

# Studies of the efficacy, implementation and sustainability of CBITS: An evidence-based mental health intervention for students exposed to trauma

18<sup>th</sup> Annual Conference on  
Advancing School Mental Health  
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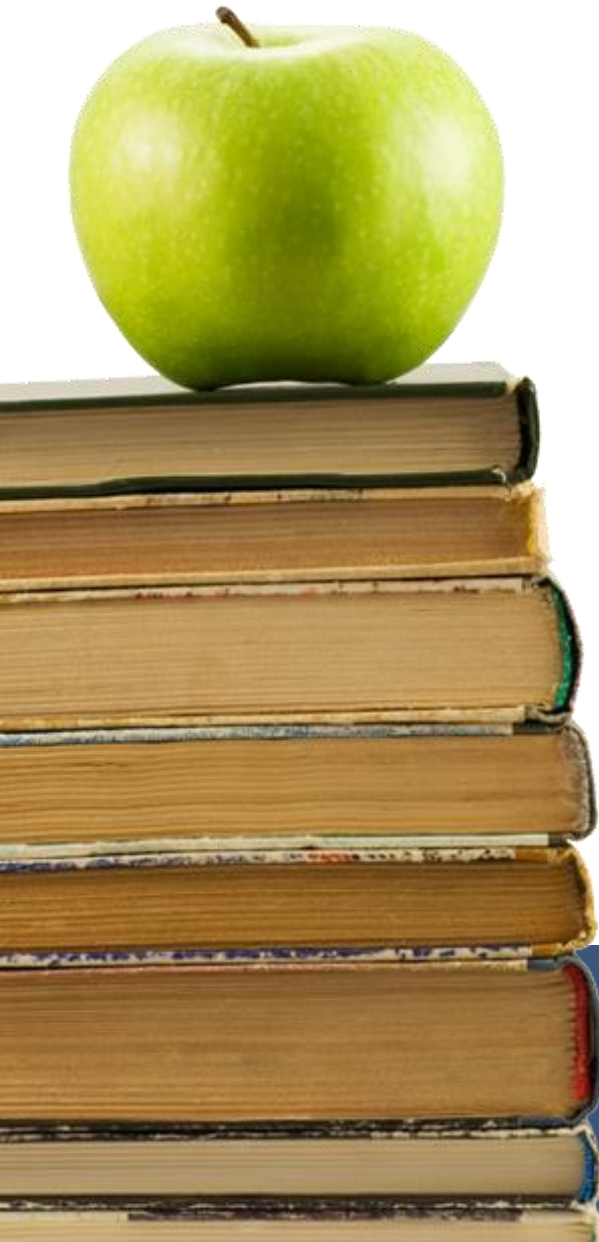
SRI International



# Outline of symposium



- Brief overview:
  - Effects of trauma on children
  - *Cognitive Behavioral Intervention for Trauma in Schools (CBITS)* program
- Efficacy Study of CBITS: Sumi & Woodbridge (SRI)
- Role of Motivation in Clinician Attitudes & Competence: McMillen (3-C Institute)
- A Web-based Platform to Support the Implementation of CBITS Vona (Treatment and Services Adaptation Center for Schools)
- Discussion: Stephan (CSMH)



# An Efficacy Study of CBITS

**W. Carl Sumi, Ph.D.**  
**Michelle Woodbridge, Ph.D.**  
**Kristen Rouspil, M.P.H.**

The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R324A110027 to SRI International. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

# Outline of presentation

- Overview of trauma and CBITS
- Description of study design
- Summary of preliminary results:
  - Trauma screening
  - Baseline measures



# Trauma and CBITS

# What is trauma?

- Highly stressful event, such as:
  - Abuse
  - Bullying
  - Injury/hospital stay
  - Abandonment
  - Community violence
  - Loss of loved one
  - Accident
  - Homelessness
  - Natural disaster
- Threatens physical or mental well-being
- Evokes feelings of extreme fear or helplessness
- Overwhelms an individual's capacity to cope



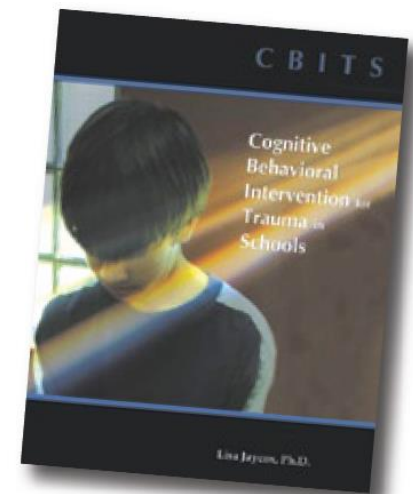
# Effects of trauma on children

- 20%–50% of children in the U.S. are victims or witnesses of violence
- Symptoms of trauma may include:
  - Isolation
  - Sadness
  - Hyperactivity
  - Distraction
  - Aggression
  - Fearfulness
- Children exposed to violence are more likely to have:
  - Behavior problems
  - Poor school performance
  - Problems with authority/directions
  - More school absences
  - Somatic complaints
  - Symptoms of depression
  - Fewer friends



# CBITS program overview

- School-based intervention developed by UCLA, RAND, & LAUSD
  - Delivered to students experiencing significant distress due to trauma
    - Implementers = MSWs, licensed psychologists, or interns
  - Tailored for the school setting and diverse populations
  - 10 weekly student group sessions, 1 individual (1-on-1) session
    - Two parent education meetings
- Cognitive behavioral techniques
  - Education about common reactions to trauma
  - Relaxation training: imaginal exposure
  - Cognitive therapy: fear thermometer
  - Real life exposure: fear hierarchy and coping strategies
  - Stress or trauma memory: drawing/writing exercises
  - Social problem-solving: HOT seat





# Goals of CBITS

- Reduce symptoms of:
  - Post traumatic stress
  - General anxiety
  - Depression
  - Low self-esteem
  - Aggression and impulsivity
  - Other behavior problems
- Build resilience
  - Coping and decision making skills
  - Communication and social skills
  - Self care and self regulation
- Increase peer and parent support



# CBITS evidence

- Cited as recommended practice by:
  - U.S. Dept of Justice (OJJDP) (Exemplary Program)
  - Promising Practices Network (Proven Program)
  - White House's Helping America's Youth (Highest Quality Evidence)
  - CDC Prevention Research Center (Effective Program)
  - SAMHSA's National Registry (3.8/4.0 Dissemination Rating)
  - National Child Traumatic Stress Network
- Previous research findings include:
  - Increased coping skills
  - Reduced trauma (PTSD) symptoms
  - Reduced depression symptoms
  - Reduced psychosocial dysfunction



# Relevant research studies

- Stein, B. D., Jaycox, L. H., Kataoka, S. H., Wong, M., Tu, W., Elliott, M. N., et al. (2003). A mental health intervention for schoolchildren exposed to violence: A randomized controlled trial. *Journal of the American Medical Association*, 290(5), 603-611.
- Kataoka, S. H., Stein, B. D., Jaycox, L. H., Wong, M., Escudero, P., Tu, W., et al. (2003). A school-based mental health program for traumatized Latino immigrant children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42(3), 311-318.
- Jaycox, L. H., Cohen, J. A., Mannarino, A. P., Walker, D. W., Langley, A. K., Gegenheimer, K. L., et al. (2010). Children's mental health care following Hurricane Katrina: A field trial of trauma-focused psychotherapies. *Journal of Traumatic Stress*, 23(2), 223-231.
- Jaycox, L. H., Stein, B., Kataoka, S., Wong, M., Fink, A., Escudera, P., et al. (2002). Violence exposure, posttraumatic stress disorder, and depressive symptoms among recent immigrant schoolchildren. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41(9), 1104-1110.

# CBITS website

- [www.cbitsprogram.org](http://www.cbitsprogram.org)
- Registration is **free** for:
  - On-line training
  - Sample materials and forms
  - Implementation assistance
  - Video clips
  - On-line community of experts and colleagues
    - Advice, networking, sharing materials

Phone: 310-393-0411, ext. 5118  
E-mail: [info@cbitsprogram.org](mailto:info@cbitsprogram.org)

Home Learn More About Us Success Stories News

### CBITS At-a-Glance

The Cognitive Behavioral Intervention for Trauma in Schools (CBITS) program is a school-based, group and individual intervention. It is designed to reduce symptoms of post-traumatic stress disorder (PTSD), depression, and behavioral problems, and to improve functioning, grades and attendance, peer and parent support, and coping skills.

CBITS has been used with students from 5th grade through 12th grade who have witnessed or experienced traumatic life events such as community and school violence, accidents and injuries, physical abuse and domestic violence, and natural and man-made disasters.

CBITS uses cognitive-behavioral techniques (e.g., psychoeducation, relaxation, social problem solving, cognitive restructuring, and exposure).

#### Access our Free Resources

By [registering with our website](#), you'll gain access to a host of **free** resources, including **everything you'll need to implement CBITS** in your school:

- Our interactive online training course that will prepare you to implement CBITS\*
- Sample materials and forms to help you deliver the CBITS intervention
- A robust online community where you can engage with discussion boards, "ask the experts," and collaborate on documents
- Video clips of experts providing practical advice on CBITS implementation
- And more!

\*NOTE: While the course is free, you'll need to purchase the course manual at a minimal cost.

#### Take a CBITS Training Course

CBITS offers both online and in-person training. To learn more about our online training or to take the online course, [register with our website](#). For more information about our in-person training, contact us at [info@cbitsprogram.org](mailto:info@cbitsprogram.org) or 703-413-1100, ext. 5118.

Website produced using Interlink Training Dissemination Services  
[www.interlinkyourtraining.com](http://www.interlinkyourtraining.com)

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PASSWORD:

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*"This group helped me because now I can concentrate more and not lose track when I'm in class or at home when I'm reading or doing math."*

Fifth-grade  
CBITS participant

*"The group has helped a lot in the way that I think. I was more fearful about things before. It helped me to trust myself and my decisions."*

Ninth-grade  
CBITS participant

# CBITS Study Design

# Funders and partners



- Funders
  - Department of Education, IES, NCSER (Goal 3 RCT)
- Partners:
  - **Local School District:** School Social Workers (SSWs)
  - **UCLA:** training, technical assistance, and fidelity rating
  - **Stanford University:** weekly clinical supervision



Sheryl Kataoka



Audra Langley



Shashank Joshi

# School participation

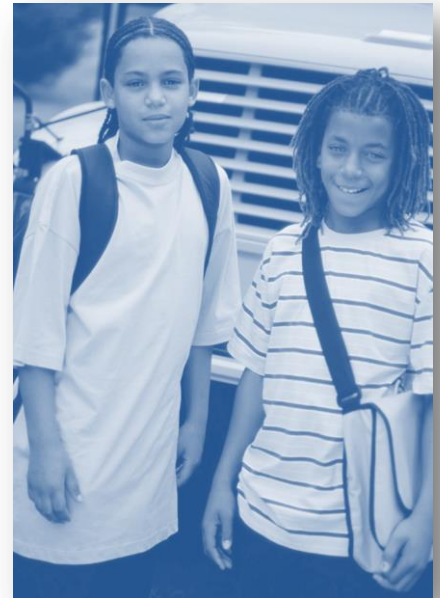


- Selected **11 middle schools** in neighborhoods with elevated violence, crime, and poverty rates
- Each school has at least 1 SSW, a certified clinician
- Each participating school receives:
  - **Resources** and **support** to implement CBITS
  - Yearly **stipends** (\$1,000 per school)
  - Ongoing **staff education** and consultation
    - Training for *all* SSWs (including non-participating)
    - Weekly clinical supervision
  - Local **Resource Guide** for trauma services
  - **Data** to support applications for potential funding



