as a person? How do you v desires for the way we want to interact with a principles that can guide us and motivate us

Values are not the same as goals. Values are along the way. A value is like heading North traveling in that direction. Goals can be achie you want to be a loving, caring, supportive p and supportive, then you are no longer a lovi contrast, if you want to get married, that's a

contrast, if you want to get married, that's a sea.

married – even if you start treating your partner very badly. If you want a better job, that's a goal. Once you've got it goal achieved. But if you want to fully apply yourself at work, that's a value – an ongoing process.

The following are areas of life that are valued by some people. Not everyone has the same values, and this is not a test to see whether you have the "correct" values. Think about each area in terms of general life directions, rather than in terms of specific goals. There may be certain areas that you don't value much; you may skip them if you wish. There may be areas that overlap – e.g. if you value hiking in the mountains, that may come under both physical health and recreation. I is also important that you write down what you would value if there were nothing in your way. What's important? What do you care about? And what you would like to work towards?

T. Family relations. What sort of brother/sister, son/daughter, uncle/auntie do you want to be? What personal qualities would you like to bring to those relationships? What sort of relationships would you like to build? How would you interact with others if you were the ideal you in these relationships?

- 2. Marriage/couples/intimate relations. What sort of partner would you like to be in an intimate relationship? What personal qualities would you like to develop? What sort of relationship would you like to build? How would you interact with your partner if you were the 'ideal you' in this relationship?
- 3. Parenting. What sort of parent would you like to be? What sort of qualities would you like to have? What sort of relationships would you like to build with your children? How would you behave if you were the 'ideal you'.
- 4. Friendships/social life. What sort of qualities would you like to bring to your friendships? If you could be the best friend possible, how would you behave towards your friends? What sort of friendships would you like to build?
- 5. Career/employment. What do you value in your work? What would make it more meaningful? What kind of worker would you like to be? If you were living up to your own ideal standards, what personal qualities would you like to bring to your work? What sort of work relations would you like to build?
- 6. Education/personal growth and development. What do you value about learning, education, training, or personal growth? What new skills would you like to learn? What knowledge would you like to gain? What further education appeals to you? What sort of student would you like to be? What personal qualities would you like to apply?
- 7. Recreation/fun/leisure. What sorts of hobbies, sports, or leisure activities do you enjoy? How do you relax and unwind? How do you have fun? What sorts of activities would you like to do?
- 8. **Spirituality.** Whatever spirituality means to you is fine. It may be as simple as communing with nature, or as formal as participation in an organised religious group. What is important t to you in this area of life?
- 9. Citizenship/ environment/ community life. How would you like to contribute to your community or environment, e.g. through volunteering, or recycling, or supporting a group/ charity/ political party? What sort of environments would you like to create at home, and at work? What environments would you like to spend more time in?
- 10. **Health/physical well-being.** What are your values related to maintaining your physical well-being? How do you want to look after your health, with regard to sleep, diet, exercise, smoking, alcohol, etc? Why is this important?

## Values Worksheet



- Values-Based
  - Intervention

Baseline

- Posttest
- Follow-Up







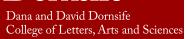


Posttest

Follow-Up

















Follow-Up





Space

Срисс

















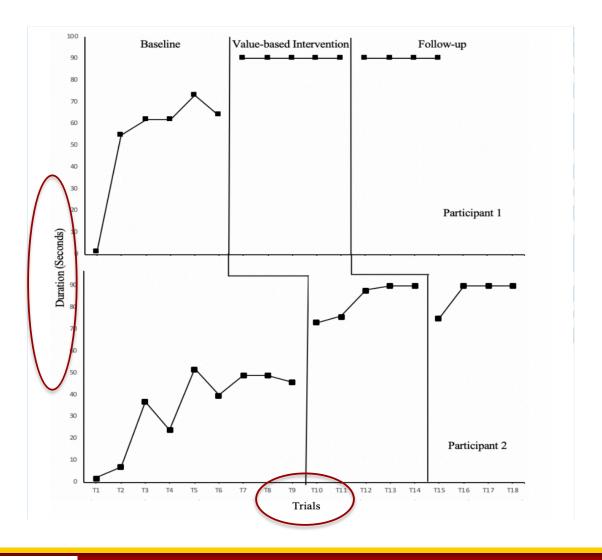
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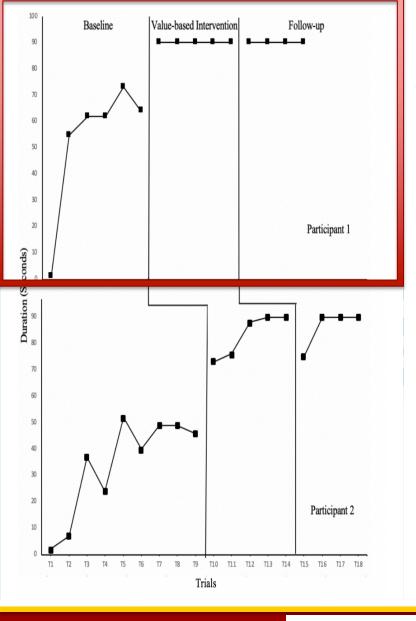


