



Riding the Research  
Wave

Navigating the journey in *community*



**YOU CAN'T STOP  
THE WAVES BUT  
YOU CAN LEARN  
TO SURF**

JON KABAT-ZINN

# A little about me

Pullman High!  
Starting running  
bc of my  
brother

Who were critical  
people that altered  
your trajectory?

WSU – Tom  
Power/Preventi  
on Science and  
PYD Meghan  
McDonough  
and Anne Cox

Seattle  
University BA  
Sociology – ran  
XC met life  
partner

What were critical  
experiences you had  
early in your career?

Purdue University  
MS/PhD  
Kinesiology (sport  
& exercise  
psychology) –  
academic family  
– Anne Cox

2 years work  
experience –  
introduced to  
Alan Smith

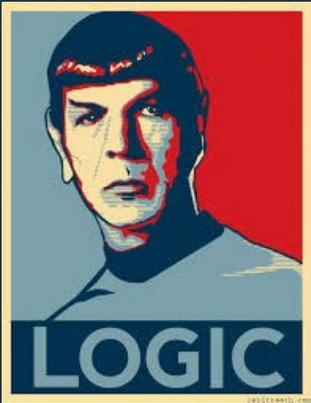
# The momentum

- There are physical, emotional, and social benefits to physical activity
- Despite known benefits, the majority do not engage in regular physical activity
- There are 2 waves that I have ridden and tried to surf (and sometimes have crashed out on) to tackle this problem

# 2 waves of questioning

- **What fosters positive physical activity experiences that lead to long-term commitment to healthy behaviors?**
  - How social relationships (parents, teachers, peers) support or undermine beliefs and autonomous motivation to move?
  - Exercise experience manipulations – learn about how we can create an experience that is positive, pleasant, and satisfying
  - How are mindful movement experienced? Can we foster mindful movement to promote intrinsic motivation?
- **How can physical activity experiences promote physical, social, and emotional well-being?**
  - Positive Youth Development – how can we best teach life skills through physical activity
  - How can we foster positive movement experiences for sustainable wellbeing

# Shifting Paradigm in Exercise psychology: role of affect



Explicit	Implicit
Motivation Regulations (reasons)	Affect/Pleasure
Goals	Unconscious associations (biases)



Dual Mode Theory (e.g., Brand & [Ekkakakis](#), 2018)

- distinguish explicit (cognitive) and implicit (affective) processes

Implicit processes take over our rational, logical goals under certain circumstances

- When you are tired, stressed, have a lot on your mind – SO MOST OF THE TIME!

How can we capitalize on this understanding?

- **Focus on what makes exercise experiences pleasant and enjoyable**

# What does exercise feel like???



WHY DOES EXERCISE ALWAYS FEEL SO HARD???

If it doesn't challenge you, it doesn't change you.



## INTEROCEPTION

THE EIGHTH SENSE: KNOWING WHAT IS GOING ON INSIDE YOUR BODY

Evidence suggests poor interoception awareness can lead to difficulties with emotional regulation

Overeating or forgetting to eat, not feeling thirsty or feeling thirsty too frequently

Not feeling the urge to urinate or feeling an intense urge to urinate frequently

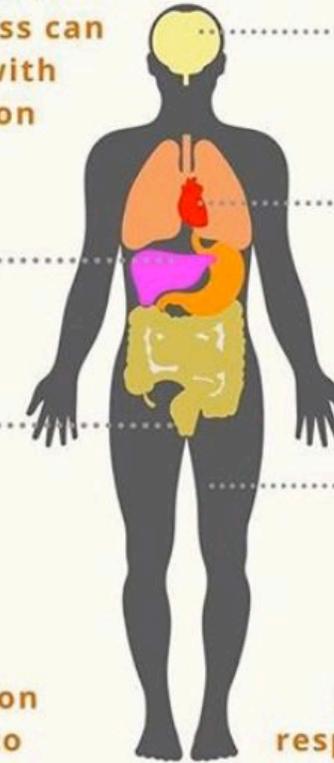
Disrupted interoception awareness can lead to autistic meltdowns

Inability to recognize signs of getting tired or fatigue

Not noticing increased heart or breathing rate or noticing it to the point it becomes distracting or overwhelming

Unusually high tolerance or sensitivity to pain, may not notice if cold or overheated

A person can be over-responsive to one particular internal signal and under-responsive to another



The problem: Our explicit goals/thoughts don't always align with our experience

# Affect, Physical activity motivation, and Mindfulness

- Positive affective experiences are associated with continued exercise behavior over time (Rhodes & Kates, 2015)
- Mindfulness is also associated with positive affective responses in a variety of life contexts (Keng & Tong, 2016)
- **Mindfulness movement experiences support explicit and implicit positive experiences (e.g., need satisfaction and positive affect)**
  - Movement (P3) and mindfulness (N2) support different positive brain functioning pathways- imagine what they support together (stay tuned we are testing that also)!