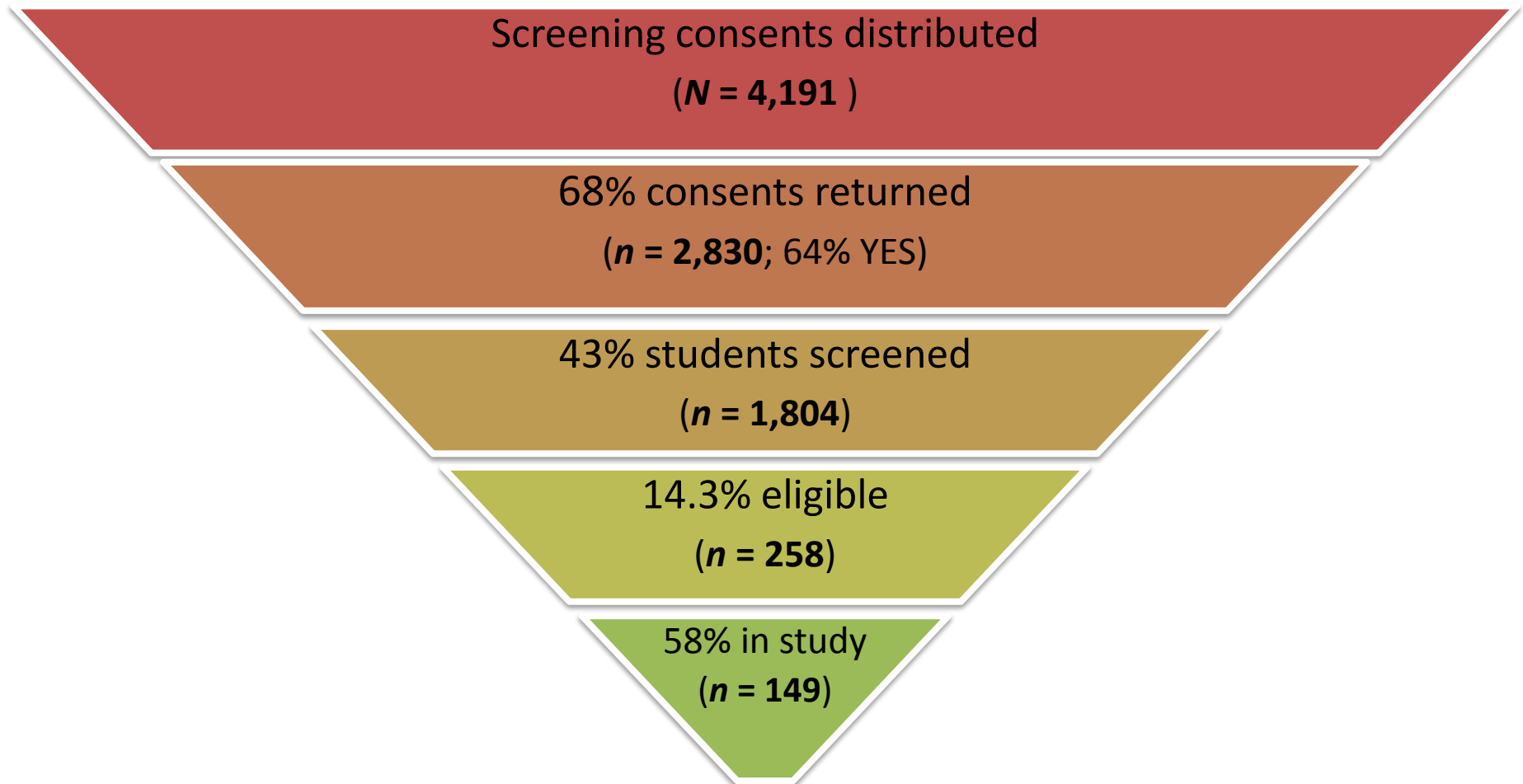
# Screening and recruitment process

- **Active consent** for all incoming 6<sup>th</sup> grade students
  - Trauma Symptom Checklist for Children, PTS subscale (Briere, 1996)
  - Traumatic Events Screening Inventory (Ford & Rogers, 1997)
- **Eligibility** criteria:
  - 80<sup>th</sup> percentile on TSCC-PTS (*T score 58+*)
  - Endorsement of 1+ trauma event on TESI
  - Parent consent, student assent
- **Randomization** (*after consent*) to:
  - CBITS group *or*
  - *Business-as-usual* comparison group
    - Both received *Trauma Resource Guide*





# Cohort 1+2 participants



# Data collection

Instrument	Purpose	Respondent
TSCC (Briere, 1996)	Trauma symptoms	Student (self report)
CRI-Y (Moos, 1993)	Coping responses	Student (self report)
SACA (Stiffman et al., 2001)	Services outside CBITS	Student (self report)
PSQI (Buysse et al., 1989)	Sleep duration/quality	Student (self report)
YSR (Achenbach & Rescorla, 2001)	Behavior	Student (self report)
WJ3 Brief Battery (Woodcock et al., 2006)	Reading and math achievement	Student (direct assessment)
AET (Walker & Severson, 1990)	Academic engagement	Classroom observation
TRF	Classroom behavior	Teacher

# Other measures

- Student Record data
  - Attendance, grades, and services (e.g., special education)
- Social Validity surveys (students and SSWs)
  - Assess satisfaction with program content, materials, and impact
- Alliance surveys (students and SSWs)
  - Assess satisfaction with relationship
- Fidelity measures
  - Ratings of audiotaped sessions by external (UCLA) staff
  - Random sample: 20% of all sessions



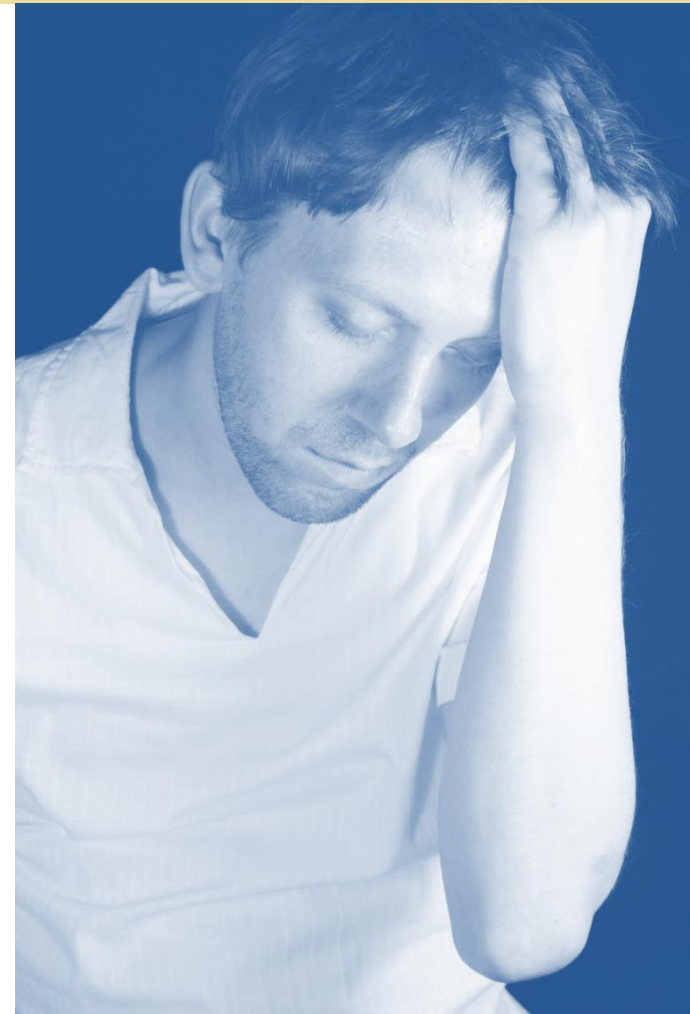
# Data collection timeline

	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	
Year 1	Cohort 1 (C1) Screening and Consent		C1 Baseline	C1 Treatment			C1 Posttest				
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	
Year 2	Cohort 2 (C2) Screening and Consent		C2 Baseline	C2 Treatment			C2 Posttest C1 Follow-up				
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	
Year 3	Cohort 3 (C3) Screening and Consent		C3 Baseline	C3 Treatment			C3 Posttest C2 Follow-up				
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	
Year 4							C3 Follow-up				
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	

# Preliminary Results: Participant Descriptives

# Student screening: Total sample ( $N = 1,804$ )

- Overall prevalence of elevated trauma = 14.3%
  - Prevalence ranged from 7% to 21% by school
- Prevalence by gender:
  - 15.3% of females
  - 13.9% of males



# Participant screening: Trauma events ( $n=149$ )

Traumatic Event	% Students
Been in serious accident	35%
Witnessed serious accident	55%
Natural disaster	28%
Relative sick/injured	80%
Been seriously ill/injured	60%
Relative died	67%
Separated from family	39%
Attacked by animal	30%
Threatened with harm	54%
Slapped, punched, or hit	65%
Witnessed someone slapped or hit	73%
Witnessed attack with weapon	22%

