Accelerating the reach of youth mental health innovations through implementation science

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The Baker Center for Children and Families
Harvard Medical School
4/9/24

SAMHSA
Substance Abuse and Mental Health Services Administration

Mountain Plains (HHS Region 8)
MHTTC Mental Health Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration

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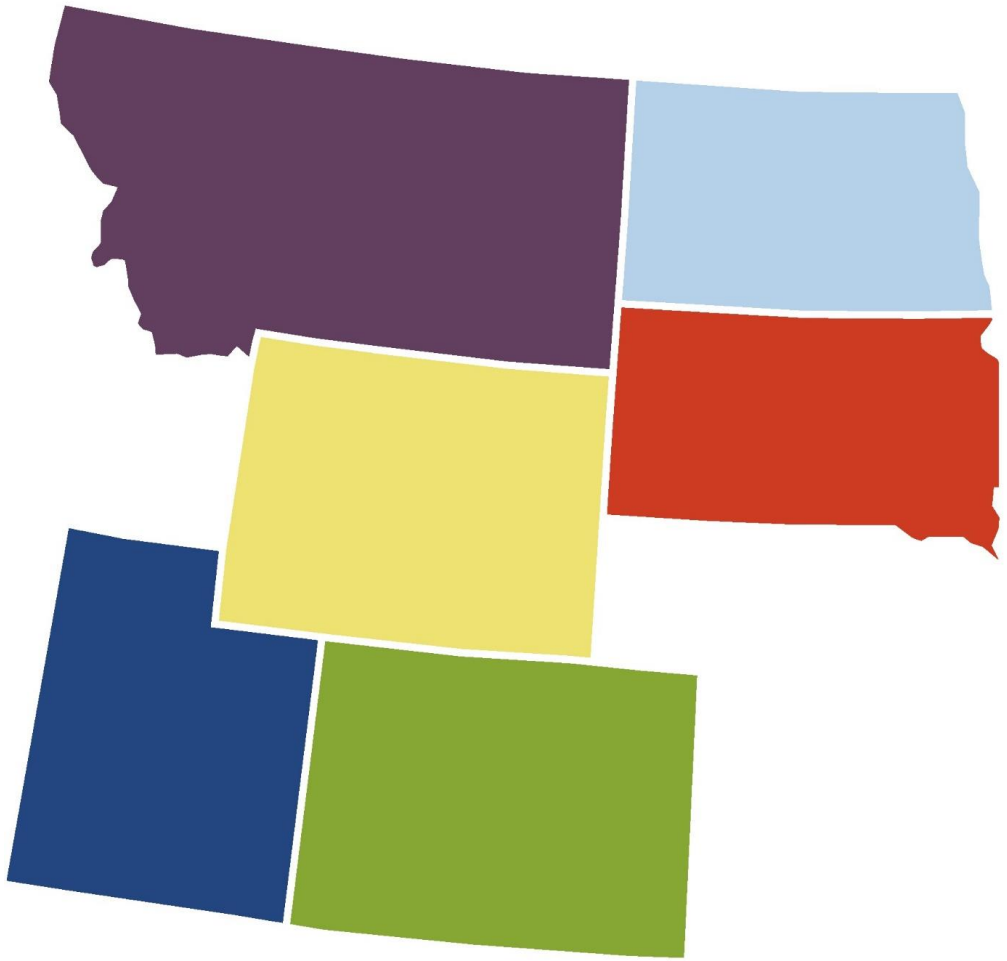
The Mountain Plains Mental Health Technology Transfer Center

The Mountain Plains Mental Health Technology Transfer Center (Mountain Plains MHTTC) provides training and technical assistance to individuals who serve persons with mental health concerns throughout Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming).

We belong to the Technology Transfer Center (TTC) Network, a national network of training and technical assistance centers serving the needs of mental health, substance use and prevention providers. The work of the TTC Network is under a cooperative agreement by the Substance Abuse and Mental Health Service Administration (SAMHSA).



Land Acknowledgement Statement

Today, the University of North Dakota rests on the ancestral lands of the Pembina and Red Lake Bands of Ojibwe and the Dakota Oyate - presently existing as composite parts of the Red Lake, Turtle Mountain, White Earth Bands, and the Dakota Tribes of Minnesota and North Dakota. We acknowledge the people who resided here for generations and recognize that the spirit of the Ojibwe and Oyate people permeates this land. As a university community, we will continue to build upon our relations with the First Nations of the State of North Dakota - the Mandan, Hidatsa, and Arikara Nation, Sisseton-Wahpeton Oyate Nation, Spirit Lake Nation, Standing Rock Sioux Tribe, and Turtle Mountain Band of Chippewa Indians.

The MHTTC Network uses affirming, respectful and recovery-oriented language in all activities. That language is:

- Strengths-based and hopeful
- Inclusive and accepting of diverse cultures, genders, perspectives, and experiences
- Healing-centered and trauma-responsive
- Inviting to individuals participating in their own journeys
- Person-first and free of labels
- Non-judgmental and avoiding assumptions
- Respectful, clear and understandable
- Consistent with our actions, policies, and products

Adapted from: https://mhcc.org.au/wp-content/uploads/2019/08/Recovery-Oriented-Language-Guide_2019ed_v1_20190809-Web.pdf

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Agenda

- Introductions
- What is dissemination and implementation science?
- Case examples:
  - Body Justice Project
  - Hoʻouna Pono
- Take home points

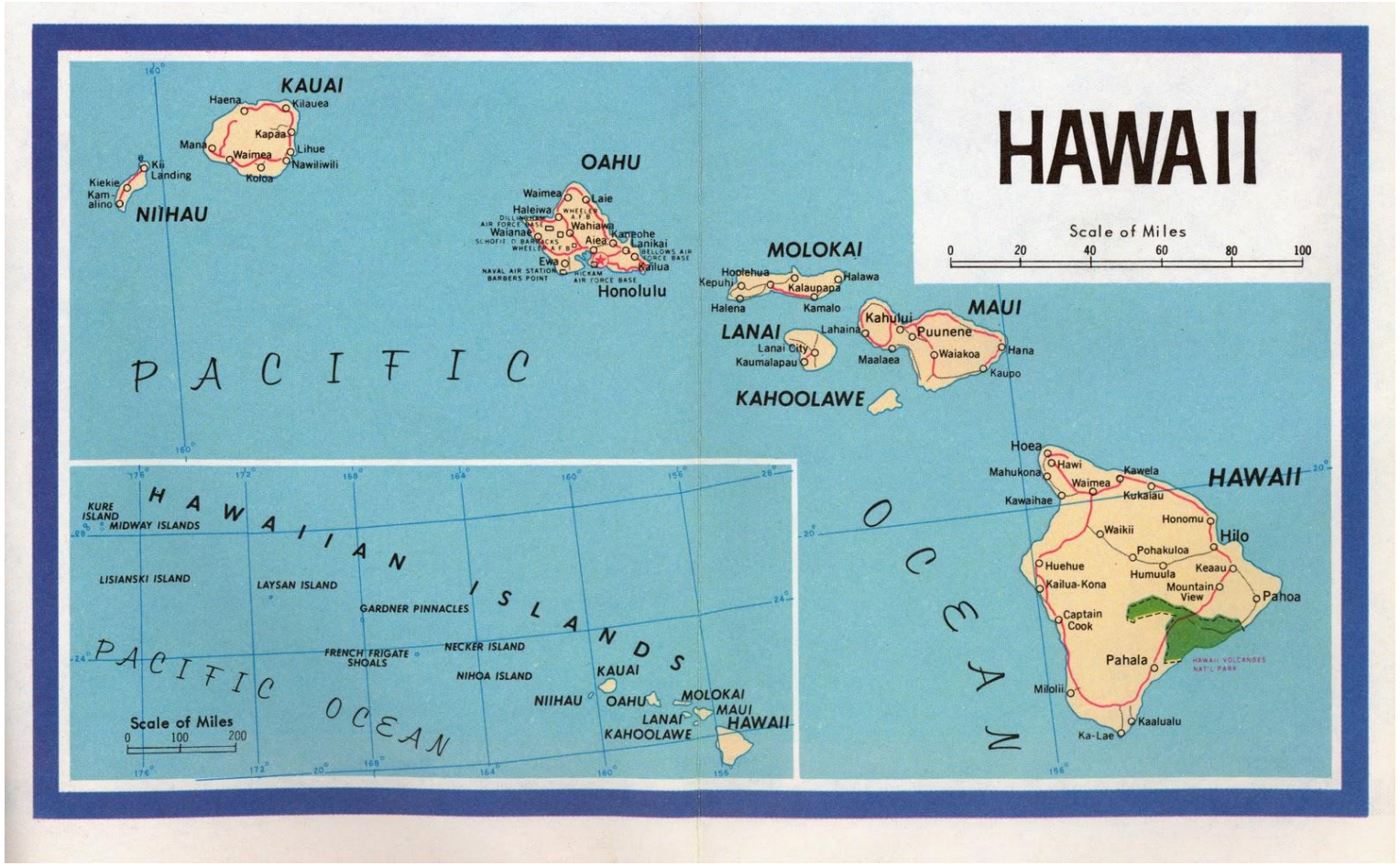
Objectives

- Define implementation science, applied implementation, and implementation research
- Understand theories, frameworks, and models that comprise implementation research
- Learn from practical school-based implementation efforts for youth mental health
- Commit to one action that aligns with implementation science principles

Introductions!