# Maybe paying attention to exercise is supportive of affective experience as well as cognitive motivational processes!

Mindfulness appears to be similar to music / podcast in affective experience during, remembered, and anticipated in the future!

BUT Wait – we talked to participants and at higher intensities – 30% did not enjoy being mindful

We have more work to understand how to introduce mindfulness and who it can be useful for



# Other ways we study mindful movement

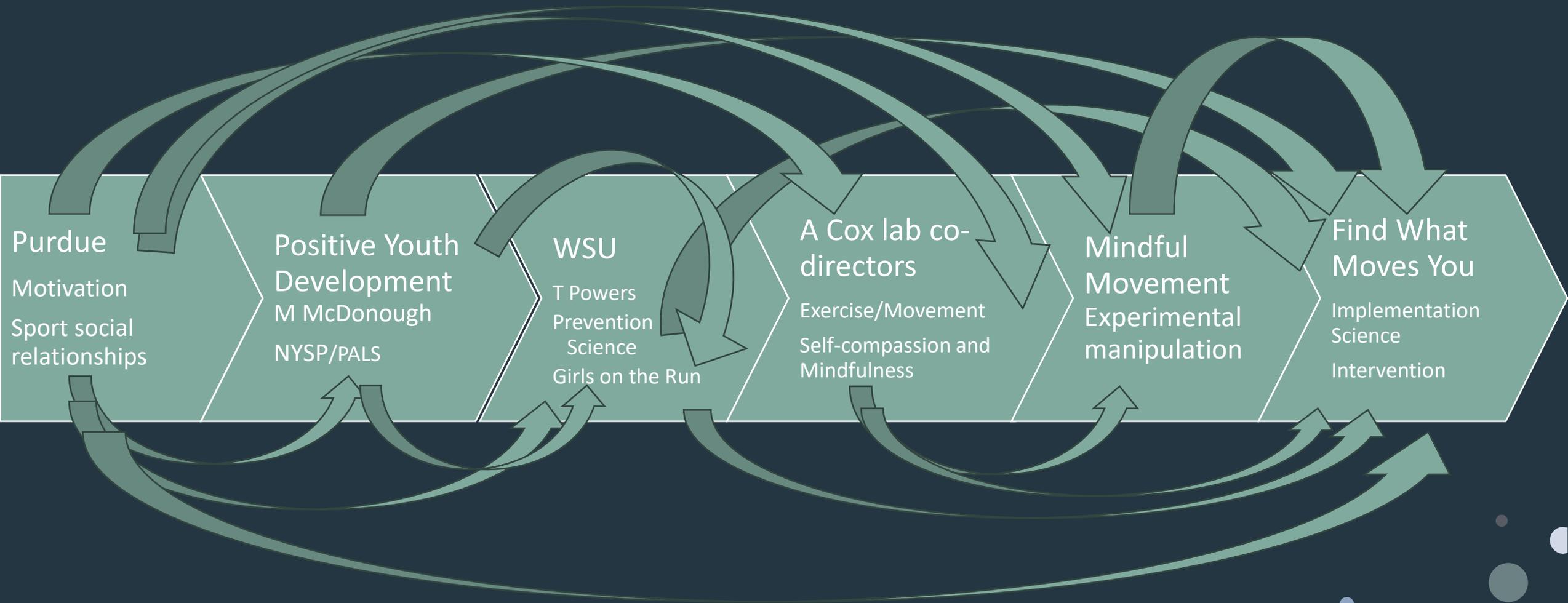
- Following yoga participants over time to explore motivation
- Tested a high school yoga curriculum
- Body image, self-compassion, and mindfulness explored through survey research and longitudinal studies
- Manipulating yoga instructional language
- Middle school Positive embodiment and mindfulness intervention



# Key conclusions

- Motivation is more affective than cognitive
  - The experience is more predictive than goals
  - Motivation that is internalized will lead to sustained behavior
  - Mindful movement can help the internalization process harnessing power of mindfulness and movement
    - But we need to know how to introduce this to those who are reluctant
- Social context has to be intentionally fostered
  - Using implementation science to design interventions that includes stakeholder input is vital to the external validity and sustainability of an intervention
  - Relationships need to be nurtured and fostered

# Currents in my research journey



# Consider several questions

- What are the currents (threads) through your trajectory? – these might reflect your core values & motives and represent your impact and *contribution*
- What are the opportunities you took a chance on? – these may have required taking a chance – growth requires challenge
- What supporters helped you along the way?