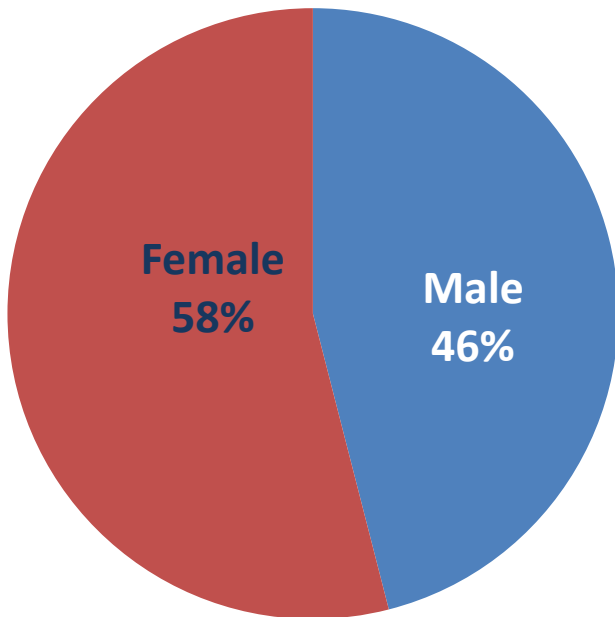
Mean Events endorsed

6.6

# Events	% Students
1–2	3%
3–4	14%
5–6	29%
7–8	30%
9–11	23%

# Participant demographics ( $n=149$ )

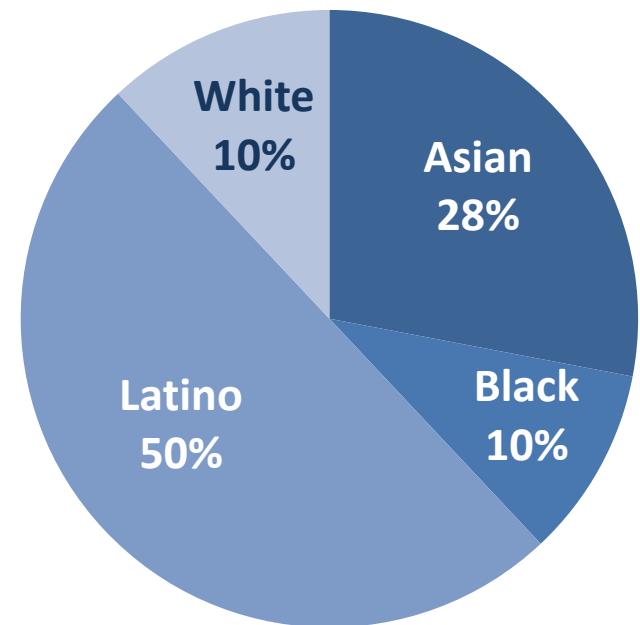
**Gender**



**Mean Age**

11.6 years

**Ethnicity**

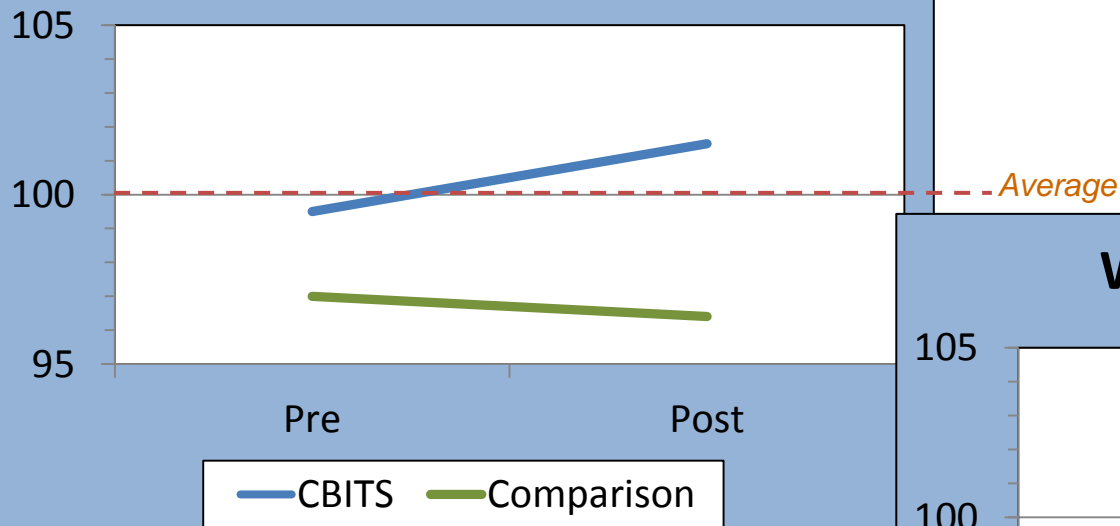




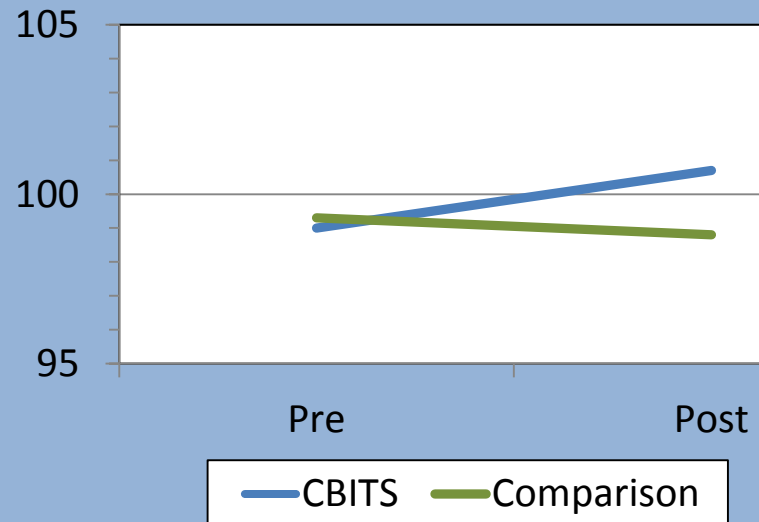
# Preliminary Results: Pre-Post Repeated Measures

# Preliminary academic outcomes

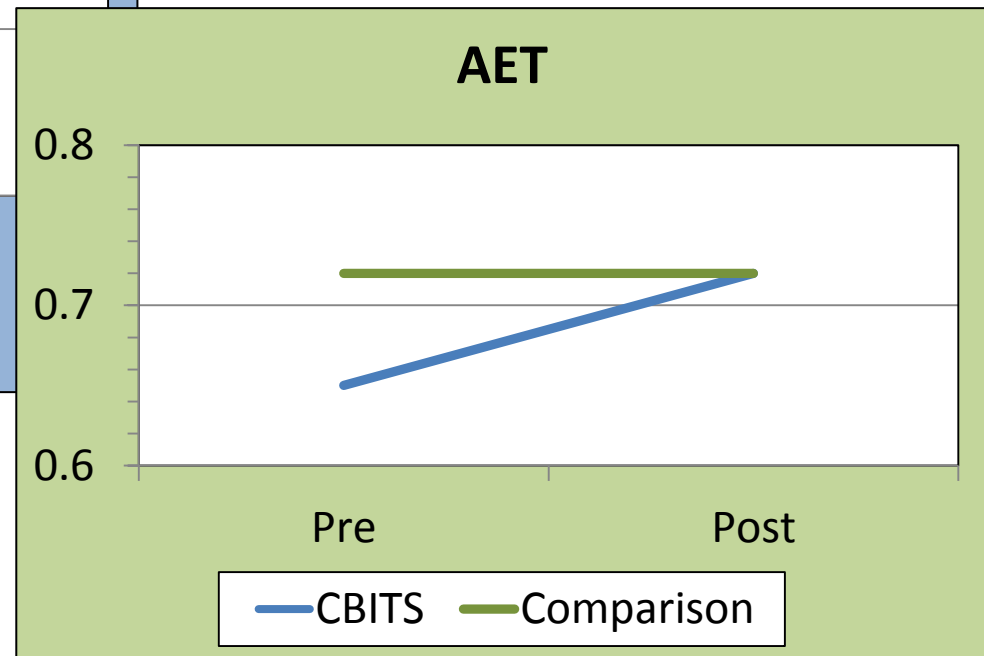
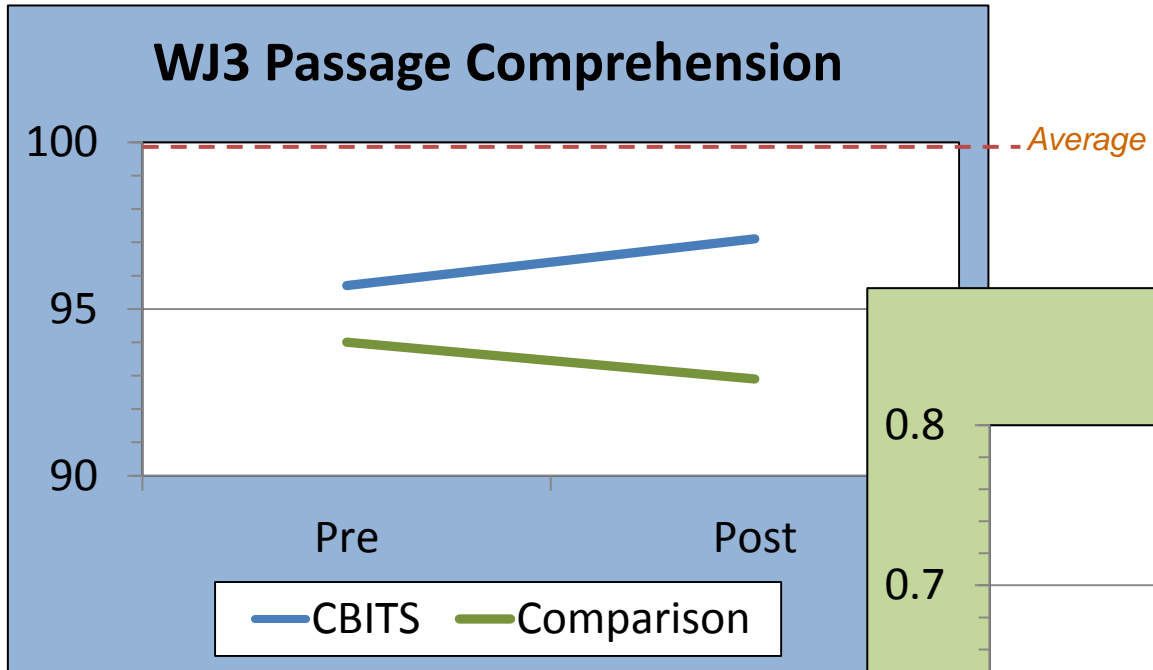
## WJ3 Letter-Word Identification