Use the chat function

- Your name
- Your role
- Where you're located



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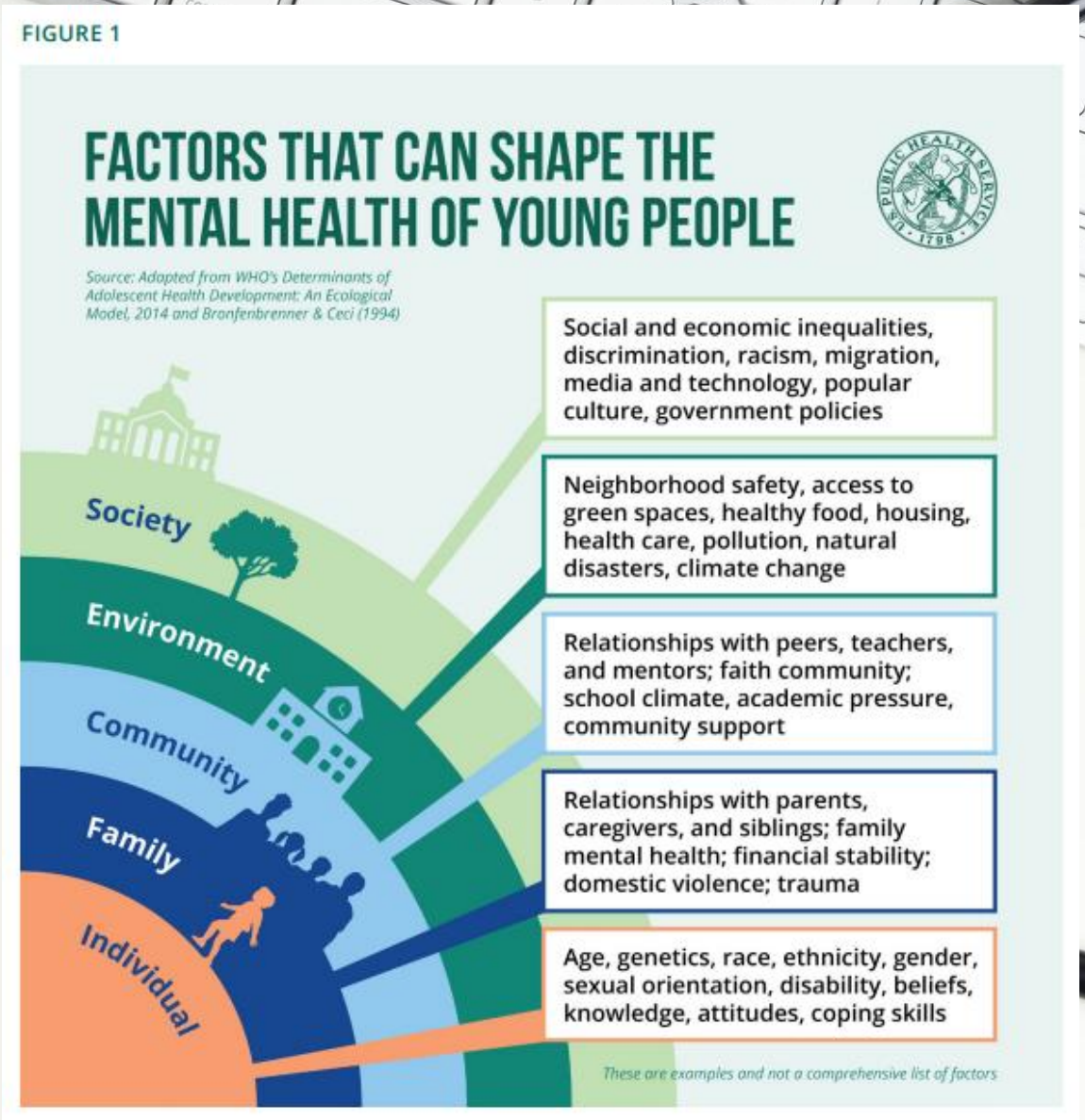
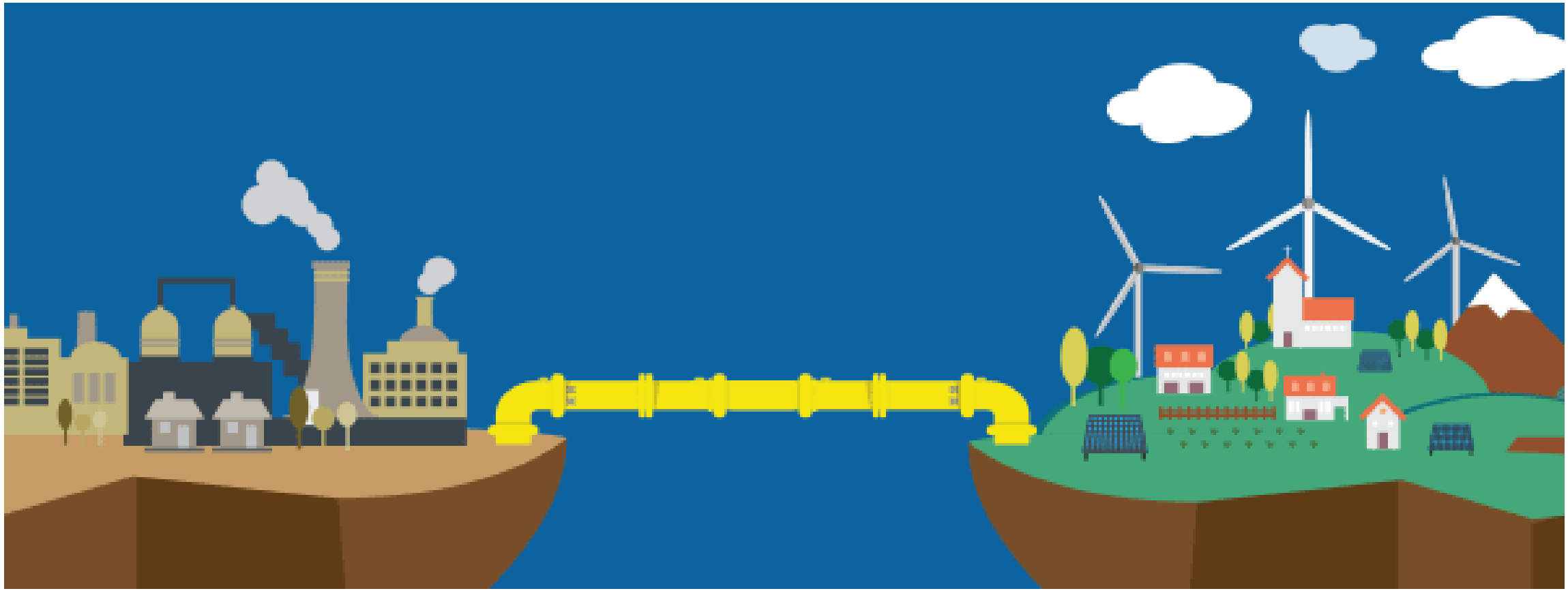
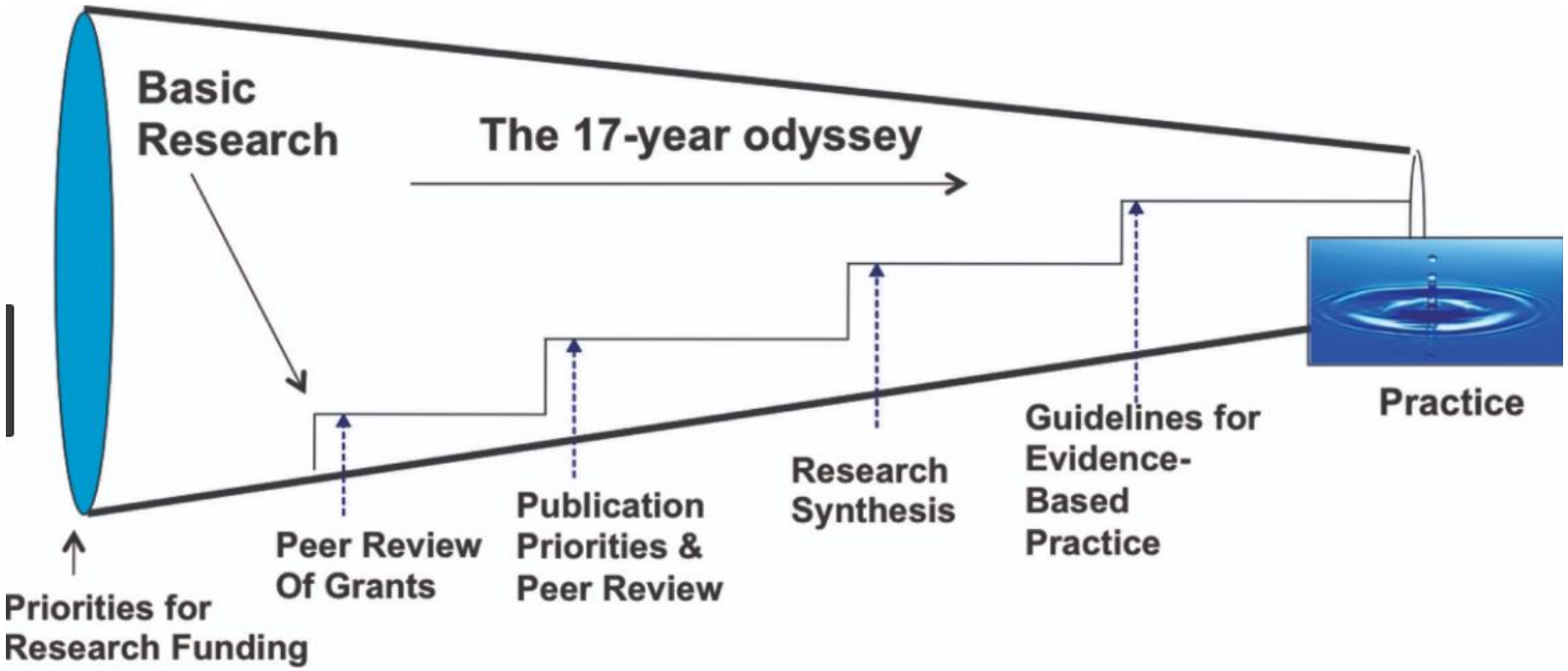
Public health problem

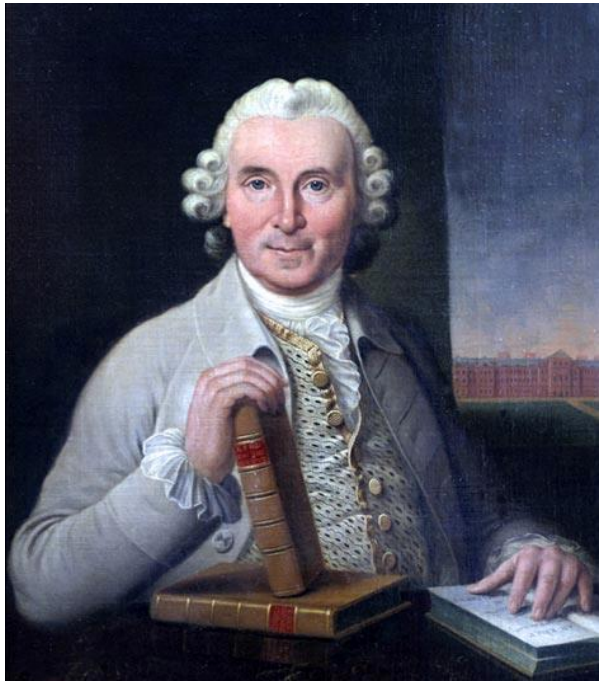
- 1 in 5 youth will suffer from a mental health concern by age 18
- Receive none or little care that is not informed by evidence
- Treatment efficacy research continues to grow
- COVID-19 and other societal pressures have heightened mental health need



Merikangas et al., 2010; Office of the Surgeon General, 2022







Research to Practice Gap

- 1747 James Lind conducts first clinical trial
- 1794 implemented

- 47-year gap!

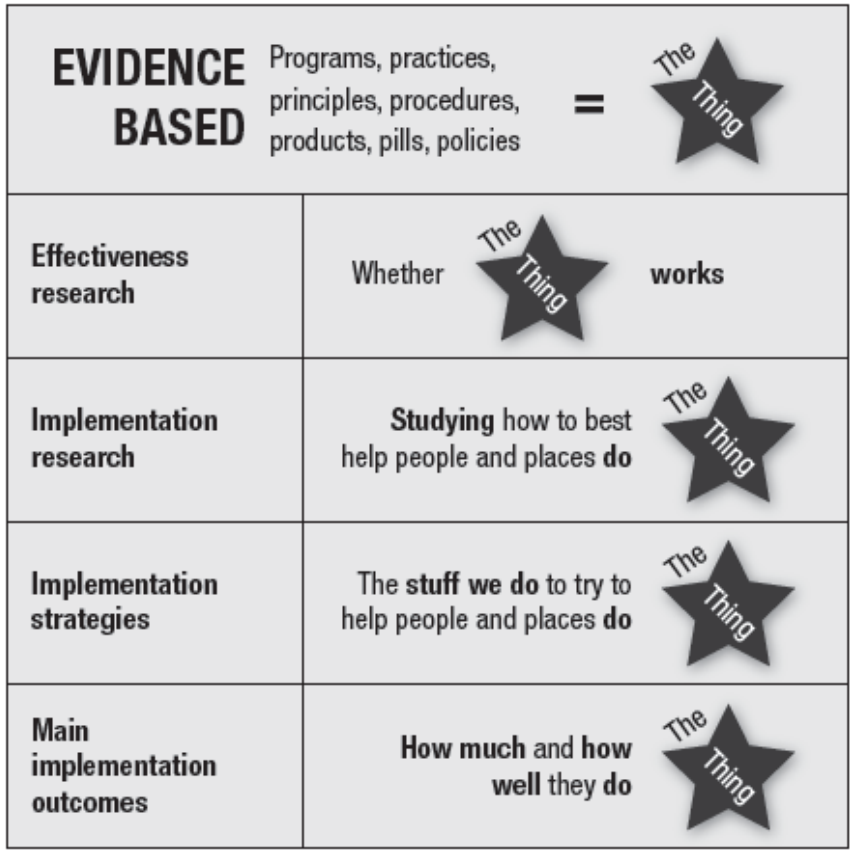


FIGURE 1.2 The basics of implementation science.
Source: Adapted from Curran, G. M. (2020). Implementation science made too simple: A teaching tool. *Implementation Science Communications, 1*, 27. https://doi.org/10.1186/s43058-020-00001-z. Courtesy of BioMed Central.