# **Results**



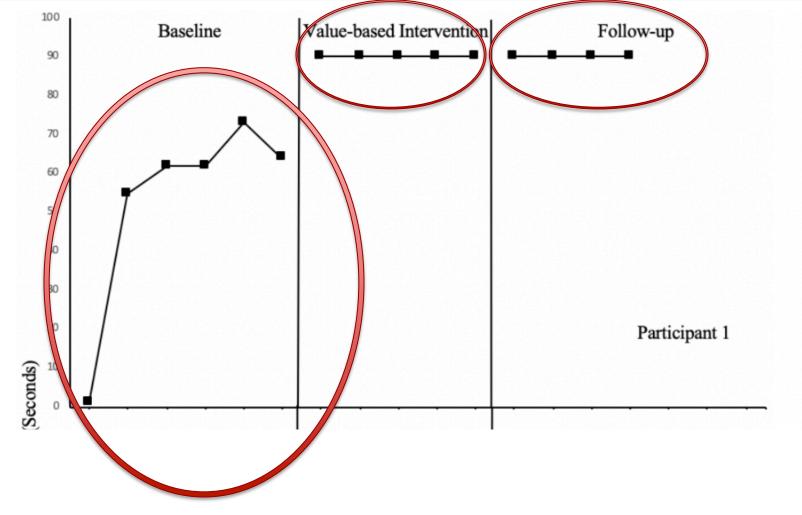






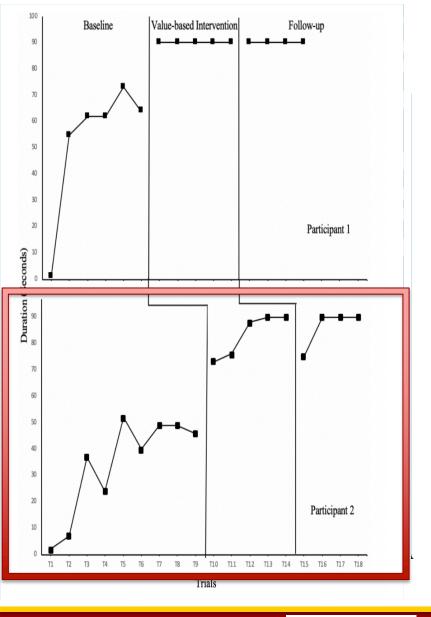
# **Results**





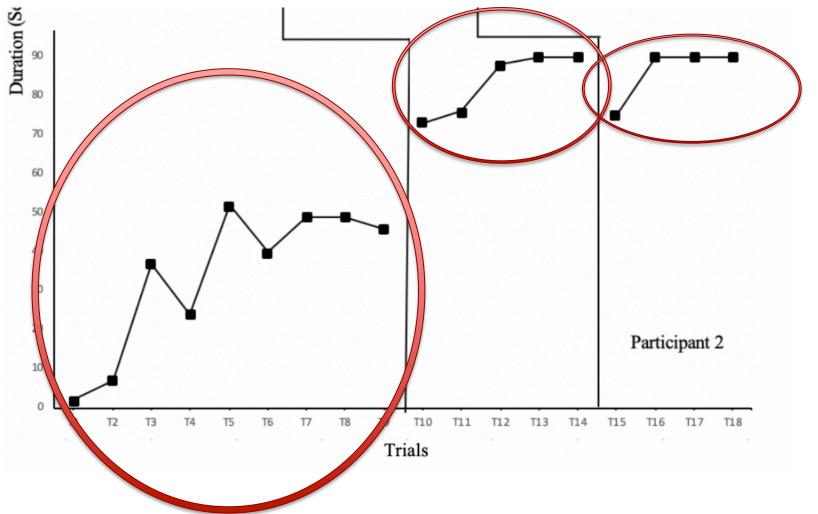


٦٢٠٠١ Dana and David Dornsife FIRSTS TEPS College of Letters, Arts and Sciences early intervention program



# **Results**







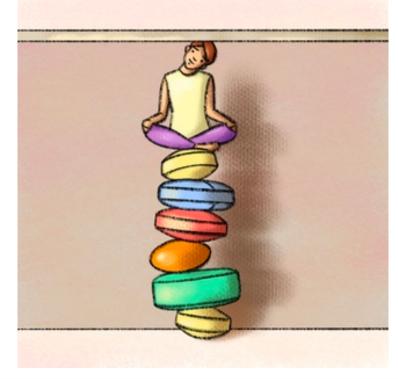




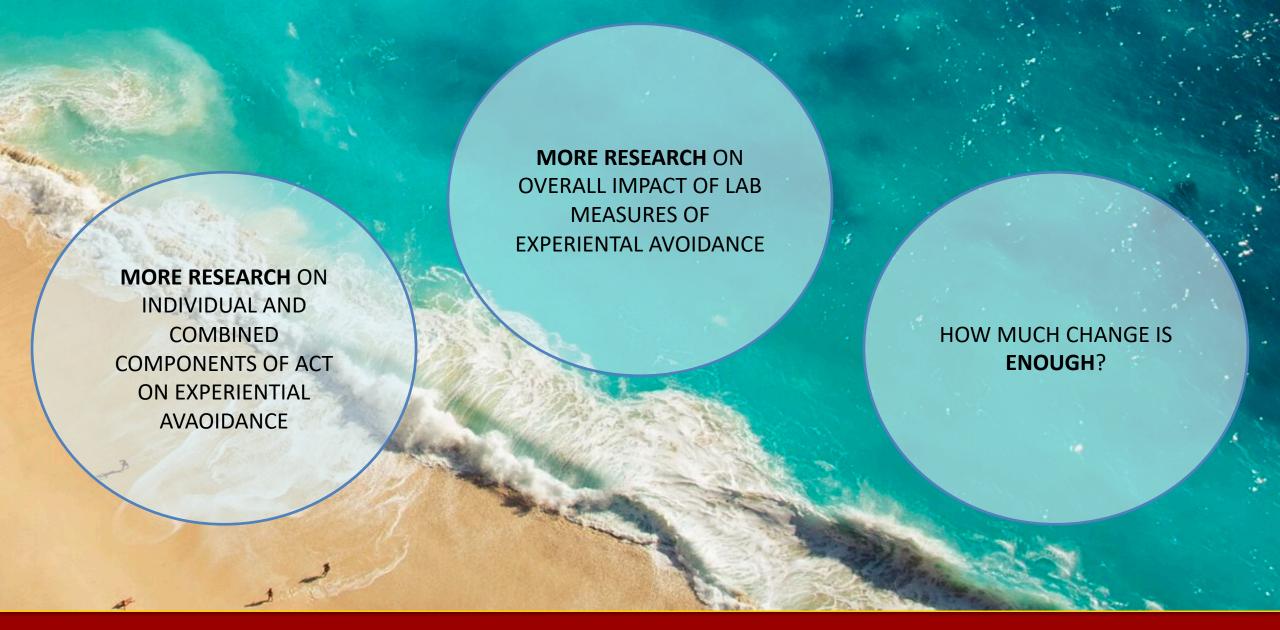