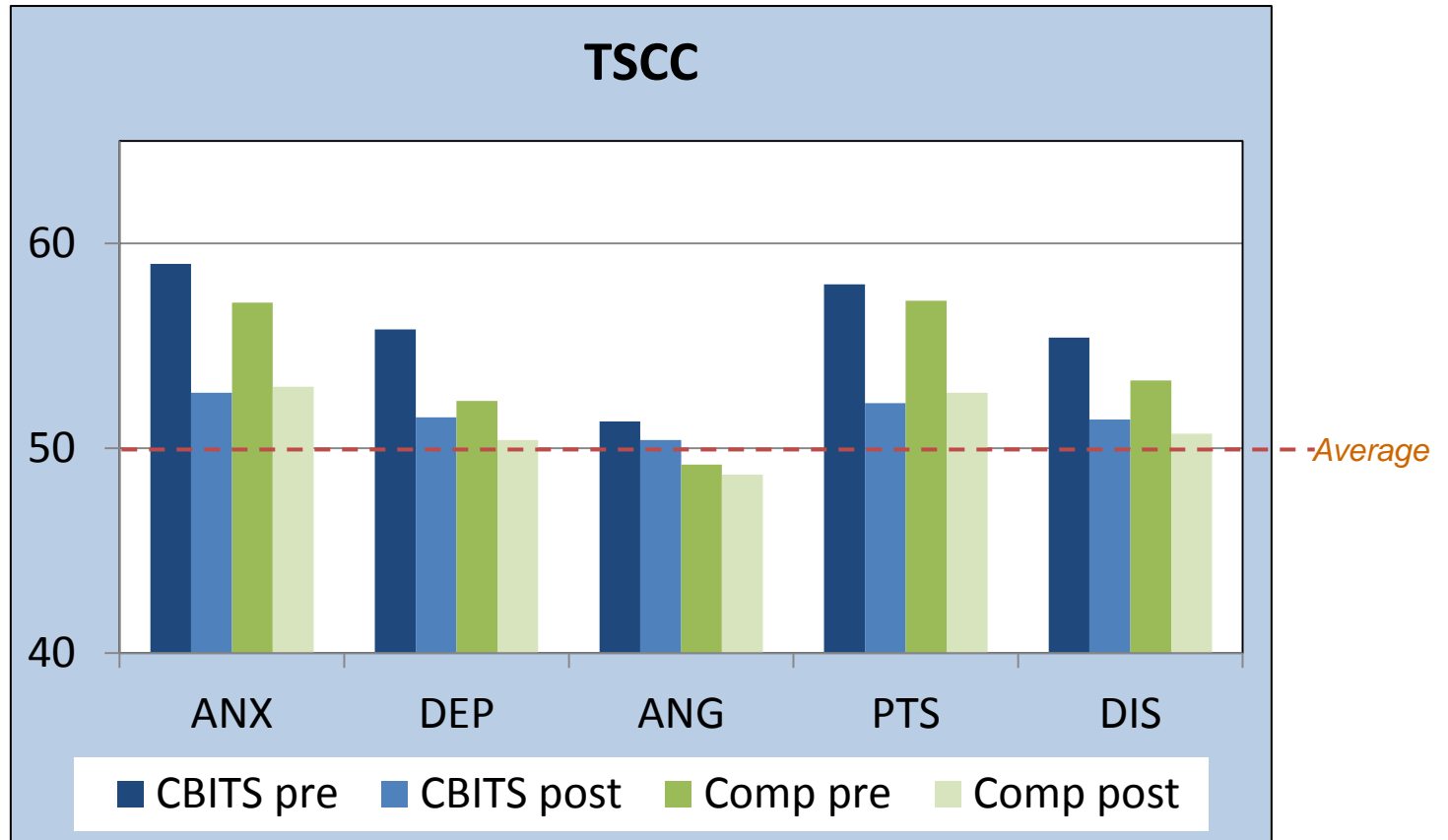
## WJ3 Applied Problems



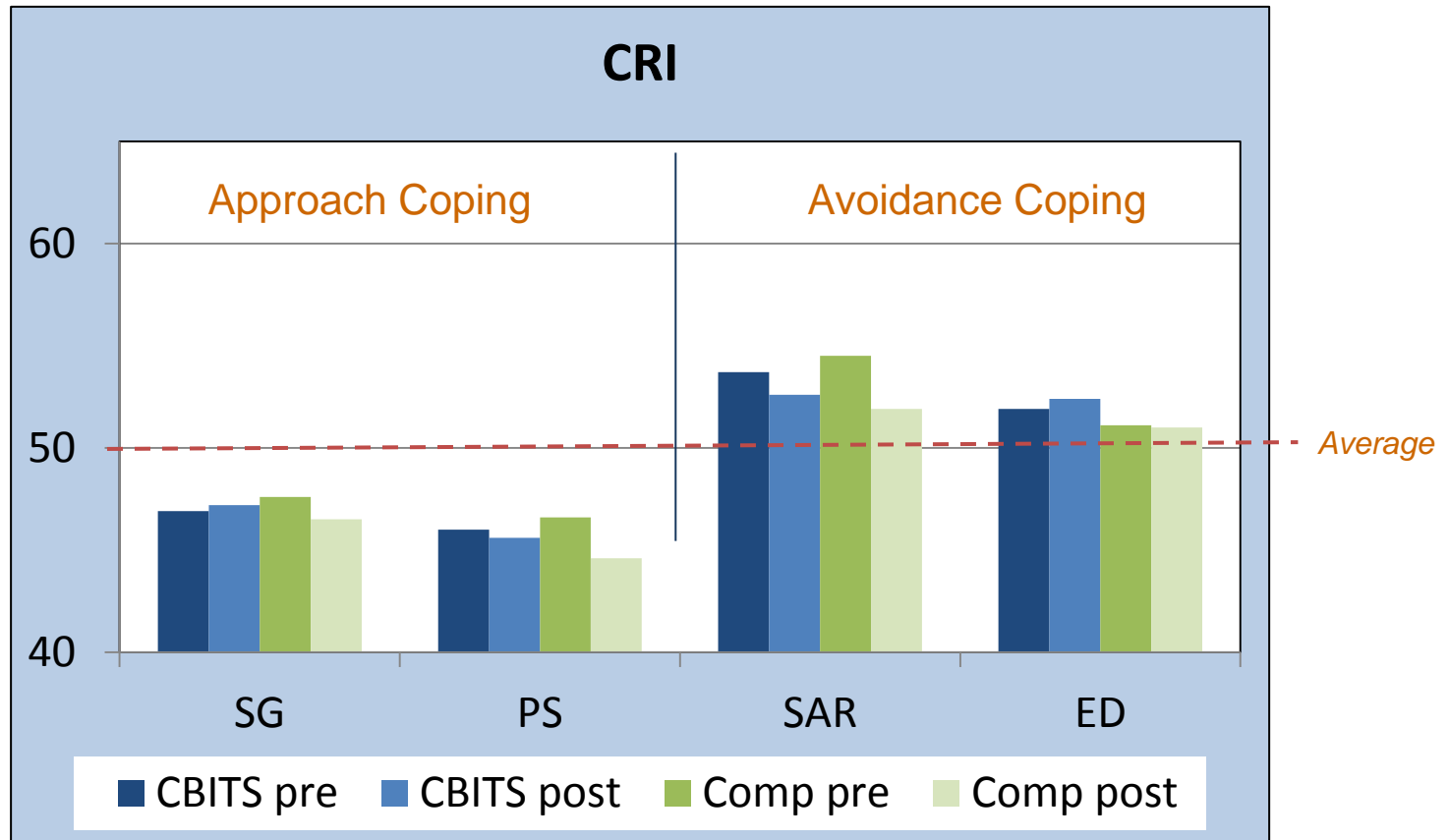
# Preliminary academic outcomes



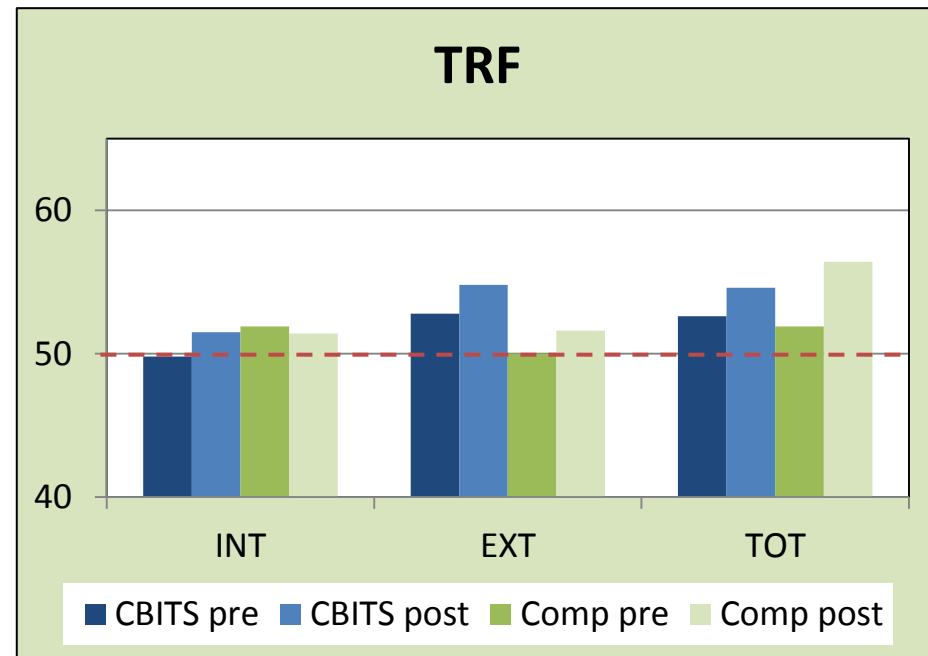
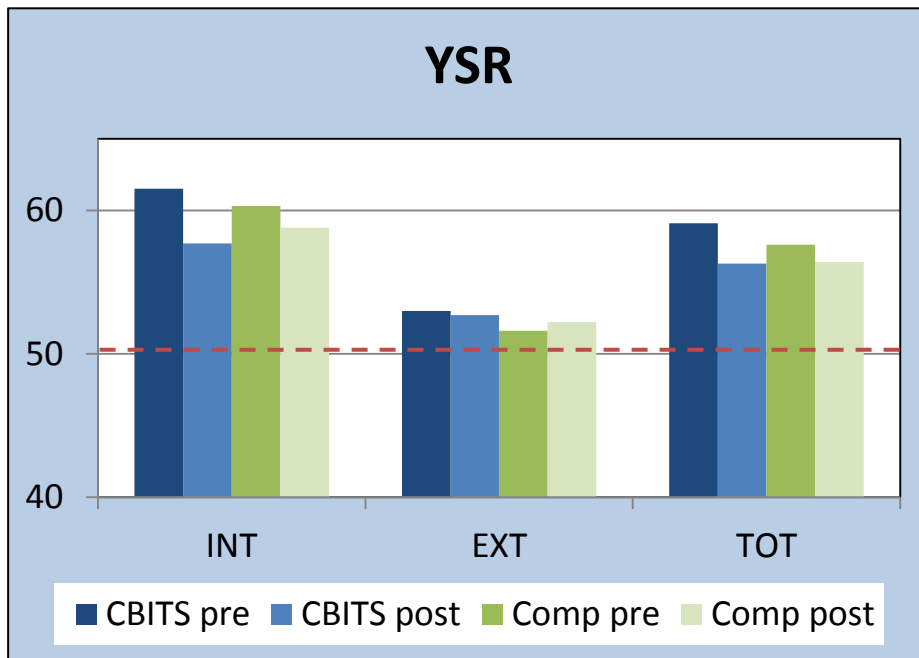
# Preliminary trauma symptom outcomes

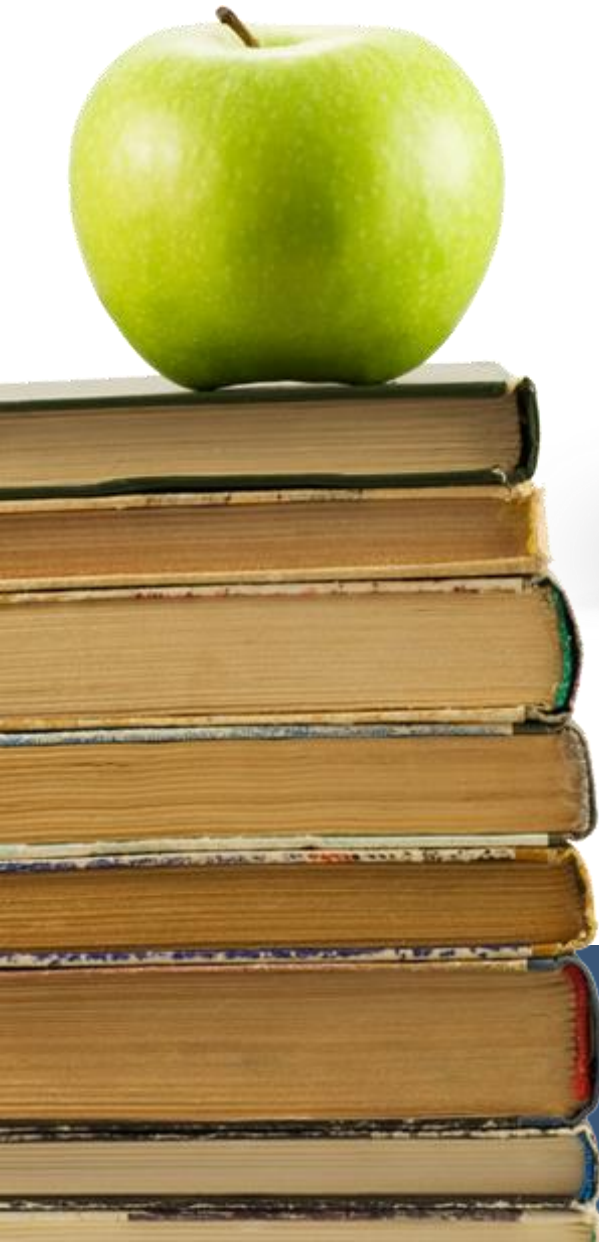


# Preliminary coping outcomes



# Preliminary behavior outcomes





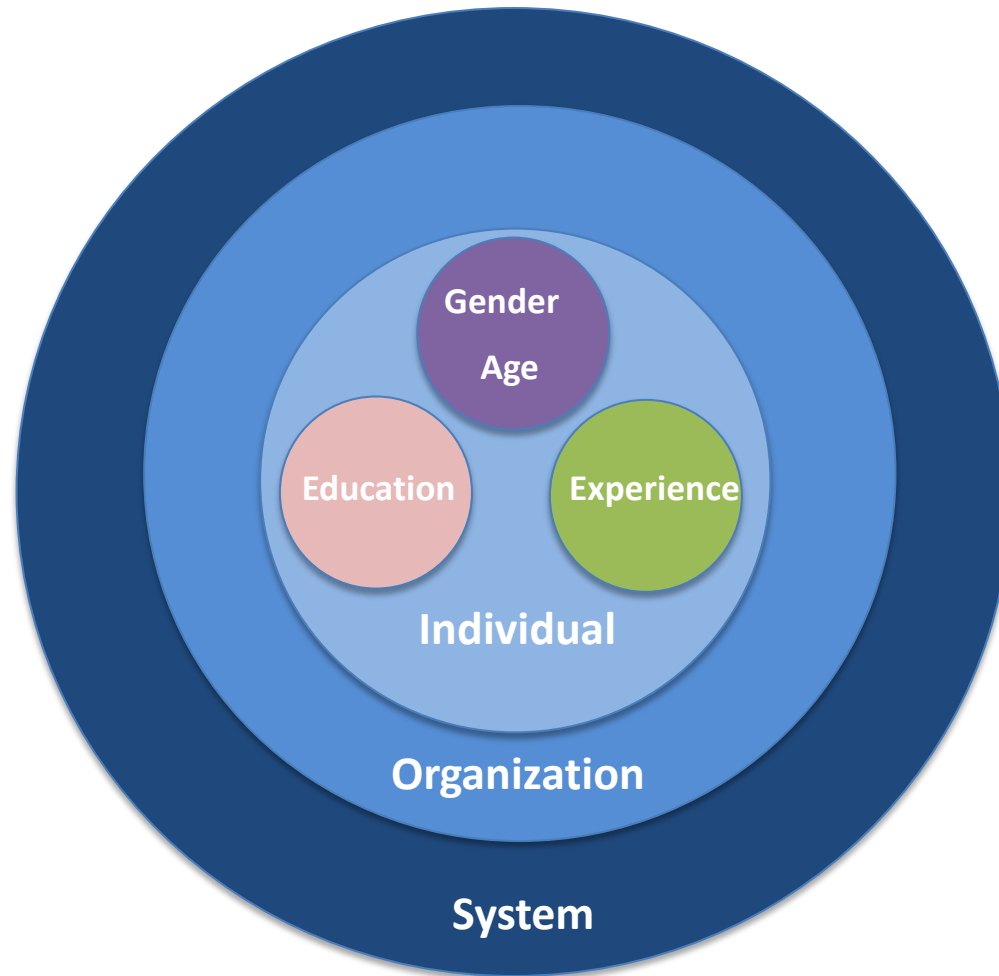
# The Role of Motivation in Attitudes and Competence of Clinicians Training to Implement CBITS