Definitions

Dissemination = the targeted distribution of information and intervention materials to a specific public health or clinical practice audience

Implementation = purposeful actions taken to put an innovation into practice or into use

Implementation science = the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services

Implementation research = the scientific study of the use of strategies to adopt and integrate evidence-based innovations into clinical and community settings to improve individual outcomes and benefit population health

Eccles & Mittman, 2006; Glasgow et al., 2012; NIH, 2021; Weiner, Lewis, Sherr, 2022

Implementation science

Theories, Frameworks, Models

Outcomes

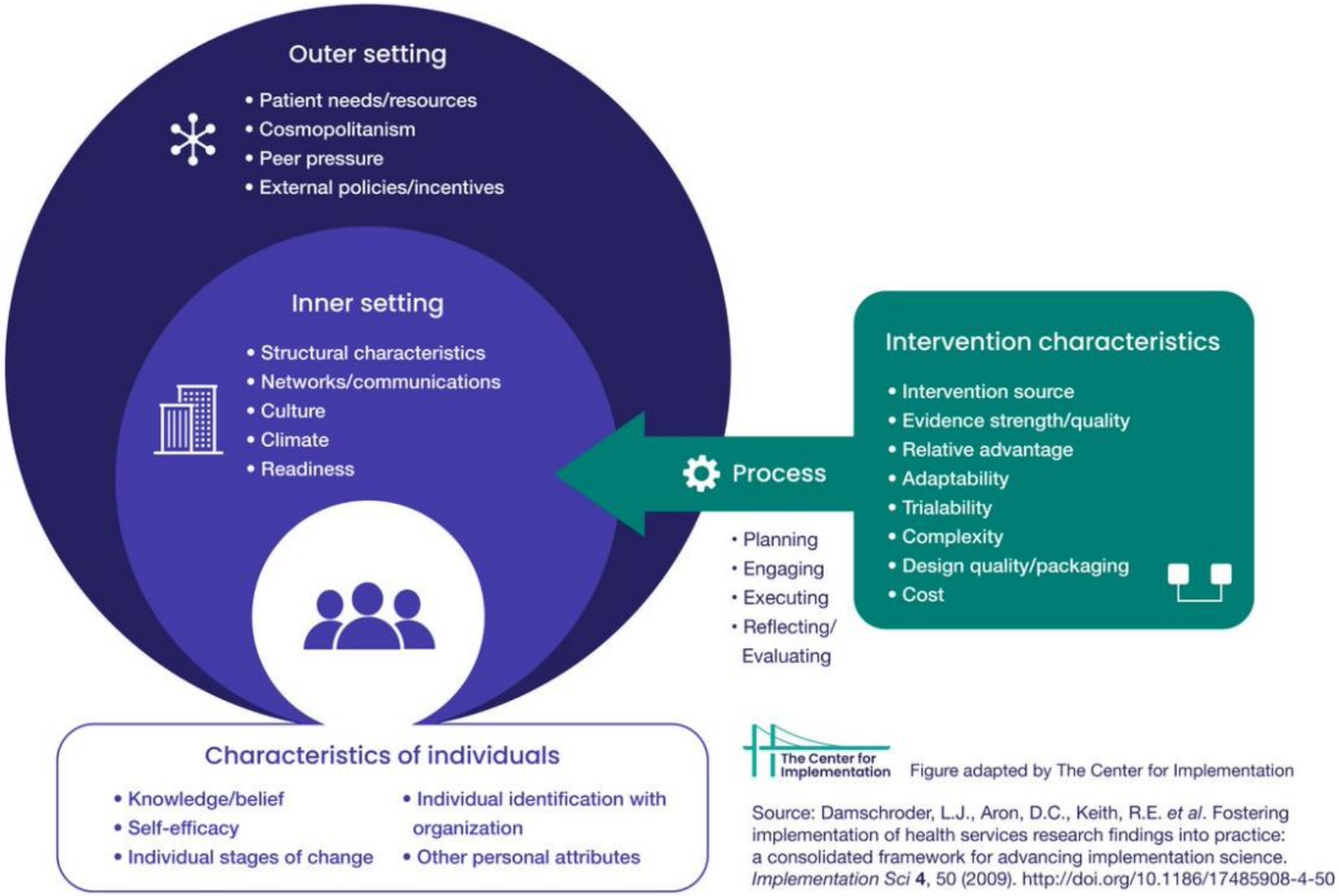
Measures

Adaptations

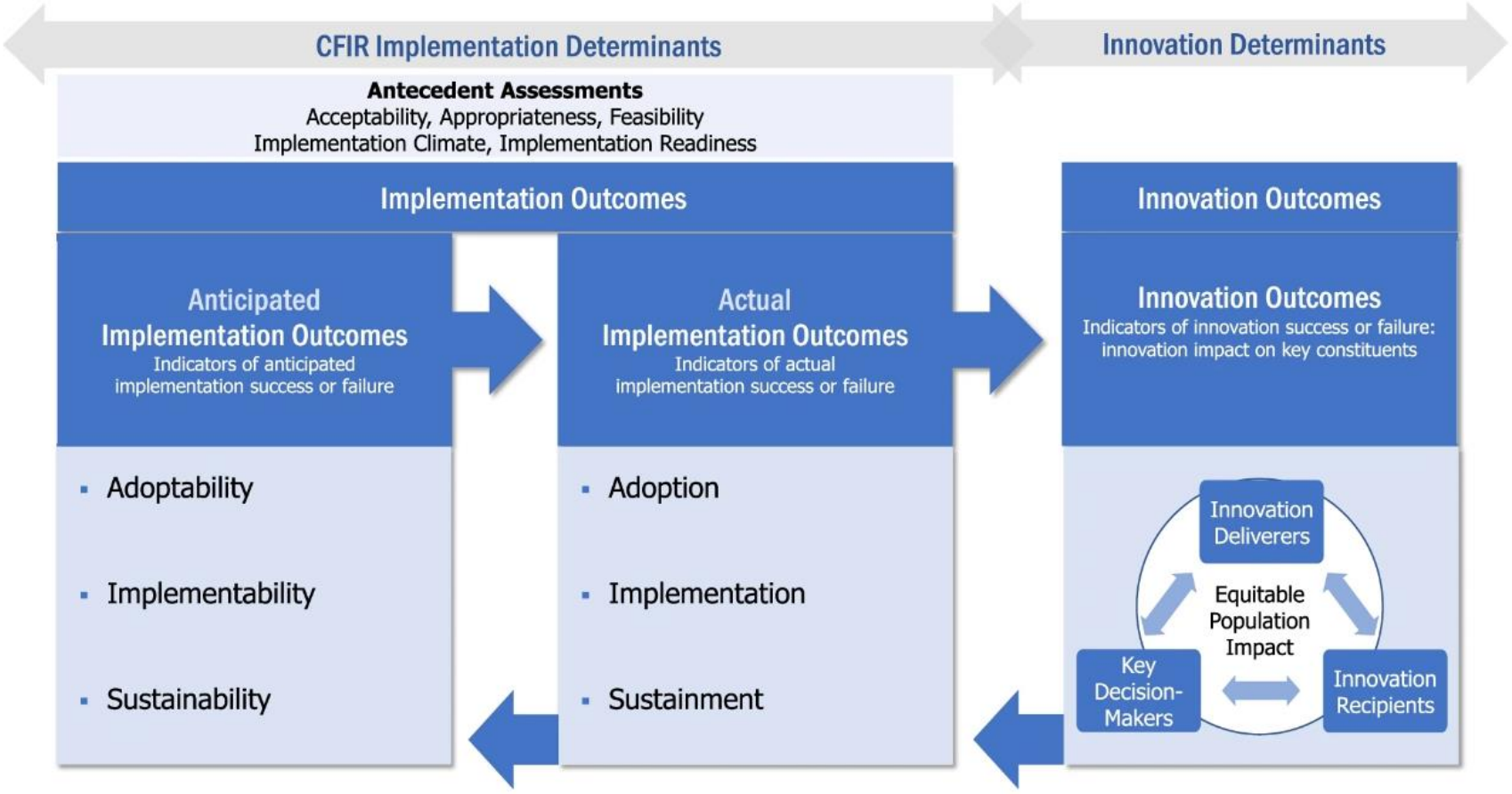
Mechanisms & Strategies

Research design

Theories, frameworks, & models



Outcomes



Damschroder, L.J., Reardon, C.M., Opra Widerquist, M.A. *et al.* Conceptualizing outcomes for use with the Consolidated Framework for Implementation Research (CFIR): the CFIR Outcomes Addendum. *Implementation Sci* **17**, 7 (2022). https://doi.org/10.1186/

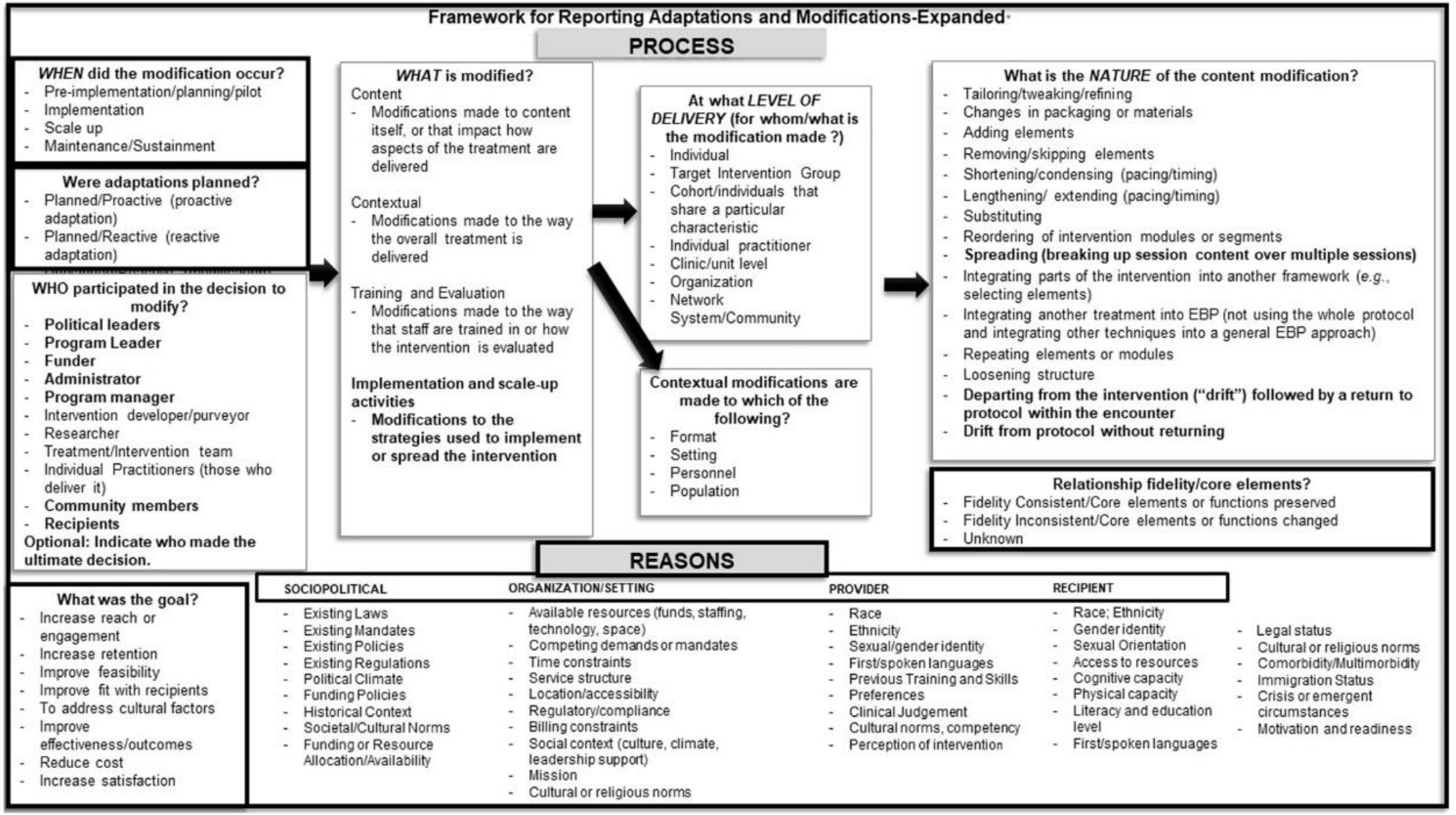
Acceptability of Intervention Measure (AIM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. (INSERT INTERVENTION) meets my approval.	①	②	③	④	⑤
2. (INSERT INTERVENTION) is appealing to me.	①	②	③	④	⑤
3. I like (INSERT INTERVENTION).	①	②	③	④	⑤
4. I welcome (INSERT INTERVENTION).	①	②	③	④	⑤

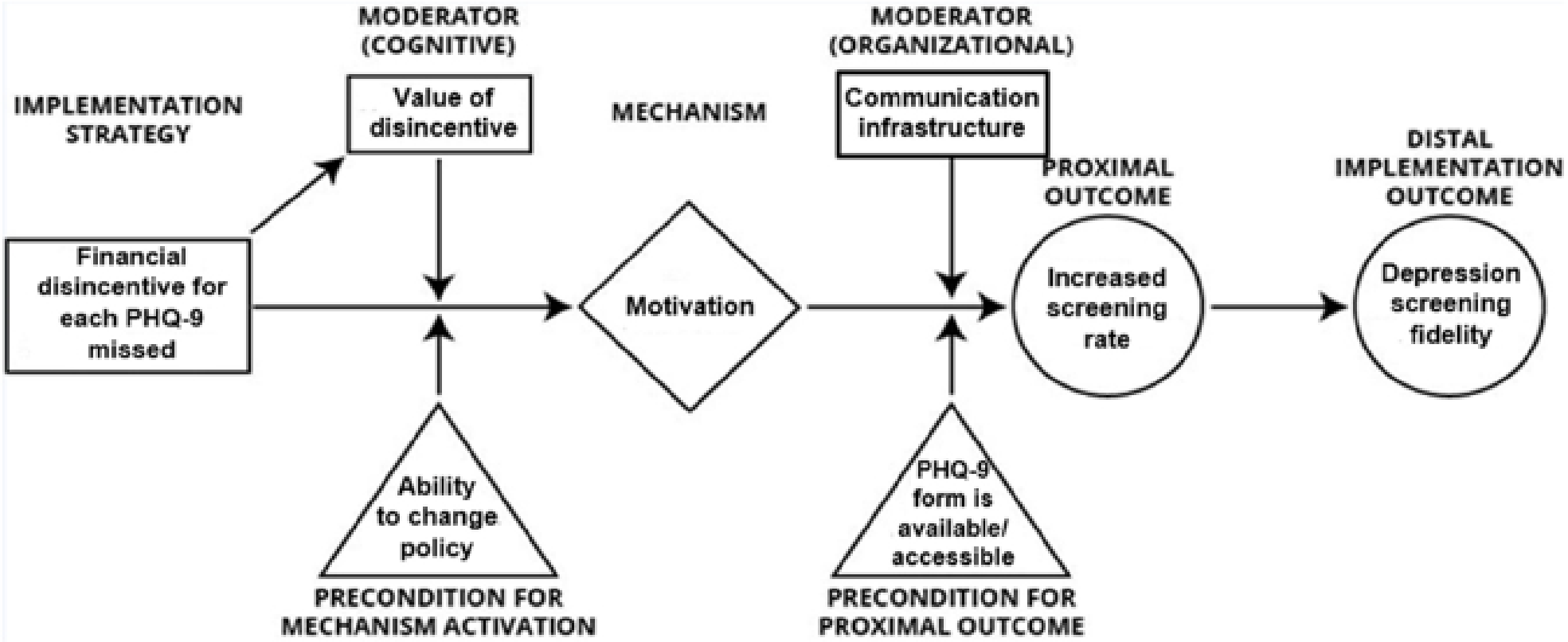
Measures

Weiner, B. J., Lewis, C. C., Stanick, C., Powell, B. J., Dorsey, C. N., Clary, A. S., ... & Halko, H. (2017). Psychometric assessment of three newly developed implementation outcome measures. Implementation Science, 12(1), 108.