Share your current and how it guided you

Stay connected to your core current – but don't be afraid to also ride a new current

# Grant Experiences

- Unsuccessful grants
  - New area of research
  - Misfit with a funding agency/call or reviewers
  - Inadequate resources
  - Inadequate TEAM – someone with grant experience is key
  - Need stakeholder input – how does your work translate to stakeholders?
- Successful grants
  - Strong rationale aligned with funding opportunity
  - Good preliminary data
  - TEAM that has all the necessary skills and expertise
    - Especially if the team has a record of working together
    - Work with other people first – to determine if it is a productive working relationship

Examples of keys to successful grants?  
(OR things that undermine)

## Example 1: NIHR21 NICHD

### *Supporting high-intensity interval training with mindfulness for enhancing childhood executive function*

- Collaboration with Purdue University

- Bringing a team together with the necessary expertise was the impetus
- Being known in the area of mindfulness and exercise was the reason for reaching out
  - A marker of impact is when you are known for an area of expertise (e.g., asked to review, write chapter, collaborate on grants or projects)
  - Don't be afraid to reach out to experts and ask for advice or invite to collaborate!
- We began collaborating on a research study, because this was a good partnership we were able to present and publish together which demonstrates a good working relationship
- THEN, we hit on an R21 grant

currents:  
Youth mindful movement  
Interventions to help youth

# Example 2: NIHR34 NCCIH (Submitted Feb 20)

- *Evaluating Feasibility of ‘Find What Moves You’: A Novel Mind-Body Intervention for Middle School Girls*
  - Anne Cox’s brainchild born during COVID that has been nurturing and a TEAM of committed faculty, students, and community partners – we both seek to build community in young girls but have done so in our own sense of community and connection
  - Past NIH efforts have not been successful – in part due to early stage of this work
  - We now have a strong base in mind and body (mindfulness) work
  - We have a strong history of research with adolescents and work in schools and in after-school programs
  - We have a strongly conceptualized intervention that has been thoroughly and rigorously developed aligned with implementation science frameworks
  - ***We have developed community partnerships, done pilot testing, and have identified a strong interest from schools and community prevention specialists – VERY IMPORTANT!***
- Met with the PO last fall and one of the things we learned in this conversation (that was NOT on the funding announcement) was that we MUST have someone with clinical trial experience and it should be from NIH funded work
  - Despite all that was established, we needed this specific person
  - Through reaching out and seeking connections, we found that person in – Eka Burduli

# Reflections

- People are the most valuable resource
- Personal connection and communication will reduce conflict, anxiety, and lack of progress (and vice versa – lack of respect, value, and transparency will tank a project)
- Starting out or new to an area of research – reach out to experts, seek connection, and knock on doors
- Cultivate relationships and community to find deeper meaning AND create more successful work

# Thank you to all my collaborators!!!

## **Anne Cox**

Sara Thompson

Maryam

Nourollahimoghadam

Amanda

McMahon

Kent Kowalski

Karin Hägglund

Ariel Cruz

Chris Connolly

McKenna Zanelli

Reese Small

Corlyn Estelle

Allie Dluzniewski

CJ Brush

Russ Baker

Shih-Chun Kao

Rida Khatri

Noah Baumgartner

Kyoungmin Noh

Sara Schmitt

Chung-Hao Wang

Joseph Clavenna

Chris Huong

Thao Vo

Jiao Liu

Maria Hildago

Montesinos

Juan González

Hernández

Christine Cook-

Cottone

Diane Neumark-  
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Elaine Hargreaves

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Abbigail

Culver/Ulofoshio

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Bruce Austin

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Joy Egbert

Youlia Ardasheva

Xio Zhang

Tracy Tylka

David Leonard

Cheryl Stuntz

Kristy Mellano

Ken Daratha

Ruth Bindler

Michael Steele

Jeff Madonia

Kristine Witty

Allison Riley

Brian French

Robert Fetsh

Meghan

McDonough

Alan Smith

notice the good and then share the good – let people know you appreciate them

# Share your experiences

- What ways have relationships, connections, or teams facilitated or were barriers for you?
- What suggestions/advice do you have for building these communities?
- What suggestions/advice do you have for fostering/maintaining these communities?

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