**Janey Sturtz McMillen, Ph.D.**  
Chief Scientific Officer  
3-C Institute for Social Development

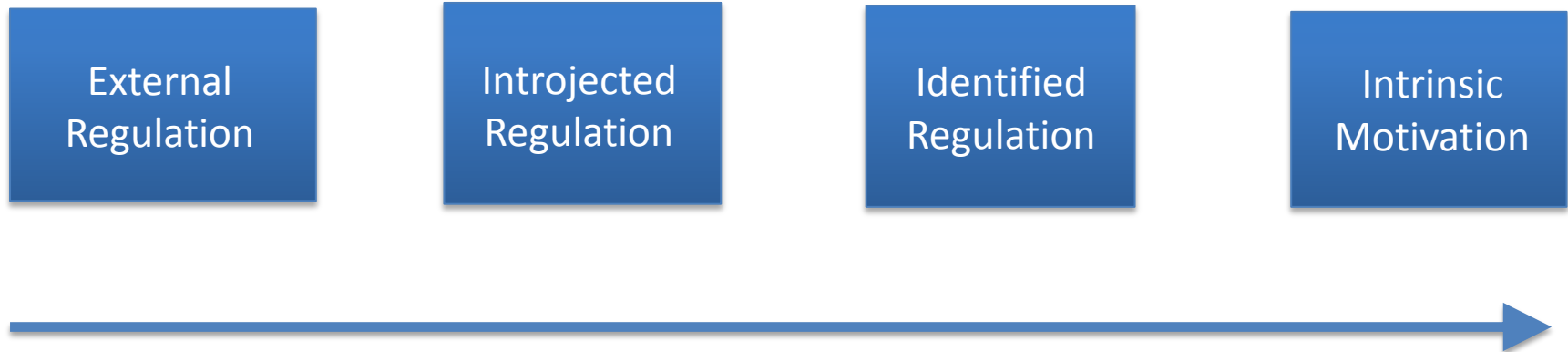
**Contributors:**  
**Pamela Vona, M.A.**  
**Lisa Sontag, Ph.D.**  
**Kelly Kocher, B.A.**  
**Bradley D. Stein, Ph.D.**

# Ecological framework





# Motivation



Teacher Motivation Inventory (Lam et al., 2010)

# Research questions

1. Does motivation to attend CBITS training differ based on individual clinician characteristics?
2. How does motivation to attend training relate to clinician attitude toward CBITS?
3. How does motivation to attend relate to perceived competence in implementing CBITS?



# Methods

- Pre-training survey (prior to two-day, in-person CBITS training)
  - Professional experience
  - Motivation for attendance
  - Perceived competence for treating patients using CBT methods
- Post-training survey (end of last day)
  - Perception of training
  - Perceived competence in using CBITS