Adaptation



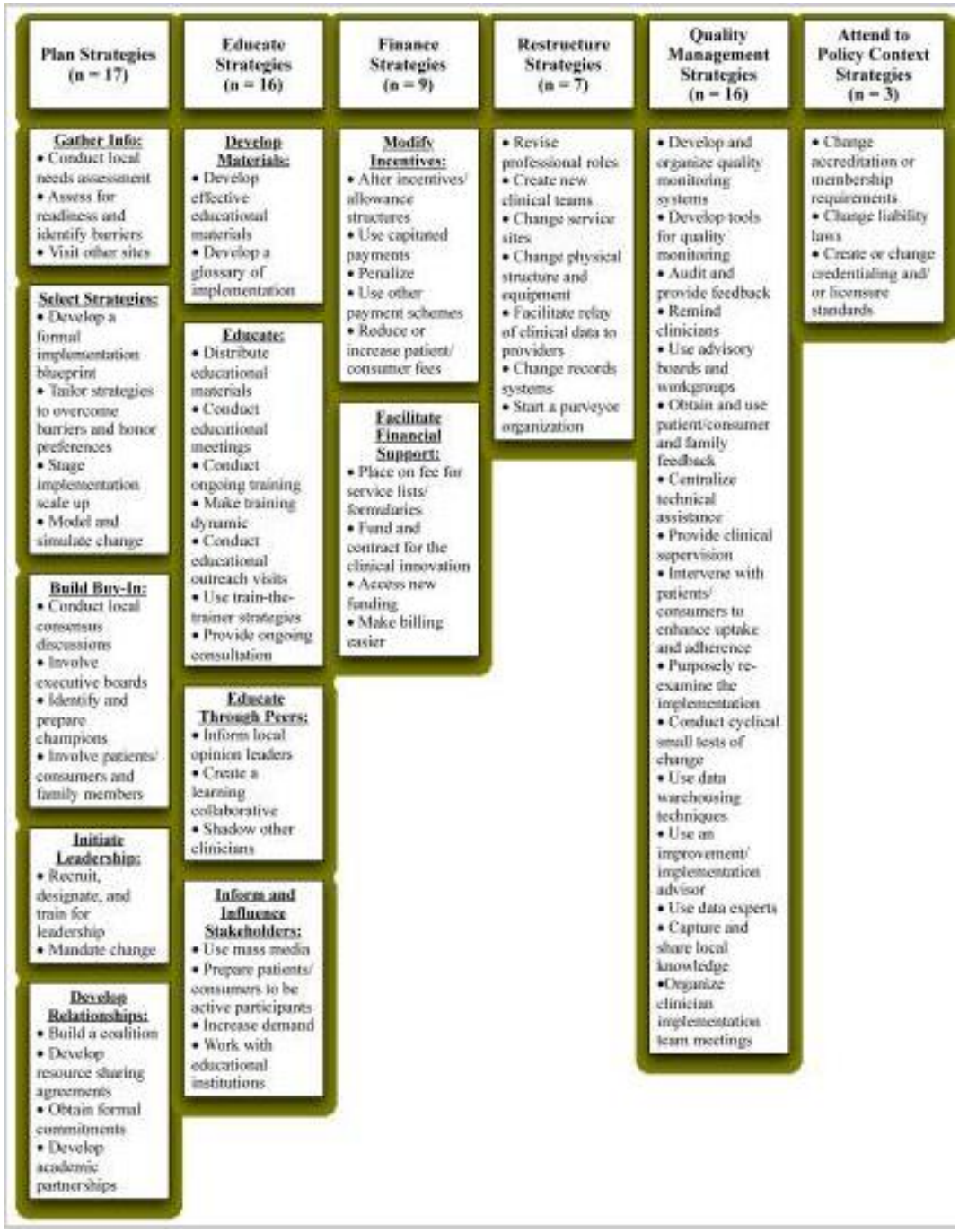
Wiltsey Stirman, S., Baumann, A.A. & Miller, C.J. The FRAME: an expanded framework for reporting adaptations and modifications to evidence-based interventions. *Implementation Sci* **14**, 58 (2019). https://doi.org/10.1186/s13012-019-0898-y



Mechanisms & Strategies

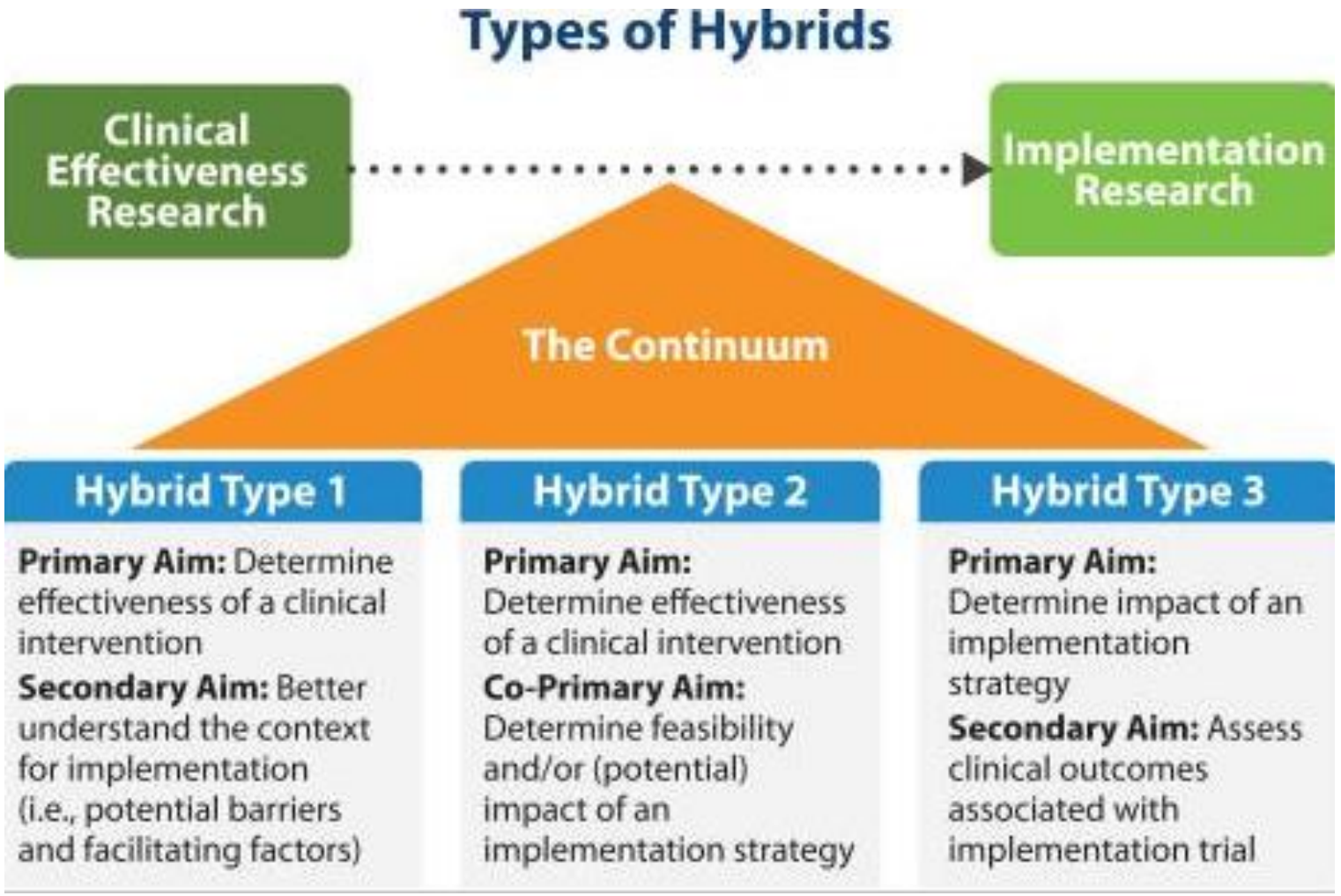
Lewis, Cara C., et al. "From classification to causality: advancing understanding of mechanisms of change in implementation science." Frontiers in public health 6 (2018): 136.

Mechanisms & Strategies



Powell, Byron J et al. "A compilation of strategies for implementing clinical innovations in health and mental health." Medical care research and review : MCRR vol. 69,2 (2012): 123-57. doi:10.1177/1077558711430690

Research Design



Curran, Geoffrey M et al. "Effectiveness-implementation hybrid designs: combining elements of clinical effectiveness and implementation research to enhance public health impact." Medical care vol. 50,3 (2012): 217-26. doi:10.1097/MLR.0b013e3182408812

Think about it...

If you were implementing a program in schools, **who** would you want to hear from?

THE BODY JUSTICE PROJECT

Co-creating and implementing a social justice-focused body image program for middle schoolers

WWU

CENTER FOR CROSS-CULTURAL RESEARCH
at Western Washington University

Background

- Research gaps in early adolescent ED prevention programs and co-designed interventions
  - Meta-analysis of body image interventions identified 101 randomized controlled trials across all ages (Le et al., 2017).
  - Meta-analysis of universal body image interventions *among children ages 5-17* identified 24 controlled studies (Chua et al., 2020)

- EVERYbody Project (Ciao et al., 2017; 2021)
  - Dissonance-based, diversity-focused body image program with active exercises and structured discussions to challenge the belief that healthy, attractive, and worthy bodies have one particular look, shape, or size
  - Address internalization of these cultural messages as a sociocultural risk factor for developing eating disorders and mood disturbance
  - Critically address how appearance and diet culture reflect other systems of oppression

Body Justice Project Phases

Curriculum development (co-design)

EATING DISORDERS
https://doi.org/10.1080/10640266.2024.2328402

Routledge
Taylor & Francis Group

Check for updates

Developing a justice-focused body image program for U.S. middle schoolers: a school-based community-engaged research process

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[a]Department of Psychology, Western Washington University, Bellingham, USA; [b]The Baker Center for Children and Families, Harvard Medical School, Boston, USA; [c]Shuksan Middle School, Bellingham, USA

ABSTRACT

We describe a community-engaged research process to co-create and implement an evidence-informed, diversity-focused body image program for early adolescents. Our team included middle school staff, students, and teachers, and university faculty and students. Team members had a diverse range of intersecting cis- and transgender, racial, sexuality, and disability identities. Specific steps to the research process included: (1) establishing team leads at each site to maintain a collaborative and non-hierarchical team structure; (2) bi-weekly advisory team meetings to establish program needs and discuss curriculum and implementation options; (3) a year-long youth co-design process to generate content ideas, pilot pieces of programming, and incorporate youth leadership through an equity lens; (4) inclusive program writing from members of socially marginalized groups; (5) program piloting to solicit feedback from teachers, facilitators, and students; and (6) collaboratively incorporating feedback. The resulting 8-session (6 hours total) *Body Justice Project* has both dissonance-based and media literacy foundations, with topics related to cultural appearance ideals, diet culture and non-diet nutrition, media and appearance pressure, and body autonomy. It is designed for in-class delivery to middle school students by trained college and youth co-facilitator teams. We emphasize guiding principles and lessons learned, along with next steps in implementation.