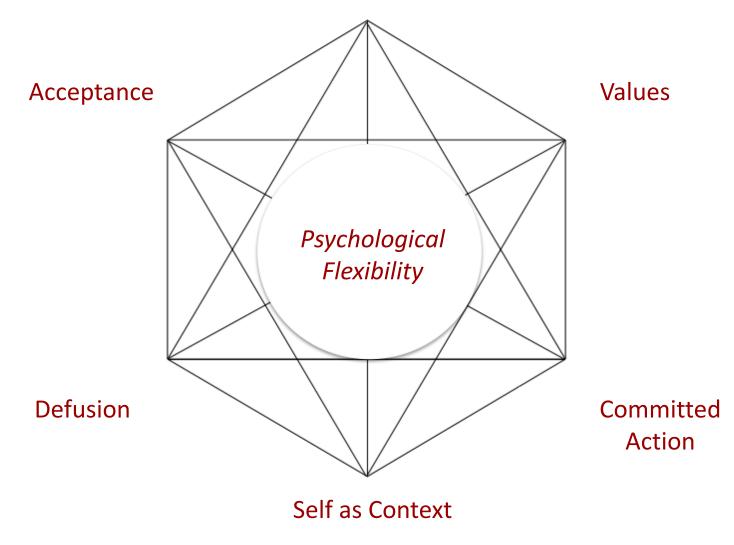




# **USC**Dornsife

#### **Present Moment**













Achastain@firststepsforkids.com

Special "Thanks" to these beautiful humans:

Jay Leung
Jonathan Tarbox
Elizabeth Meshes
Yiyi Wang
Michael Cameron





EXPERIENTAL AVOIDANCE: "...the attempt to alter the form, frequency, or situational sensitivity of private events even when doing so causes behavioral harm (Hayes et al., 1996)."