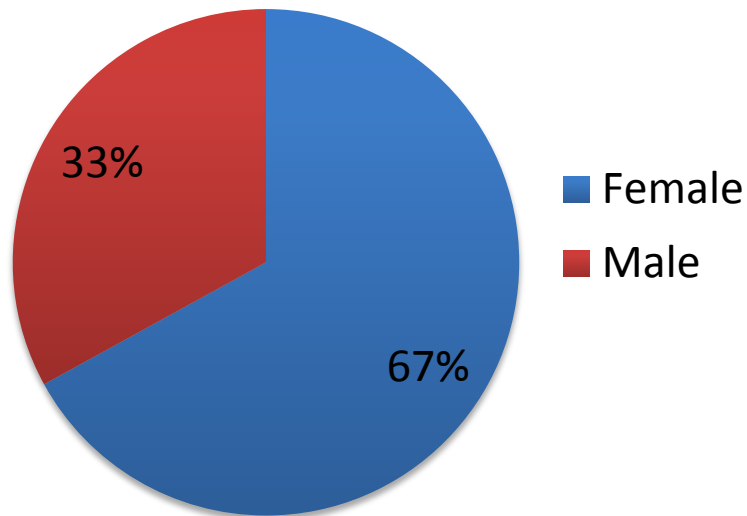


# Participants

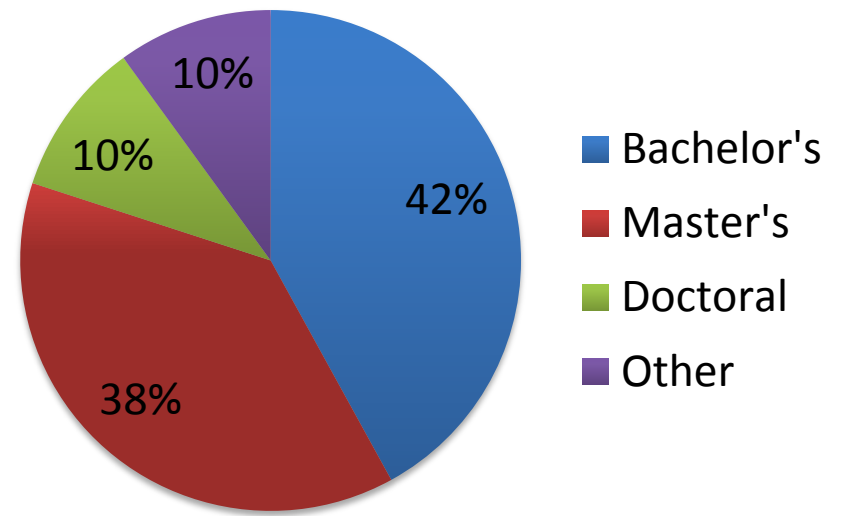
Mean Age

35

Gender

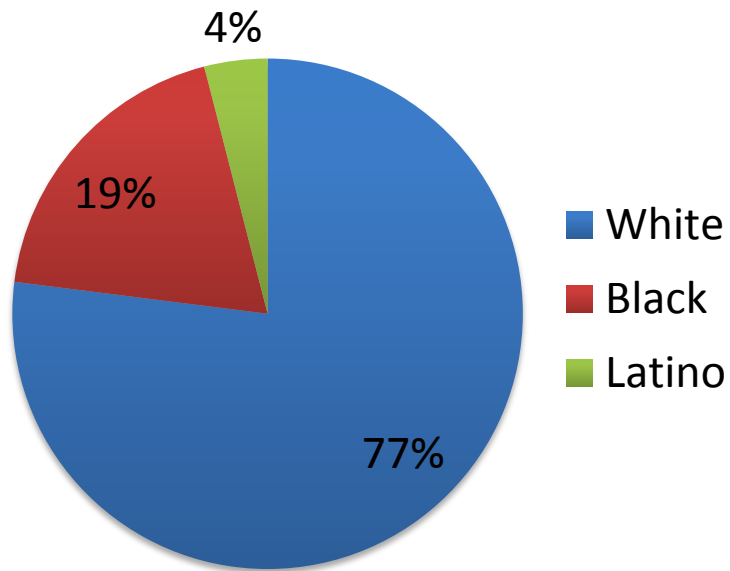


Education Level

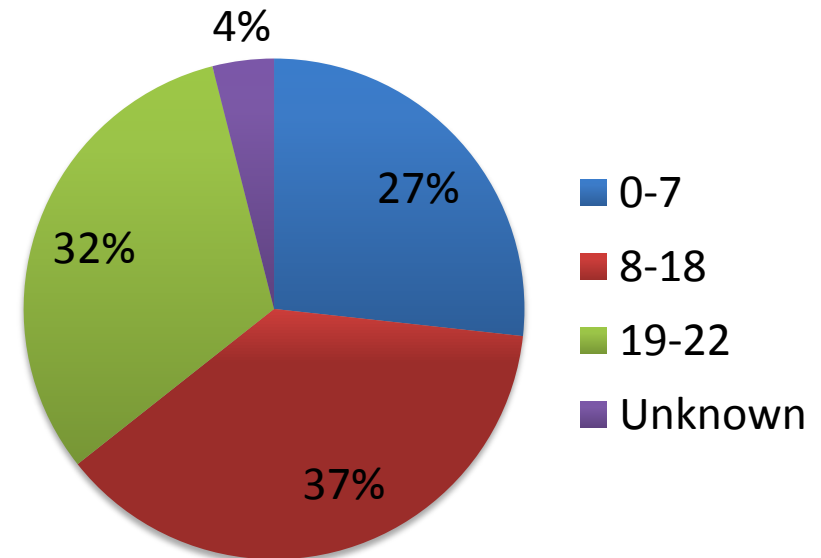


# Participants

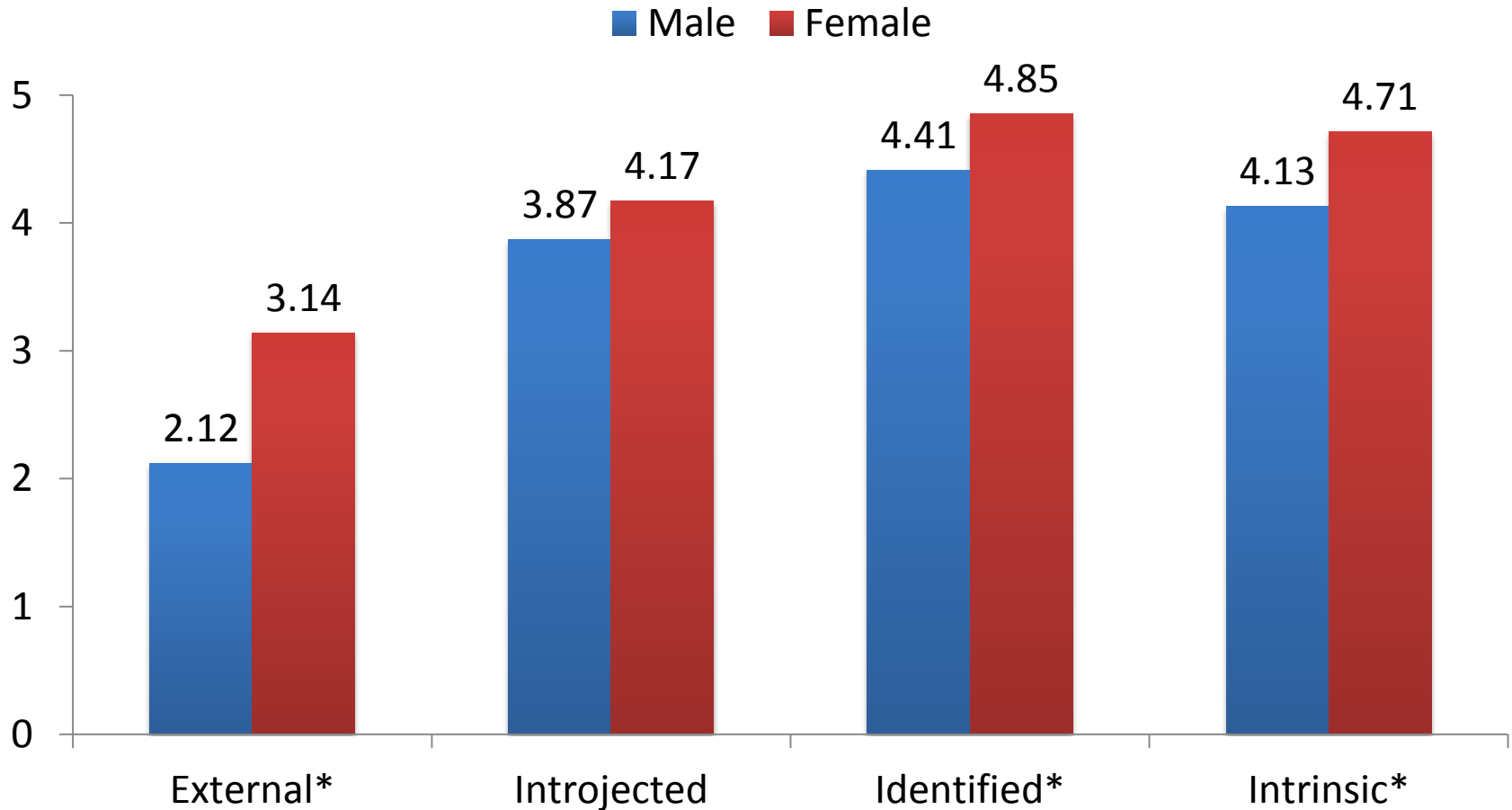
## Race/Ethnicity



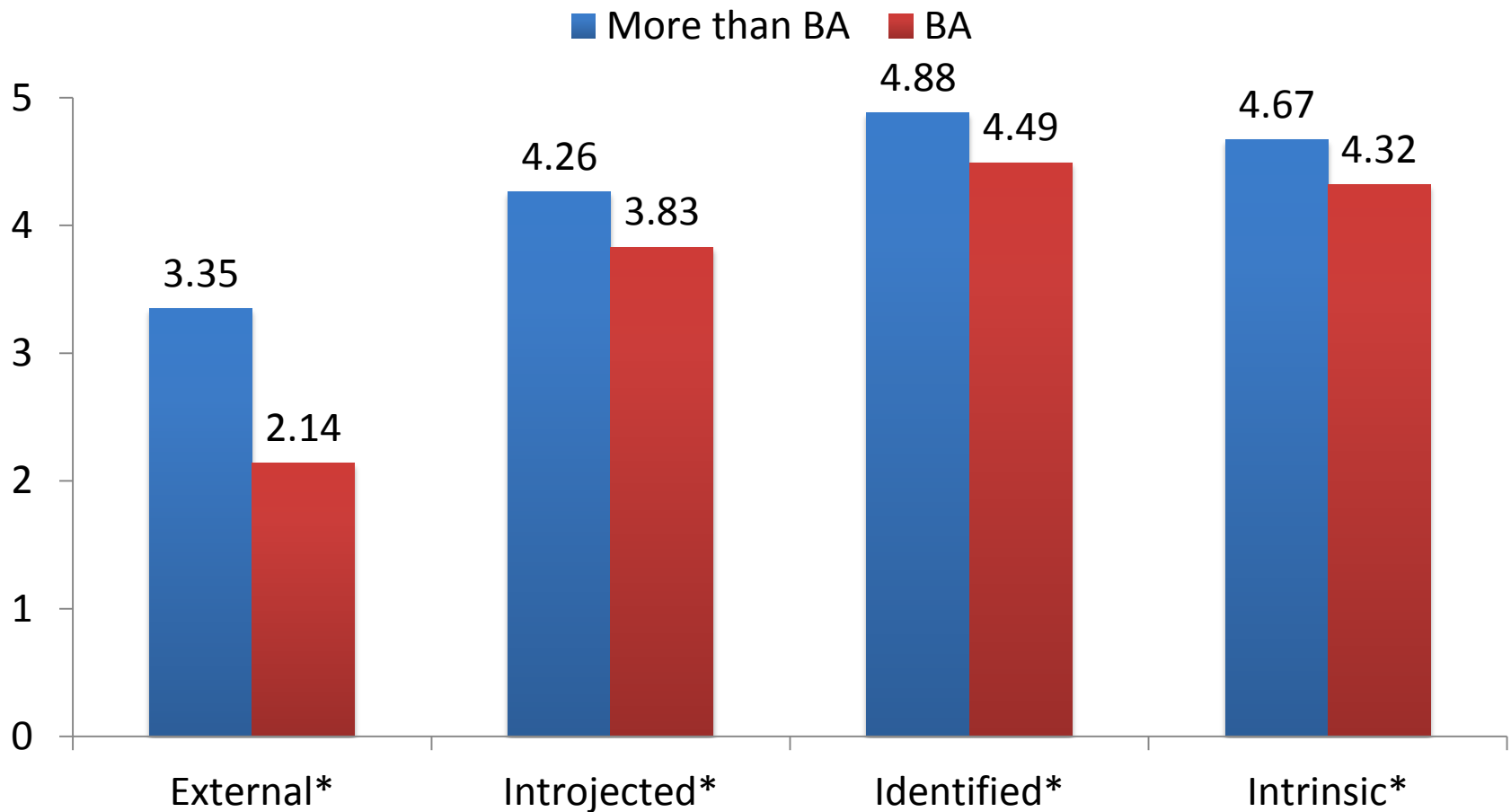
## Years in Profession



# Pre-training survey results



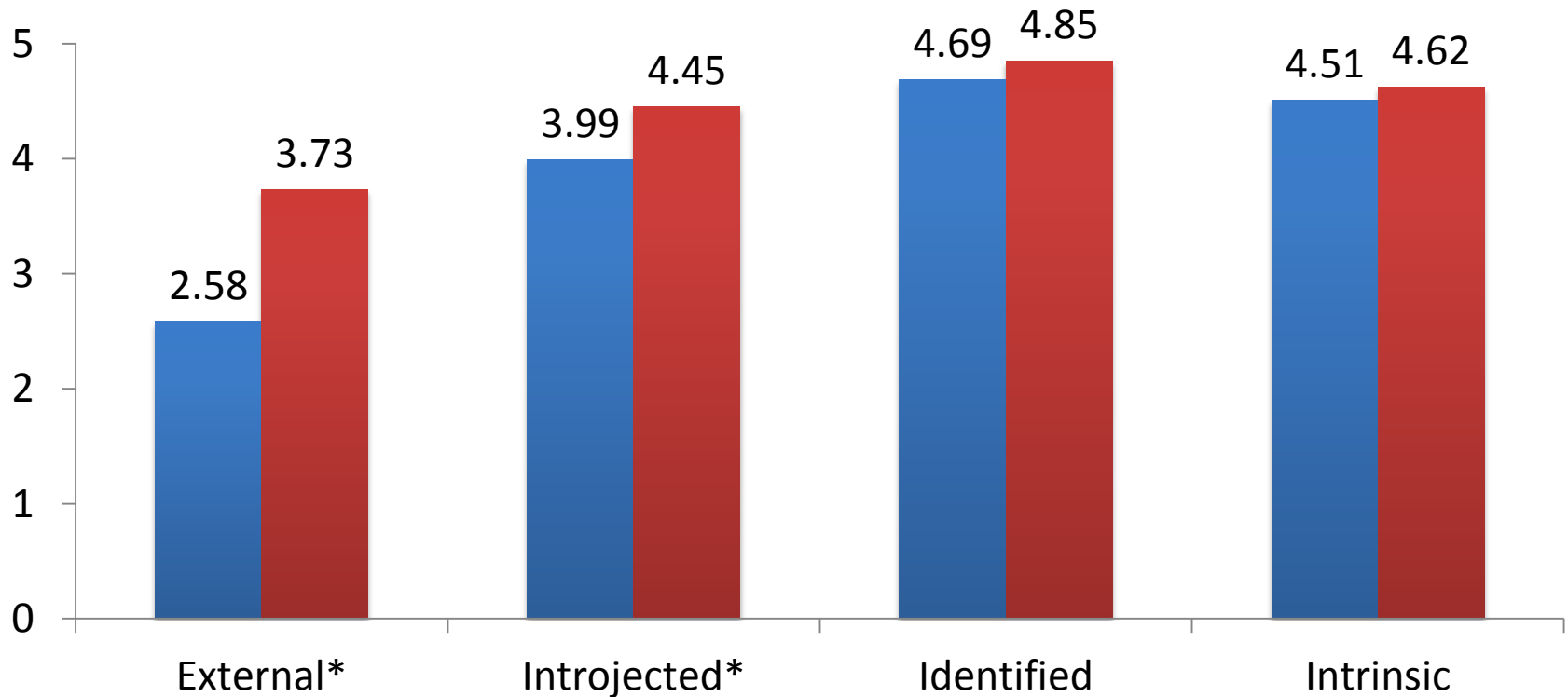
# Pre-training survey results



# Pre-training survey results

## Providing CBITS This Year?

■ Yes ■ No





# Post-training survey results

- Post-training: Higher motivation to attend associated with more positive CBITS perceptions
- Stronger and more common for identified regulation and intrinsic motivation
  - Perception of CBT effectiveness positively associated with introjected ( $r = .34$ ) and intrinsic ( $r = .41$ ) motivation
  - Perception of psychotherapy effectiveness associated with motivation ( $r = .37$  to  $.45$ )
  - Quality of program components associated with higher levels of introjected regulation, identified regulation, & intrinsic motivation ( $r = .36$  to  $.69$ ), but not external regulation
  - Perceived competence in implementing CBITS associated with greater intrinsic motivation ( $r = .30$ )

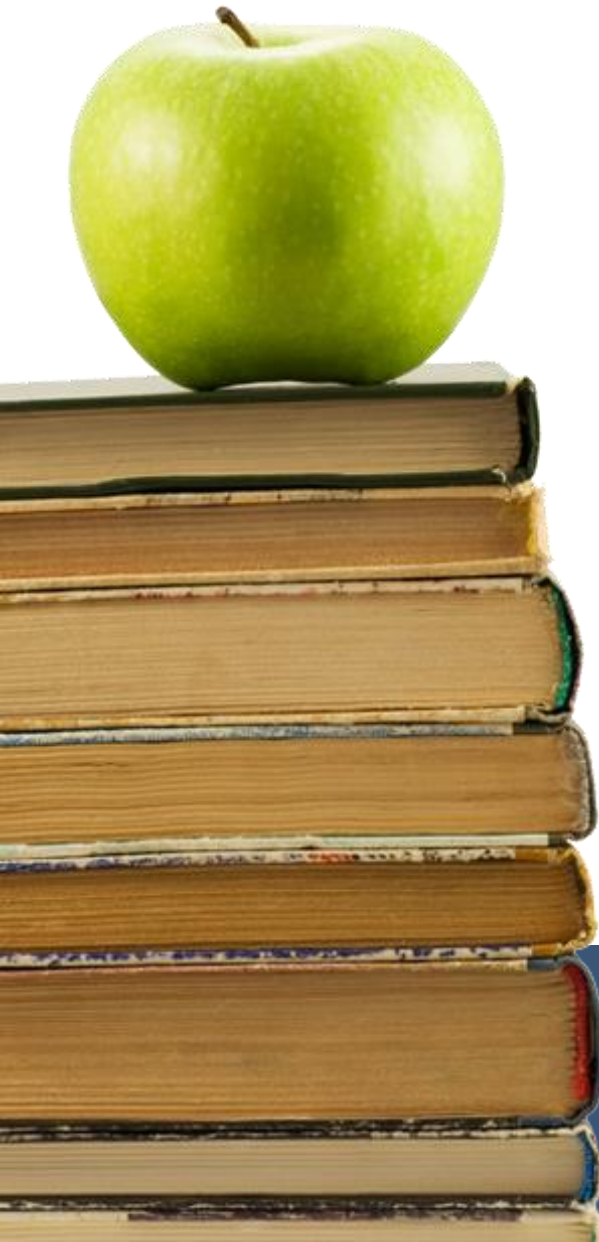
# Conclusion

- Motivational levels need to be considered in development & deployment of EBI training
- Different types of motivation to attend training linked to multiple outcomes regarding perceptions of program quality and trainees' perceived ability to implement EBI
- Overall pattern of associations suggests positive outcomes more strongly associated with participants' internal rather than external motivation
- Findings emphasize role of specific motivations & trainee characteristics in setting stage for high-quality implementation of EBIs by clinicians in schools



# Research Team

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# A Web-based Platform to Support the Implementation of CBITS

**Pamela Vona, M.A.**  
**Project Manager**  
**Treatment and Services Adaptation Center for  
Resiliency, Hope and Wellness in Schools**



**Treatment and Services Adaptation Center**  
for Resiliency, Hope, and Wellness in Schools

# What we'll cover:

- Address the gap between development and implementation of evidence-based practices in schools
- Provide an overview of the development and components of [www.cbitsprogram.org](http://www.cbitsprogram.org)
- Share how the website was used in its first year
- Address the potential role of web-based platforms in supporting the adoption and retention of EBPs in schools and other community settings.

# The EBP gap: Moving from development to implementation

- Evidence-based interventions can “languish” for 15-20 years before being implemented as standard practice in community settings (Boren & Balas, 1999)
  - Few clinicians currently enter the workforce trained to implement EBPs
  - Limited infrastructure, funding, and support for training in EBP in community settings
  - Lack of ongoing consultation: “train and hope” approach
- Can web-based platforms help to bridge this gap?