COMMUNITY-ENGAGED DEVELOPMENT PROCESS

Co-development of Shuksan Body Justice Project based on community-based participatory methods for involving youth in health-related program development (Cahill & Dadvand, 2018):

Youth advisory team:

- 17 students total
- Four 6th graders, six 7th graders, seven 8th graders
- 6 non-binary, 9 female, and 2 male students

Staff advisory team:

- 7 staff total
- Assistant principal, two school counselors, three before- and after-school program staff, Communities in Schools site coordinator

Keys to collaboration:

- Relationship building/collaborative goal-setting
- Prioritizing community voices and needs
- Establishing team leads for both sites
- Student-focused and administrative members of adult advisory team
- **Youth teams/co-design**

Pilot implementation and evaluation

Curriculum re-vamp

Project Pilot

- May 2022: Program piloted with one 6th grade class, two 7th grade classes, and one 8th grade class
- Collected mid- and post-program feedback from students, teachers, and facilitators
- Program manual and activities were modified throughout Summer 2022
  - Integrated feedback from pilot (students & teachers; WWU leaders)
  - Maintained main topics of the curriculum but edited activities for more group discussion and sharing
  - Shifted focus to 7th and 8th graders
- Developed a more concrete assessment process to reflect updated topics and desired outcomes
- Fall 2022: WWU-Shuksan Advisory Team reconvened to discuss updates to program and plan for implementation in 22-23 academic year

Table 1. Body Justice Project Curriculum Outline

	Part 1 (45 minutes)	Part 2 (45 minutes)

Week 1: Cultural Appearance Ideals	• Group Norms Activity (10 min)
	• Defining Cultural Appearance Ideals (20 min)
	  ○ Feminine Ideal Activity
	  ○ Masculine Ideal Activity
	  ○ Inclusivity of Ideals Introduction
		• Inclusivity of Ideals (15 min)
		  ○ Who is Left Out Activity
		  ○ Appearance Stereotypes Activity
		• The Healthy Ideal (15 min)
		  ○ Flexible Health Activity
		  ○ Body Compassion Introduction
		  ○ Fat and Disabled Bodies Introduction

Week 2: Health and Non-Diet Nutrition	• Health at Every Size Introduction (5 min)
	• Dieting vs. Intuitive Eating Introduction (5 min)
	• Practical Intuitive Eating (10 min)
	  ○ Hunger-fullness Scale Activity
	  ○ Intuitive eating strategies Activity
	• Health Myth Busting Activity (25 min)
		• Good and Bad Foods (15 min)
		  ○ Good or Bad Foods Activity
		  ○ Food is Fuel Activity
		• Favorite Food Memory Activity (20 min)

Week 3: Media and Appearance Pressure	• Mass Media and Body Image (15 min)
	  ○ Representation in Media Activity
	• Analyzing Ads Activity (25 min)
		• Social Media and Body Image (15 min)
		  ○ Positives of Social Media Activity
		  ○ Negatives of Social Media Activity
		• Creating Positive Spaces Activity (15 min)

Week 4: Body Autonomy	• Body Respect (20 min)
	  ○ Body Autonomy Introduction
	  ○ Body Respect and Care Activity
	• Body Boundaries Activity (15 min)
		• Respecting Other Bodies (10 min)
		  ○ Body Talk Activity
		• Sharing the Message Activity (30 min)

Note: each session began with an introduction (5 minutes) and ended with a wrap-up (5 minutes)

Program Structure and Content

- Prevention intervention for middle school students (7th and 8th grade)
- Dissonance-based activities (some from the EVERYbody Project, some new)
- Psychoeducation and media literacy
- Social-justice focused
- Reflects priorities and input from Shuksan team members

First research trial and evaluation

First Research Trial

Program ran from March 7th – March 31st, 2023

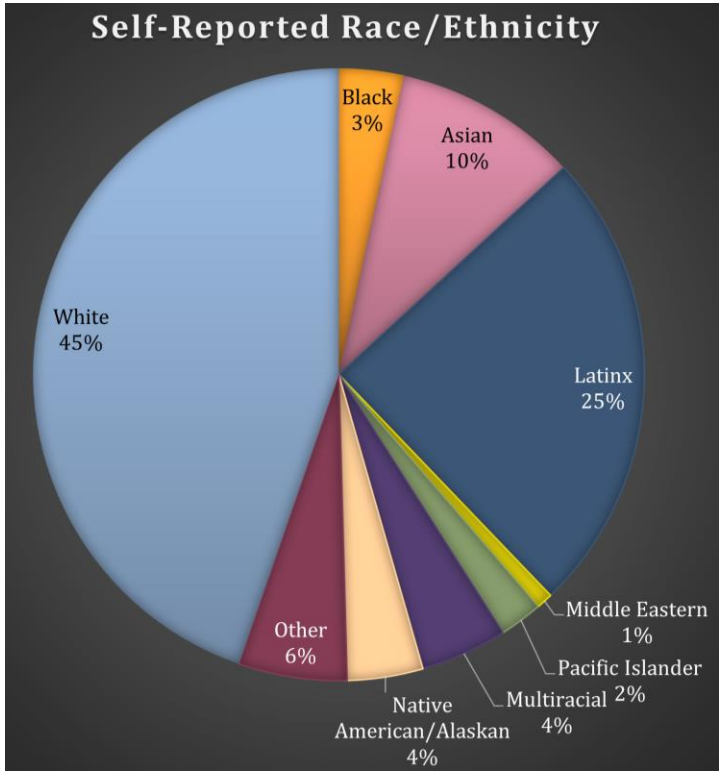
- Four out of ten 8th grade classes, nine out of eleven 7th grade classes
- Two lessons observed for each class by an independent rater **(facilitator adherence and competence)**

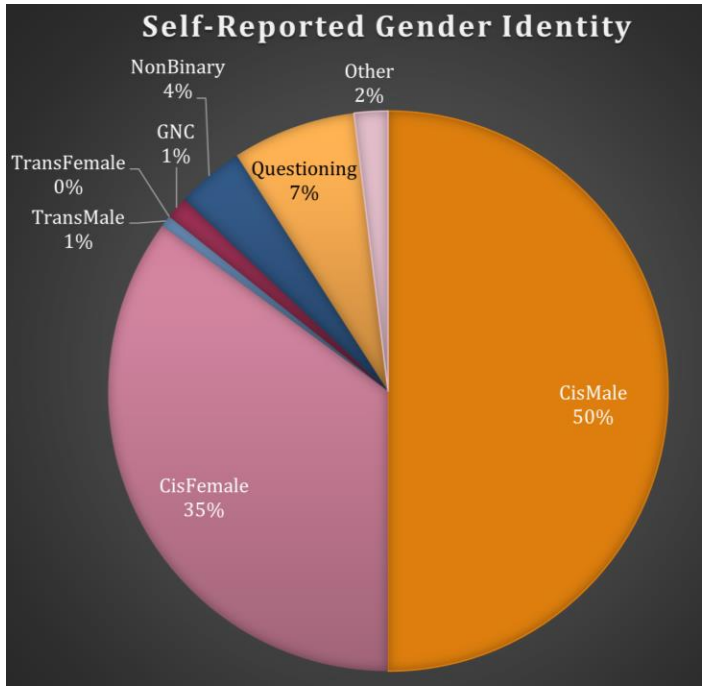
- Outcomes:
  - **Student and teacher perceptions of the program** evaluated post-curriculum
  - Body image, eating, and school climate outcomes assessed pre-curriculum, post-curriculum, and at two-month follow-up

Participants

Participants

- Within-participants evaluation of curriculum's impact over time
- 209 students total
  - Baseline surveys: N = 173
  - **Post-curriculum surveys (last day of program): n = 132 with baseline <u>and</u> post**
  - Follow-up surveys (2 months after end of program): n = 119 with baseline <u>and</u> follow up





Measures (Feasibility and Acceptability)

College facilitator competence (3 items)

- Overall impressions of the session in terms of curriculum delivery and student reception, leader organization and time management, and leader acceptance and respect
- 1-10 scale

Student perceptions (5 items)

- Students indicated whether they enjoyed the lessons, understood them, thought the activities were fun, thought their leaders did a good job, and would recommend the curriculum to a friend
- 1-5 scale where higher scores = greater satisfaction

Teacher perceptions (7 items)

- 8 of 12 teachers chose to provide feedback
- How much they enjoyed the curriculum, whether their students understood the content, whether the activities were engaging for their students, though the college leaders were respectful, thought the college leaders were effective, and whether they would recommend the curriculum and use it again.
- Based on typical satisfaction questions used in the team's other body image research, 1-5 scale where higher scores = greater satisfaction (e.g., Ciao et al., 2021).

Results

COLLEGE FACILITATOR ADHERENCE AND COMPETENCE

- Across both observations for each of the 11 different classes, 92% of curriculum content was covered (SD = 7.49%; range = 82%-100%).
- Competence ratings (out of 10) were above average for:
  - overall (M = 7.9, SD = 1.06),
  - organization (M = 7.7, SD = 1.06),
  - and respect (M = 8.5, SD = 1.02).

TEACHER PERCEPTIONS

- Teachers had a generally positive perception of the curriculum, with average ratings between 3.50 and 4.75 out of 5 across the seven feedback questions.
- Overall satisfaction was rated as 3.84 (SD = 0.54) out of 5.

Results

STUDENT PERCEPTIONS

- Across the five questions assessing satisfaction with the curriculum rated on the final day, student ratings were an average of 3.52 (SD = 0.77).
- Cisgender girls reported higher overall satisfaction with the curriculum (M=3.91, SD = 0.61) compared to cisgender boys (M=3.36, SD = 0.86), with scores of gender diverse students falling in the middle but not significantly different from cisgender boys or girls (M=3.73, SD = 0.73).
- Highest rated item:
  - “My leaders did a good job”
  - Average score of 4.14 out of 5 (SD=0.84).
- Lowest rated item:
  - “I enjoyed the lessons”
  - Average score of 3.20 out of 5 (SD=0.98).

Conclusions and Implications

College student facilitators

- Seen as competent, organized, and respected
- Liked by students
- Near-peer facilitation model is evidence-based (Becker et al., 2017) and feasible, given the research team's experience with leading this type of curriculum at the college level (Ciao et al., 2023)

Curriculum acceptability

- Teachers generally satisfied
- Student satisfaction of the curriculum was above average but not high

What are ways that students can be more involved in future iterations of the program? Would this increase overall student satisfaction in the curriculum?

- Youth-led participatory action research is an innovative and equity-focused solution, including power-sharing and engaging in a collaborative development process (Cahill & Dadvand, 2018; Sanchez et al., 2023)
- More youth involvement during first research trial than pilot but still room for improvement

Scaling up within the school

Scaling up within the district

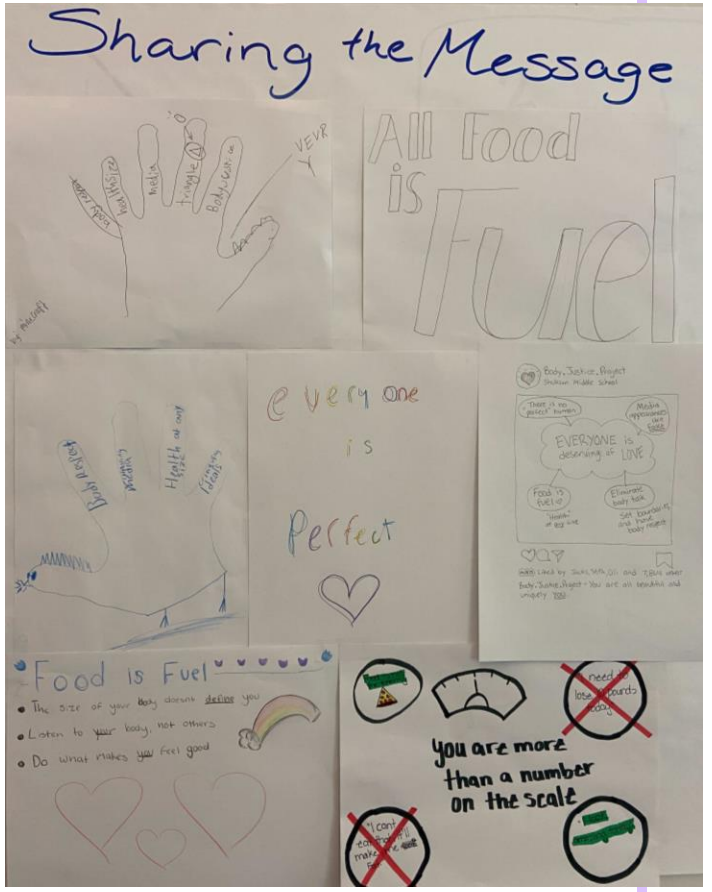
Future Directions

Moving towards sustainability in original school

- Spring 2024: wrapping up research trial with entire 7th grade, 8th graders as co-facilitators
- Research team providing ongoing implementation support
- Continue to rely on and strengthen this partnership

Implementing in other WA schools

- Work agreement with Communities in Schools of Washington
- Primary partner who will be driving the implementation plan



Communities In Schools®

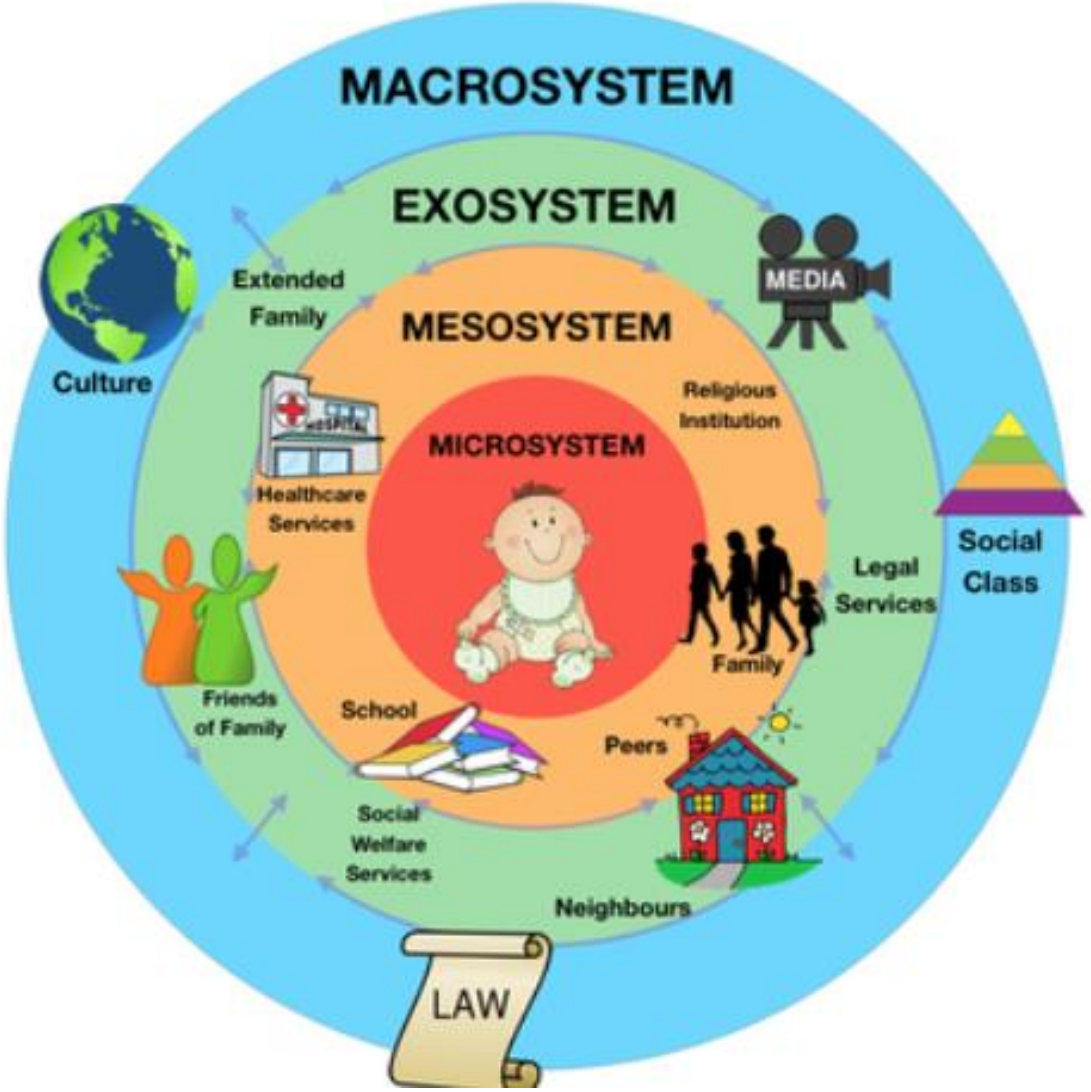
PIKO

Applying implementation science to Ho'ouna Pono sustainability for Native Hawaiian youth in rural Hawai'i

This research was funded by the National Institute on Drug Abuse (R34 DA046735; L60 DA059132), with supplemental funding from the Center for Pacific Innovations, Knowledge, and Opportunities (NIGMS, U54GM138062)

The context

- 25% of youth will experience some type of behavioral health concern this year
- Native Hawaiian and Pacific Islander have significantly higher rates of drug use
- More disparate in rural settings
- Socioecological influence on substance use



Merikangas, Nakamura, & Kessler, 2022; Nishimura, Hishinuma, & Goebert, 2013; Okamoto et al., 2010

Hoʻouna Pono program

- Culturally grounded
- Modular, interactive, video-enhanced
- Teacher-implemented
- Developed through five NIDA-funded projects

Yet…

Research has indicated haphazard or poorly planned implementation of drug prevention programs in Hawai‘i

Hawai‘i Island educational partners have pointed to systemic issues related to the implementation, adoption, and sustainability of prevention in HIDOE schools

Need for research focused on measurement in implementation science

Waitzfelder, Engel, & Gilbert, 1998

Multimethod Implementation Research Approach

Formative, mixed-methods studies with Hawai‘i island educational collaborators and partners

1. In-depth individual interviews (N = 24)
2. Implementation, adoption, and sustainability surveys (N = 204)
3. Concept mapping (N = 7)

Participants

	In-Depth Interviews (*N* = 24)	Surveys (*N* = 197)	Concept Mapping (*N* = 7)
Gender (Female)	50%	71%	62.5%
Ethnicity			
Hawaiian/Part-Hawaiian	21%	32%	16.7%
Japanese	8%	28%	16.7%
Korean	--	--	8.3%
Other Pacific Islander	--	--	8.3%
Portuguese	--	--	16.7%
White	46%	55%	25%
HIDOE Role			
School Counselor/SBBH	21%	15%	14.3%
Superintendent/ Principal/VP	33%	10%	14.3%
Teacher	38%	56%	0%
District Education Specialist	--	--	28.6%
State Education Specialist	--	--	42.9%
Other	8%	20%	0%
Education			
Undergraduate Degree	21%	36%	25%
Graduate Degree	79%	55%	75%

STUDY 1

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RESEARCH ARTICLE

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The implementation of a culturally grounded, school-based, drug prevention curriculum in rural Hawai'i

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Abstract

This article describes the process of infusing implementation strategies in the development of a school-based drug prevention curriculum for rural Native Hawaiian youth. The curriculum (Ho'ouna Pono) is a video-enhanced, teacher-implemented curriculum developed using a culturally grounded and community-based participatory research approach. Throughout the development of the curriculum, strategies reflective of the domains of the Consolidated Framework for Implementation Research (CFIR) were integrated into the teacher training manual, to promote the implementation, adoption, and sustainability of the curriculum in rural Hawai'i. These strategies were validated through qualitative data across two interrelated studies with community stakeholders in rural Hawai'i. Implications for prevention, community, and educational practices are described in this article.

KEYWORDS
Implementation, Native Hawaiian, culturally grounded, prevention, youth

Semi-Structured Interview

Question	CFIR Domain/ Construct(s)
What can be done to further promote Ho‘ouna Pono’s alignment with teachers’ professional and educational needs?	Innovation/ Innovation Adaptability
How do local, state, or national performance measures or policies influence the implementation of Ho‘ouna Pono?	Outer Setting/ Policies & Laws
Which teacher(s) should oversee the implementation of the curriculum in your school ? Why?	Inner Setting/ Work Infrastructure
How confident do you feel about implementing Ho‘ouna Pono in your classes?	Individuals/ Innovation Deliverers, Capability
Who do you see as the lead person implementing the curriculum in your school?	Process/ Teaming

STUDY 2

Implementation Survey

Barriers

Now we're going to ask you about barriers to the implementation, adoption, and/or sustainability of the Ho'ouna Pono (HP) curriculum in Hawai'i Island schools. *Think about each barrier and answer the **TWO** questions at the right as best as you can.*

	To what extent does each barrier **impact** the implementation, adoption, and/or sustainability of the Ho'ouna Pono (HP) curriculum in Hawai'i Island schools?					How **difficult** would it be to overcome each barrier to the implementation, adoption, and/or sustainability of the Ho'ouna Pono (HP) curriculum in Hawai'i Island schools?				
	No impact	Minimal impact	Some impact	Significant impact	Substantial impact	Very easy	Easy	A little difficult	Moderately difficult	Very difficult
1. Natural disasters on Hawai'i Island (e.g., lava, hurricanes) disrupt school-based prevention efforts, like HP.	o	o	o	o	o	o	o	o	o	o
2. HIDOE administrators are resistant to endorsing HP, due to fear of asking overburdened teachers to try something new in the classroom.	o	o	o	o	o	o	o	o	o	o
3. Some HIDOE teachers are resistant to trying new curricula like HP, because it feels like "one more thing you [administrators] want me to do in the classroom."	o	o	o	o	o	o	o	o	o	o
4. Marijuana use is socially acceptable on Hawai'i Island, diminishing the need for HP.	o	o	o	o	o	o	o	o	o	o
5. The turnover of state-level administrators will disrupt the ongoing implementation of HP.	o	o	o	o	o	o	o	o	o	o
6. Teachers may not use the HP curriculum, because they are afraid that it could prompt their students to ask them about their personal drug use histories.	o	o	o	o	o	o	o	o	o	o
7. There may be a lack of enthusiasm for the HP curriculum because health education is not a standardized or measured content area.	o	o	o	o	o	o	o	o	o	o

Implementation Survey

Facilitators

Below is a list of facilitators that may promote the implementation of the Hoʻouna Pono (HP) curriculum in Hawaiʻi Island schools. Review these items, and select the **top three items** that you feel will promote the use of the curriculum. **Rank order** these three items (with 1 as the best) in their ability to support the implementation, adoption, and/or sustainability of the curriculum.

HP is aligned with Superintendent Kishimoto's emphasis on Student Voice.	The timing and length of the HP lessons can be flexibly implemented throughout the semester.	The HP curriculum focuses on culturally appropriate resistance strategies, like avoiding drug-related problem situations.
HP is aligned with the Hawaiʻi Content and Performance Standards for Health (6-8)	My district-level health resource teacher recommends the HP curriculum.	A motivated teacher supports the use of HP.
The HP curriculum is developmentally appropriate for middle-school aged youth on Hawaiʻi Island.	The structure and content of the HP curriculum is presented in a statewide HIDOE workshop.	The HP curriculum helps to engage youth in age-appropriate discussions about their feelings and emotions.
The HP curriculum is free, contingent upon receiving training to use the curriculum.	The HP curriculum was developed through research in HIDOE schools on Hawaiʻi Island.	The HP curriculum promotes students' critical thinking in difficult social situations.
The HP curriculum can help new teachers from the Mainland U.S. understand and connect with local students.	My Complex Area Superintendent evaluates and promotes health education in my school complex.	The HP curriculum aligns with HĀ, because it contributes toward the development of the "whole child".
In-person teacher training on the classroom implementation of HP is offered on Hawaiʻi Island.	The HP curriculum is approved by the HIDOE as part of the middle/intermediate school health curriculum.	My principal supports the use of the HP curriculum.
The HP curriculum is place-based, in that it is focused on the "local" culture on Hawaiʻi Island.	The HP curriculum fills a need. There are a lack of school-based substance use prevention programs that work.	The HP curriculum promotes active student participation (e.g. problem-solving through group discussions).
The HP curriculum supports and compliments socioemotional learning.	The HP curriculum includes a teacher implementation website, where teachers can help each other online.	HP can be woven into different educational settings outside of health, such as advisory.
The videos in the HP curriculum are realistic and relatable to Hawaiʻi Island youth.	The HP curriculum focuses on teaching skills to youth, like decision making and problem solving.	The HP curriculum is based on Native Hawaiian culture and values.