# What do we know about the use of web-based trainings?

- Increase in the use of web-based platforms to promote training
  - DBT
  - Substance Abuse
  - Trauma-informed CBT
- Online training can be as effective as in-person training at improving professionals' knowledge and skills



# Developing the CBITS website

- Created in collaboration by the original CBITS developers and the 3C Institute for Social Development



- Developed in response to the high demand for:
  - CBITS trainings
  - Implementation support



# CBITS website components

- Online Course
  - Slides
  - Training Videos
- Implementation Assistance Section
  - Materials and Forms
  - Quicktips
- Online Community Forum
  - Advice
  - Sharing materials

The screenshot shows the CBITS website homepage. At the top left is the logo for Cognitive Behavioral Intervention for Trauma in Schools (CBITS), featuring a stylized globe with the letters 'CBITS' inside. To the right of the logo is the text 'Cognitive Behavioral Intervention for Trauma in Schools'. Further right is a photograph of a young boy's face. In the top right corner, contact information is provided: 'Phone: 310-393-0411, ext. 5110' and 'E-mail: info@cbits.org or am.org'. Below the header is a navigation menu with buttons for 'Home', 'Learn More', 'About Us', 'Success Stories', and 'News'. The main content area is titled 'CBITS At-a-Glance' and contains several paragraphs of text describing the program, its target audience (students from 5th grade through 12th grade), and the techniques used (e.g., psychoeducation, relaxation, social problem solving). It also lists 'Access our Free Resources' and provides a list of resources available to users who register. A 'Take a CBITS Training Course' section is also present. On the right side of the page, there is a login section with fields for 'E-MAIL:' and 'PASSWORD:', a 'Log In' button, and a 'Forgot Password' link. Below the login section are two testimonials from participants, one from a fifth-grade participant and one from a ninth-grade participant. At the bottom of the page, it states 'Website produced using Interlink Training Dissemination Services' and provides the website URL 'www.interlink.org/trauma'.

# CBITSPROGRAM.ORG Year 1: What did we want to learn?

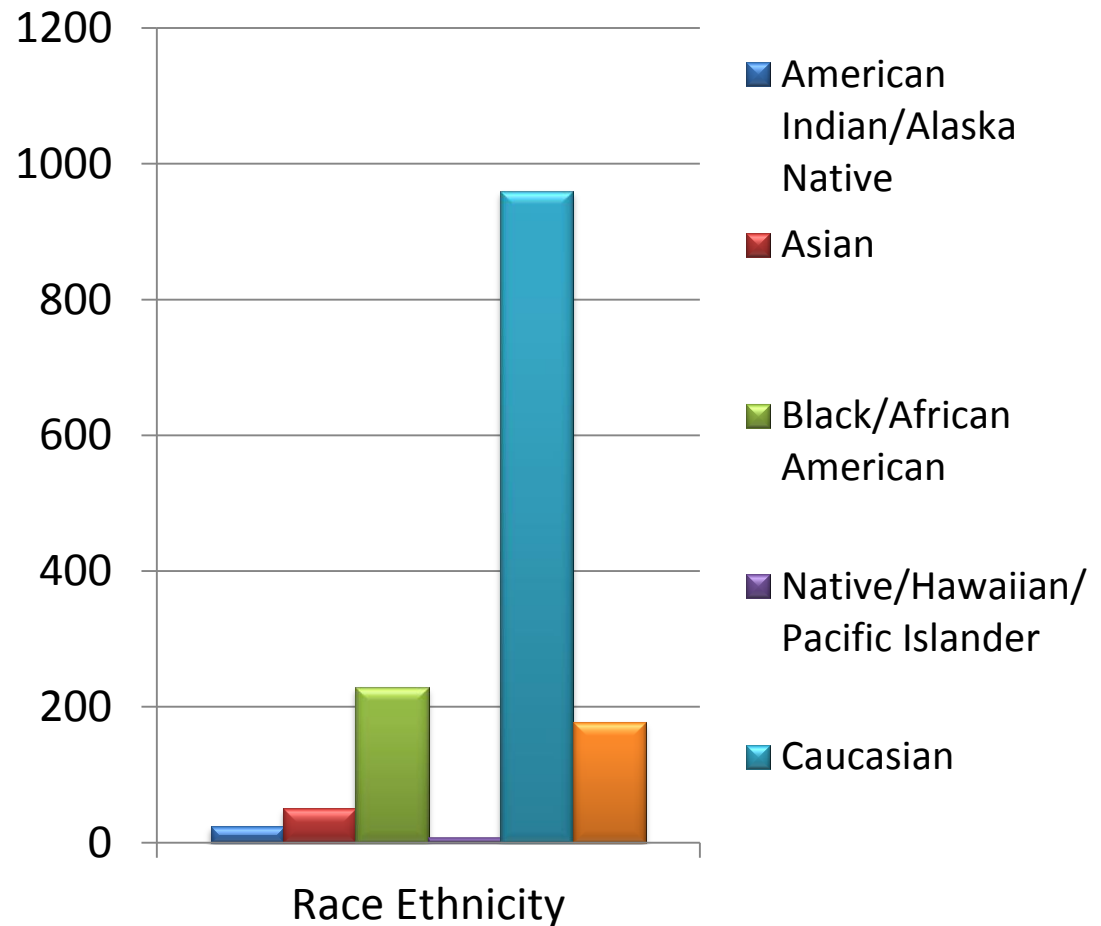
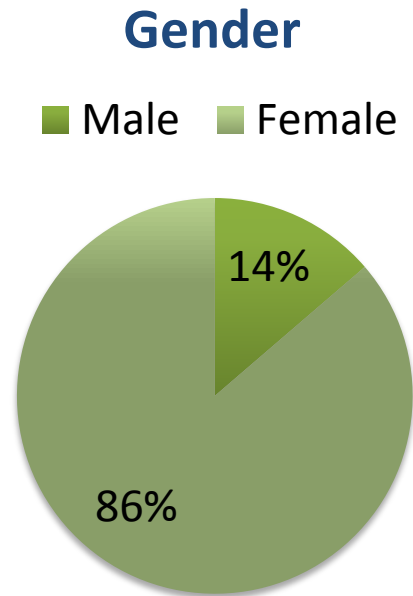
- We examined utilization of CBITS website users who registered from July 1, 2011-June 30, 2012 ( $n = 1,406$ )
- Research questions:
  - Who used the website?
  - How engaged were users?
  - How did users interact with website content?
  - Did engagement and/or usage vary by user characteristics?

# Who used the CBITS website?

- Users complete an online survey during the registration process, including:
  - Gender
  - Race/ethnicity
  - Highest degree
  - Years of experience
  - Experience with CBT
  - Prior training in CBITS