Highest impact barriers

Rank	Item	Mean (SD)	CFIR 2.0 Domain/Construct(s)
1	The HP curriculum does not extensively cover current or recent forms of substance use, such as vaping.	3.30 (1.00)	Innovation/ Innovation Adaptability
2	Some HIDOE teachers are resistant to trying new curricula like HP, because it feels like "one more thing you [administrators] want me to do in the classroom."	3.27 (1.04)	Individuals/ Innovation Deliverers, Motivation
3	There is a lack of HIDOE funding to support prevention curricula like HP.	3.26 (1.09)	Outer Setting (HIDOE)/ Financing
4	The implementation and training related to the HP curriculum will be difficult to fit into teachers' busy schedules.	3.14 (1.03)	Inner Setting (HIDOE)/ Structural Characteristics, Work Infrastructure
5	The delivery of the HP curriculum is assigned to a teacher who is resistant to using the curriculum.	3.09 (1.20)	Individuals/ Innovation Deliverers, Motivation

Highest ranked facilitators

Rank	Item	Percent	CFIR 2.0 Domain/Construct(s)
1	The HP curriculum is place-based, focused on the "local" culture of Hawai‘i Island.	21%	Innovation/ Innovation Relative Advantage
2	The HP curriculum is developmentally appropriate for middle-school aged youth on Hawai‘i Island.	9%	Innovation/ Innovation Relative Advantage
3	The videos in the HP curriculum are realistic and relatable to Hawai‘i Island youth.	9%	Innovation/ Innovation Relative Advantage
4	The HP curriculum is free, contingent upon receiving training to use the curriculum.	7%	Innovation/ Innovation Cost
5	HP is aligned with Superintendent Kishimoto's emphasis on Student Voice.	6%	Outer Setting (HIDOE)/ Policies & Laws

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STUDY 3

STUDY PROTOCOL Open Access

Ho'ouna Pono implementation: applying concept mapping to a culturally grounded substance use prevention curriculum in rural Hawai'i schools

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Abstract

Background: Despite their potential to ameliorate health disparities and address youth substance use, prevention programs have been poorly disseminated and implemented across Hawai'i, which begs the question: *Why are effective prevention programs not being used in communities most in need of them?* Implementing and sustaining culturally grounded prevention programs is critical to address equitable healthcare and minimize health disparities in communities. The field of implementation science provides frameworks, theories, and methods to examine factors associated with community adoption of these programs.

Method: Our project applies concept mapping methods to a culturally grounded youth drug prevention program with state level educational leadership in rural Hawai'i schools. The goal is to integrate barrier and facilitator salience collected through teacher and school staff surveys and specific implementation strategies to regionally tailored implementation plans on Hawai'i island. This protocol paper describes the concept mapping steps and how they will be applied in public and public-charter schools.

Discussion: Improving prevention program implementation in rural schools can result in sustained support for populations that need it most. The project will integrate implementation science and culturally grounded methods in rural Hawai'i, where most youth are of Native Hawaiian and Pacific Islander descent. This project addresses health disparities among Native Hawaiian and Pacific Islander youth and provides actionable plans for rural Hawai'i communities to implement effective prevention programming.

Keywords: Concept mapping, Rural schools, Culturally grounded prevention, Substance abuse

Preparation

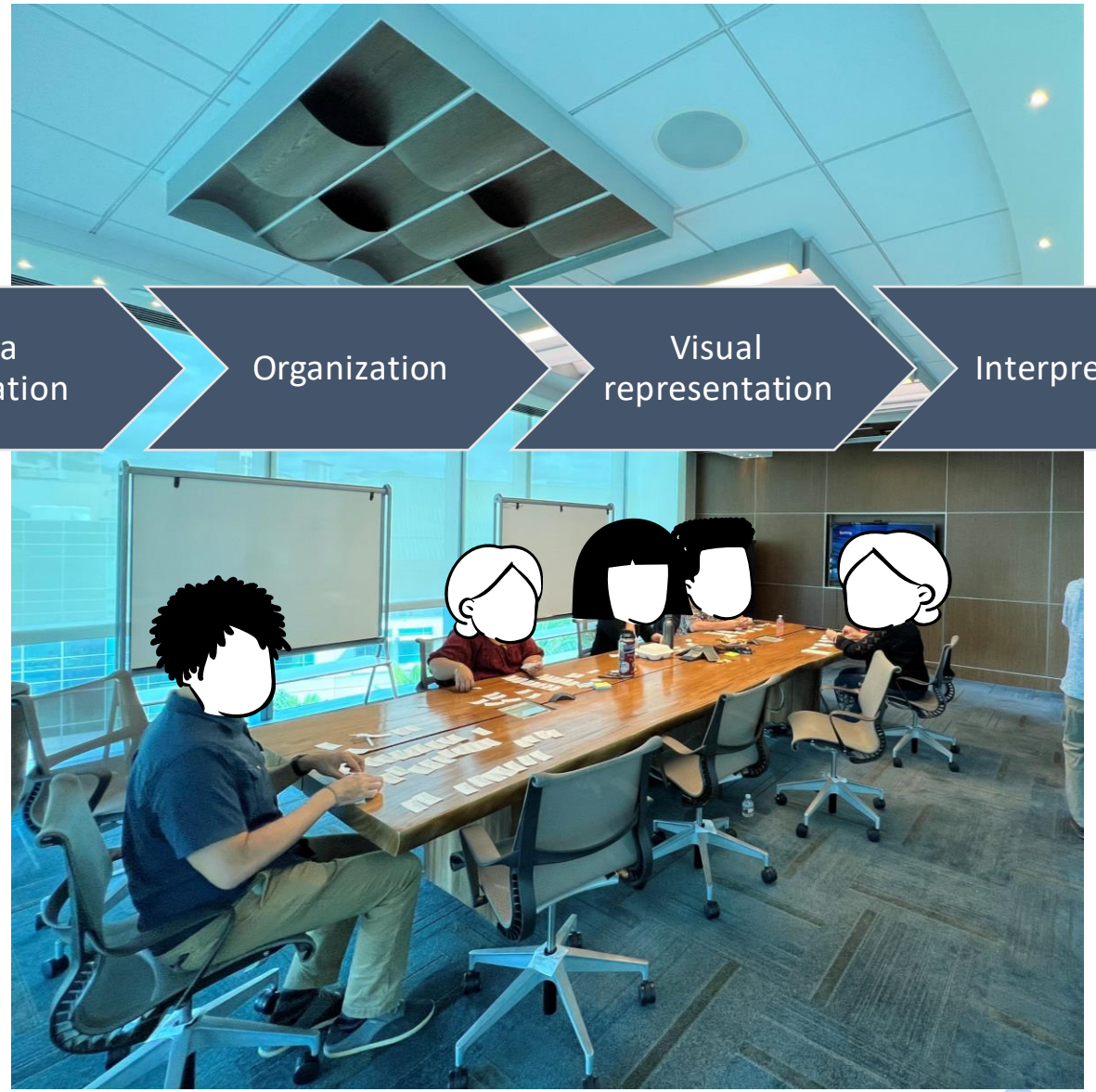
Idea generation

Organization

Visual representation

Interpretation

Utilization



Barriers

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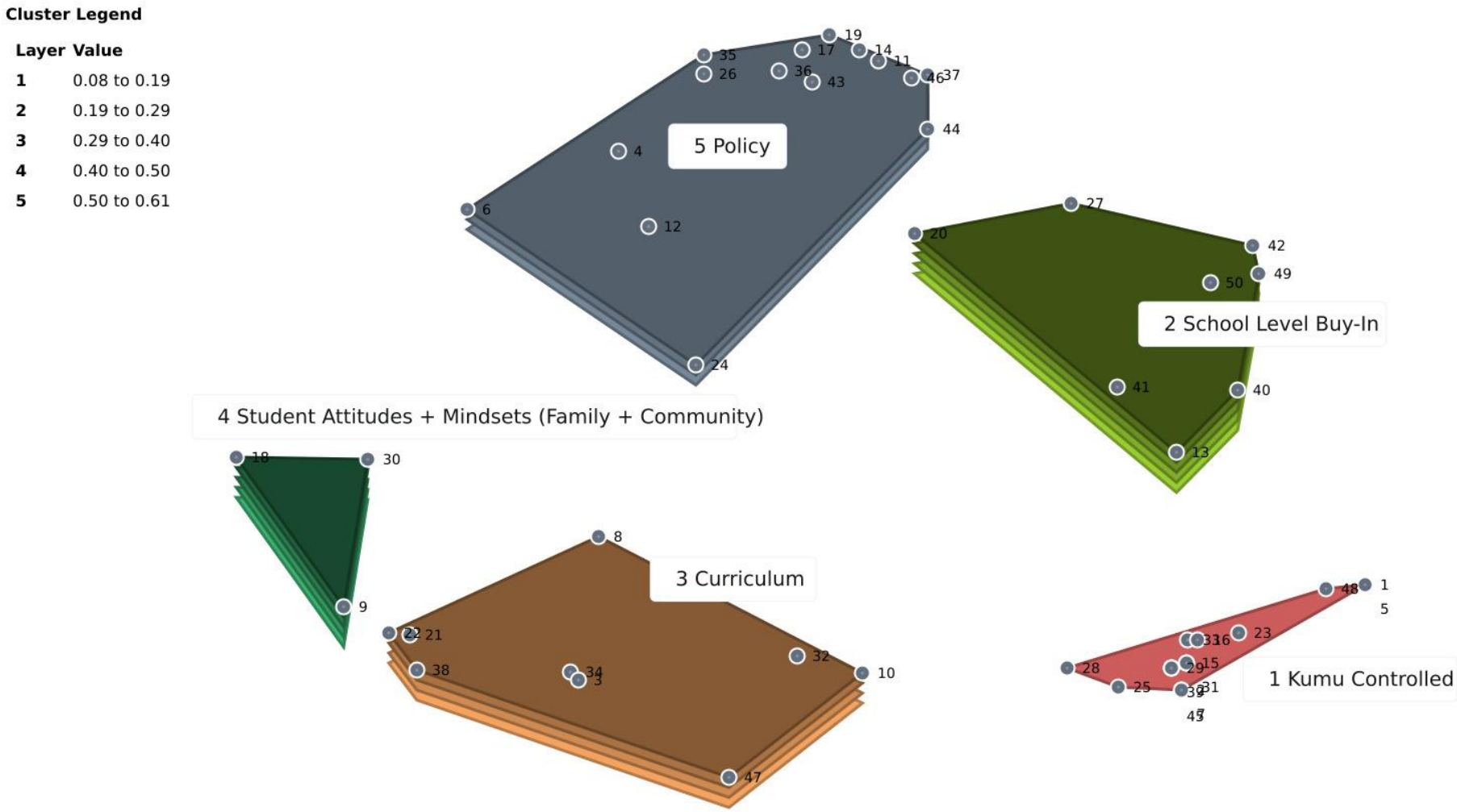
2. HIDOE administrators are resistant to endorsing HP, due to fear of asking overburdened teachers to try something new in the classroom.	O	O	O	O	O	O	O	O	O	O
3. Some HIDOE teachers are resistant to trying new curricula like HP, because it feels like "one more thing you [administrators] want me to do in the classroom."	O	O	O	O	O	O	O	O	O	O

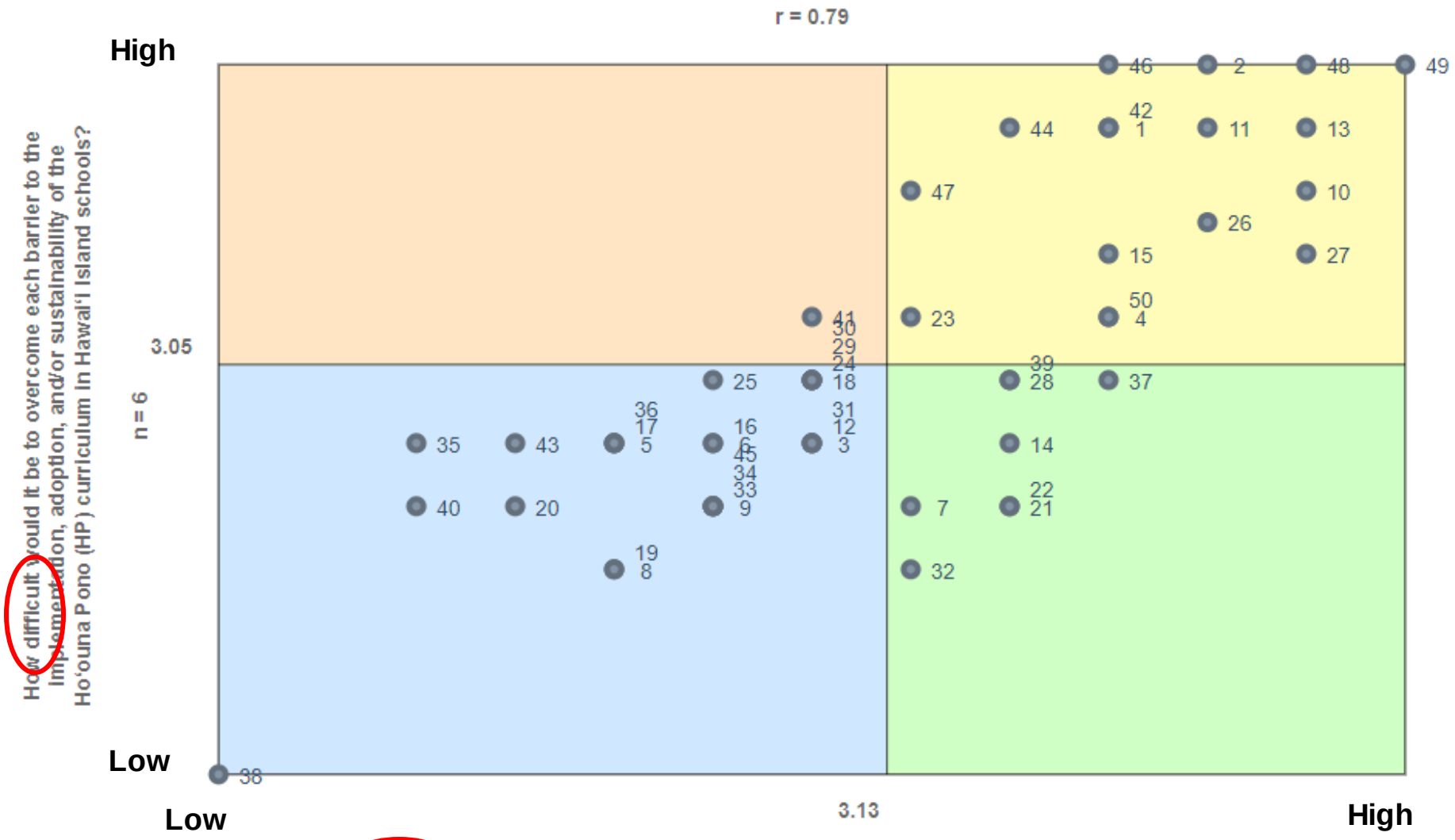
Okamoto et al., 2020

Preparation | Idea generation | Organization | Visual representation | Interpretation | Utilization



Concept Map

Preparation | Idea generation | Organization | Visual representation | Interpretation | Utilization



Go Zone

Concept	Implementation Strategy
Kumu Controlled	• Coordinated and cohort-based training • Integration into existing curricula with lesson plans to address all students • Drug treatment counselor, school counselor and school-based behavioral health involvement
School-Level Buy-In	• More required health education courses in middle school • Creating new incentives for continuing education for teachers (especially those who have reached their ceiling) • Aligning educational policies with outcomes that address health and well-being
Curriculum	• Use teachers to develop curriculum
Student Attitudes + Mindsets (Family + Community)	• School community councils to elevate student voice
Policy	• Talking with legislators

Conclusions

- Financial resources are a major consideration in the implementation of prevention
  - Barrier: Lack of funding
  - Facilitator: No cost for curriculum
- Role conflicts between administrators and teachers present an implementation barrier
- Intervention characteristics is a facilitator
- State and district level administrators perceived different challenges to HP implementation
- School-level buy-in determinants have an impact on what kumu can control
- Student and community mindset influence the extent to which kumu can control curricula related to substance prevention and health

What's next

Figure 1. Scalable Process

HOW IT WORKS

1 INNOVATION CHALLENGES ARE POSTED TO THE PLATFORM

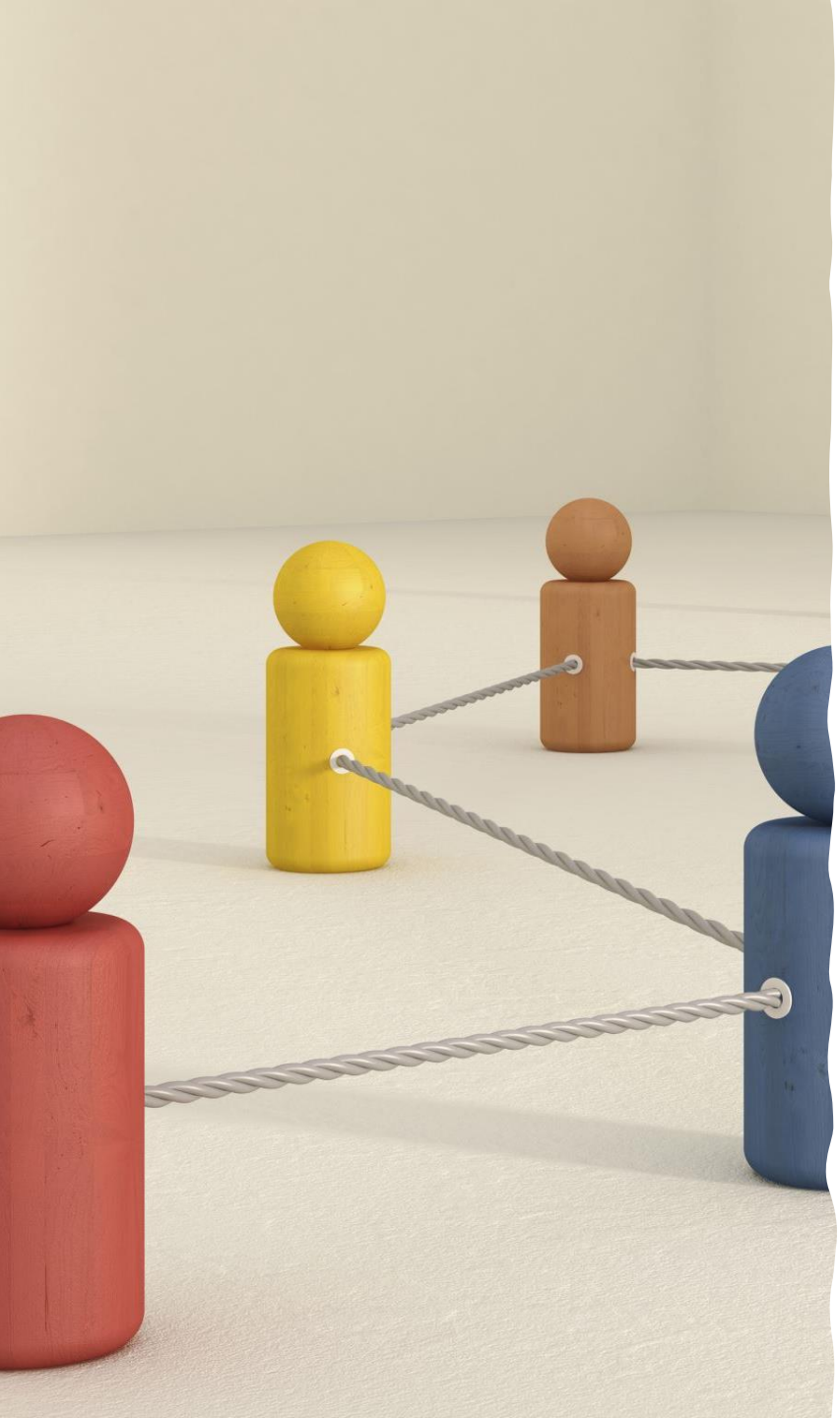
2 FACULTY, STAFF AND STUDENTS SUBMIT AND RATE IDEAS

3 CHALLENGE COMMITTEES REVIEW IDEAS AND RATINGS AND DETERMINE NEXT STEPS

4 TEAMS WALK AWAY WITH INNOVATIVE IDEAS AND SOLUTIONS THAT ENABLE THEM TO TURN IDEAS INTO ACTION

What do these implementation studies have in common?

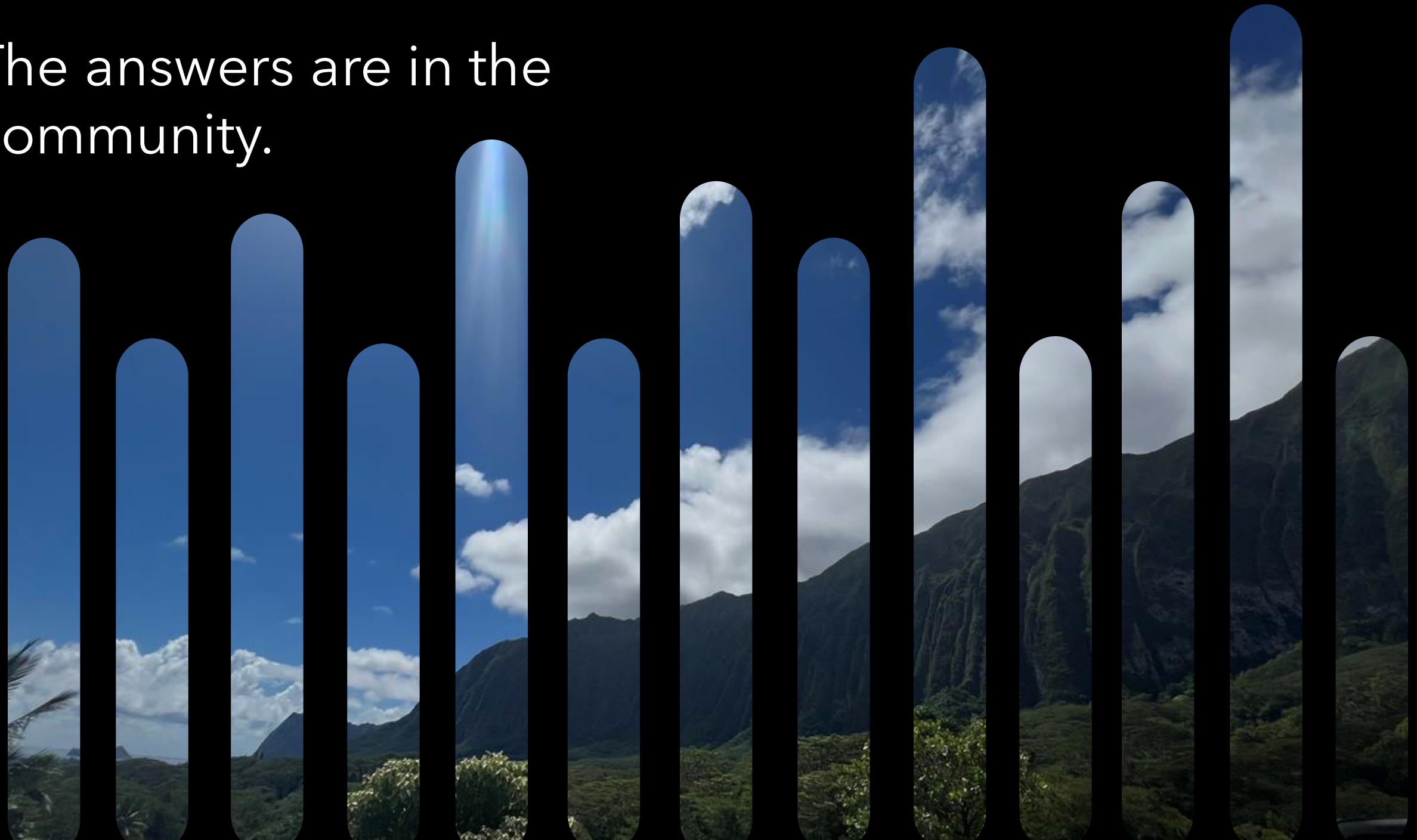
- Identifies youth behavioral health intervention implementation challenges in school settings
- Community members heavily involved in the research process
- Encompassed multiple phases of feedback from community members



Take home

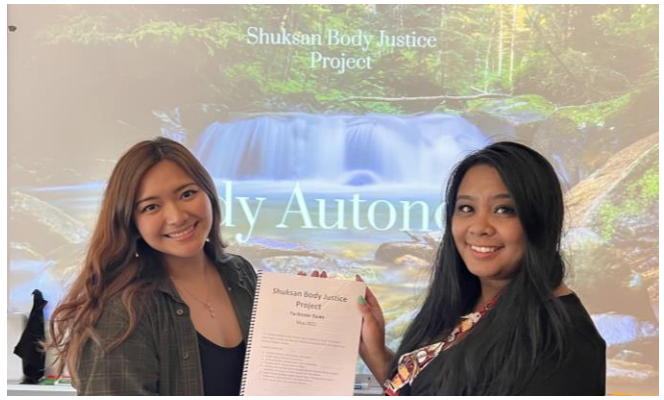
- Research and applied implementation science can accelerate the reach and spread of evidence-based innovations
- Implementation takes time and careful consideration
- Implementation research is about elevating voices

The answers are in the community.



Mahalo to our community partners

- Shuksan Middle School
- Communities in Schools of Washington
- Hawai’i Department of Education
- Big Island Substance Abuse Council
- Hawai‘i Island Tobacco Free Coalition (Hawai‘i Public Health Initiative)
- Compassionate Ko‘olaupoko



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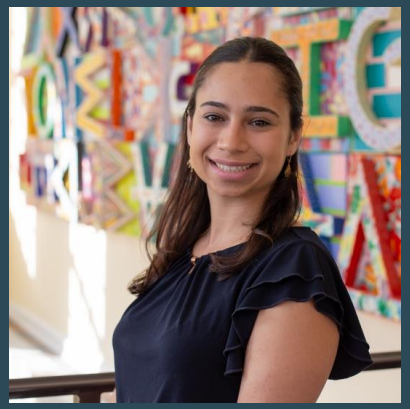

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THE BAKER CENTER FOR CHILDREN AND FAMILIES | HARVARD MEDICAL SCHOOL AFFILIATE

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