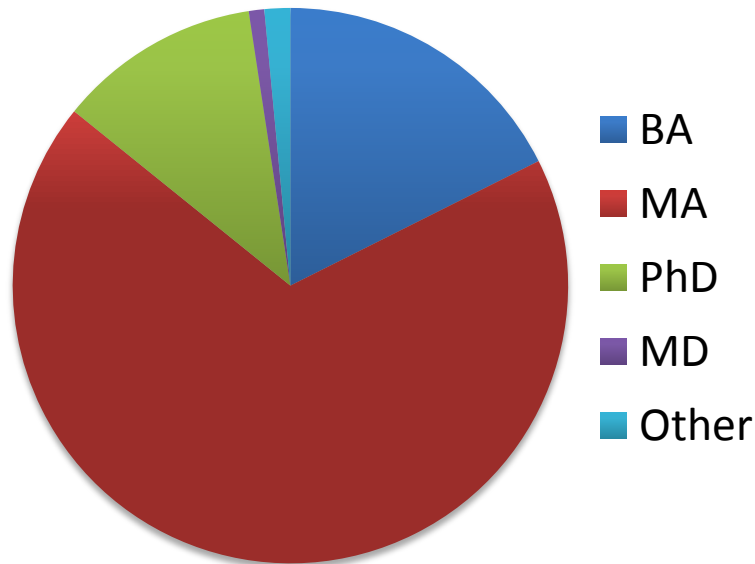


# Who used the CBITS website?

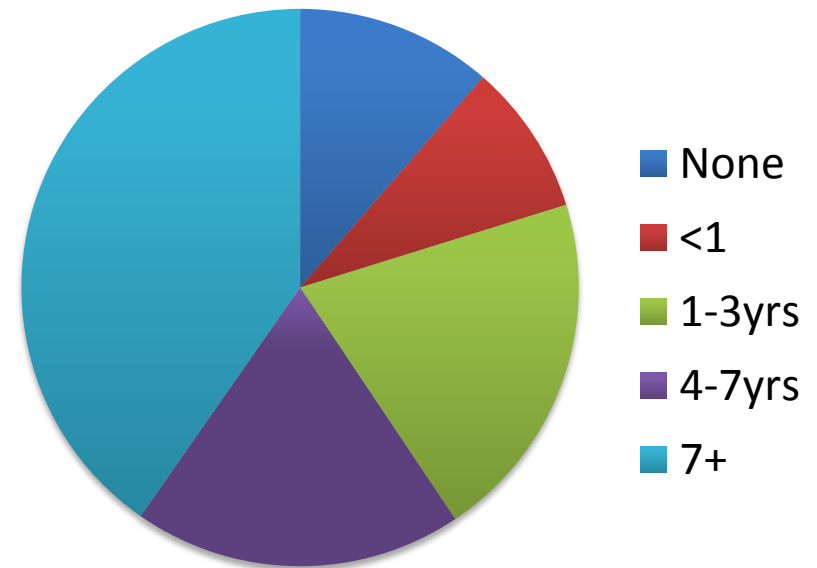


# Who used the CBITS website?

## Highest Degree

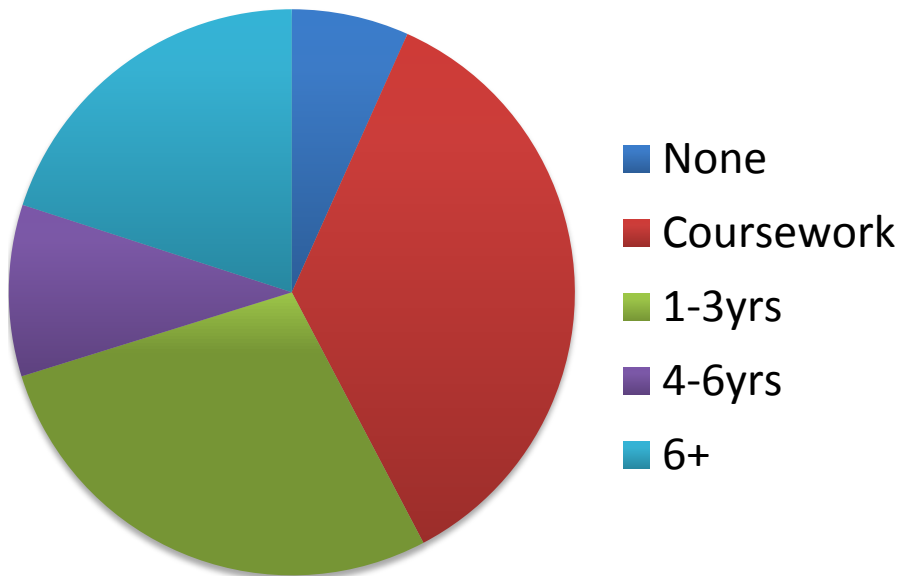


## Years of Experience as a Clinician

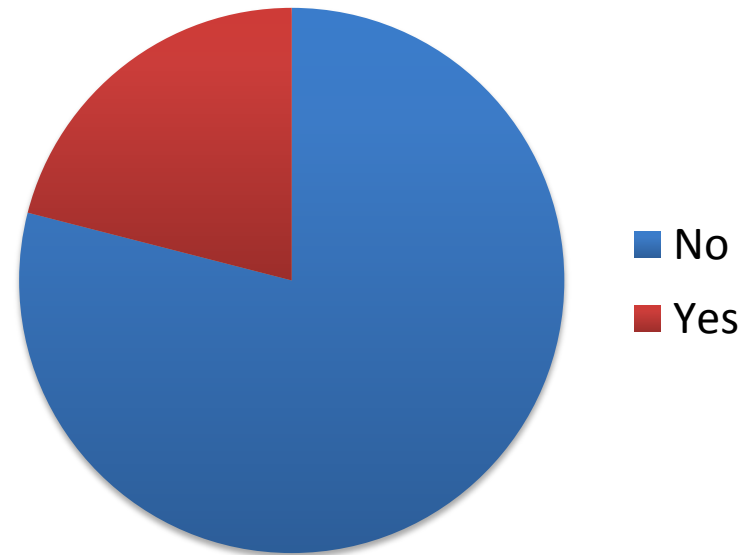


# Who used the CBITS website?

## Experience with CBT



## Prior Training in CBITS



# User engagement

## **Average Visit Duration:**

The average amount of time a user spends on the website per visit

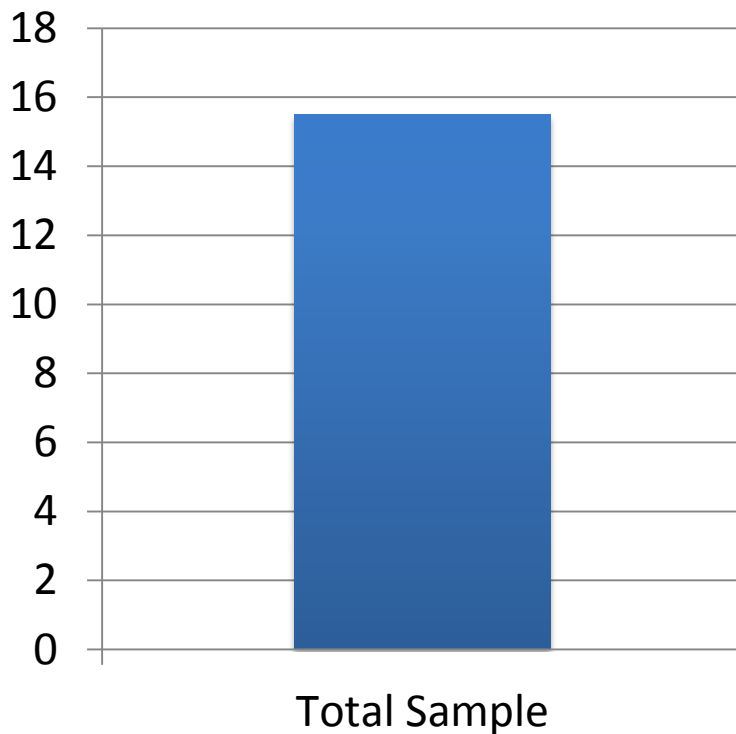
## **Pages Viewed per Visit:**

The average number of pages a user visits per visit

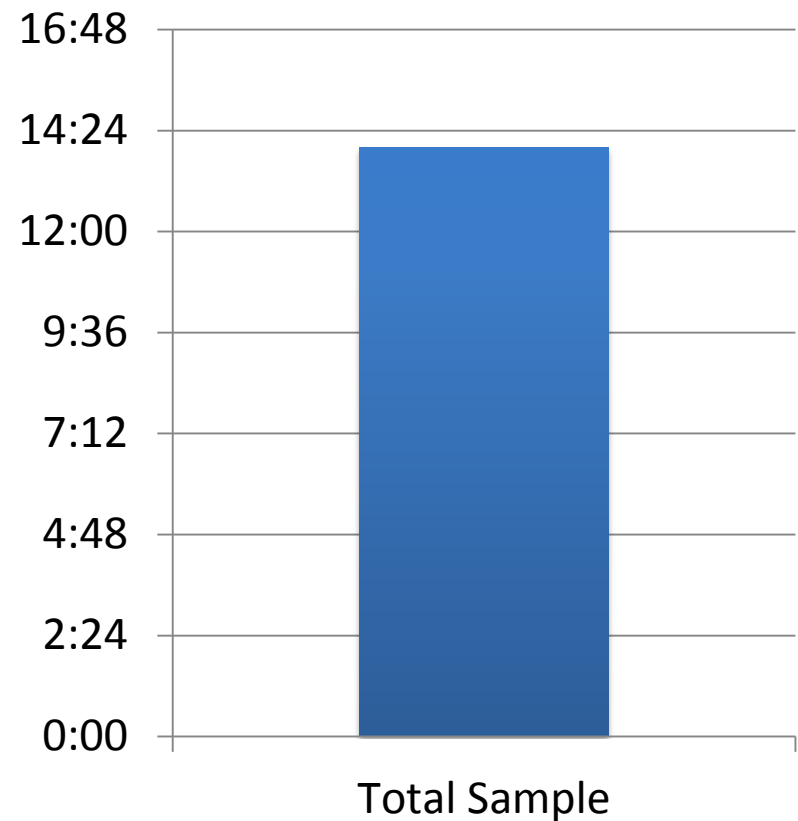


# Website engagement: Total sample

## Average Page Views per Visit



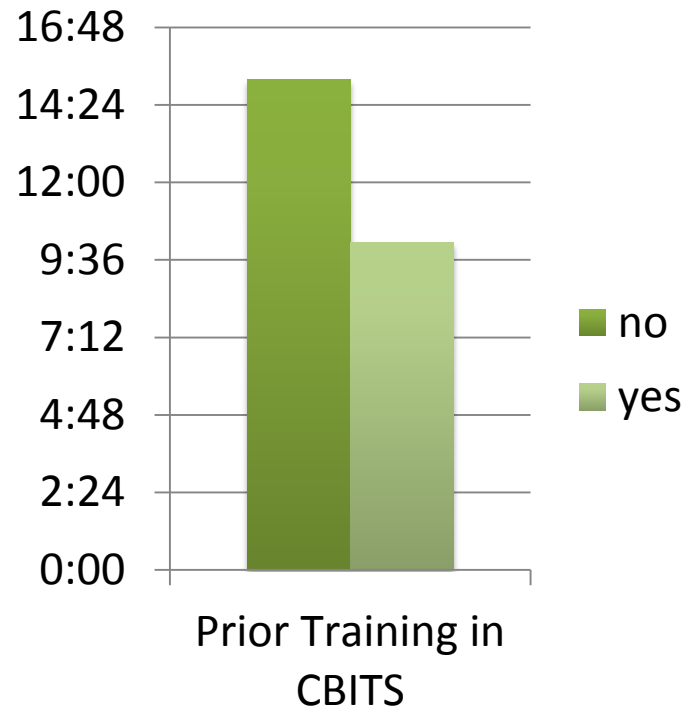
## Average Visit Duration



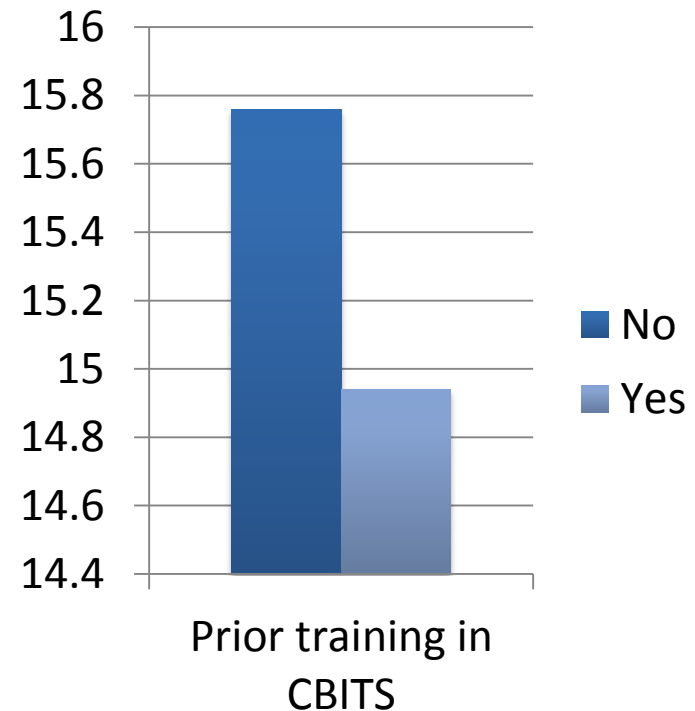


# Website engagement by prior training in CBITS

## Average Visit Duration

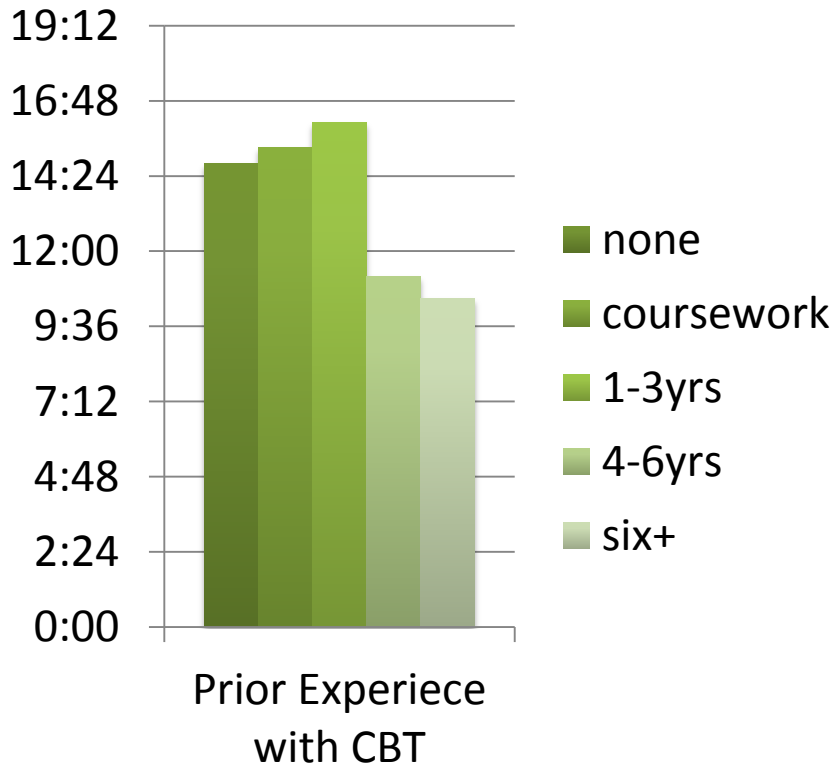


## Page Views per Visit

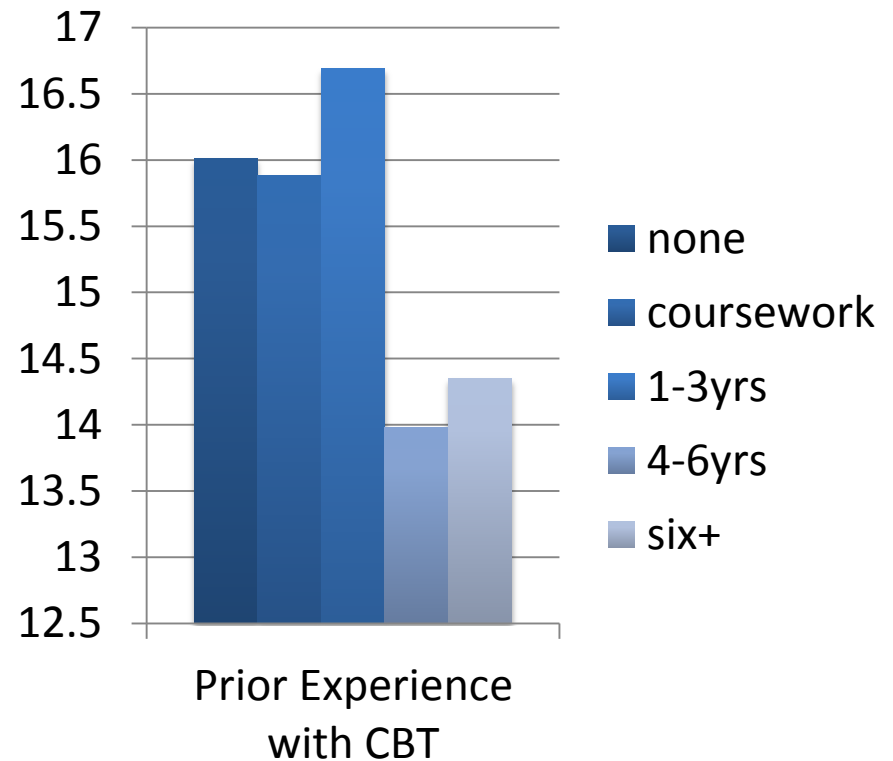


# Website engagement by prior experience with CBT

## Average Visit Duration

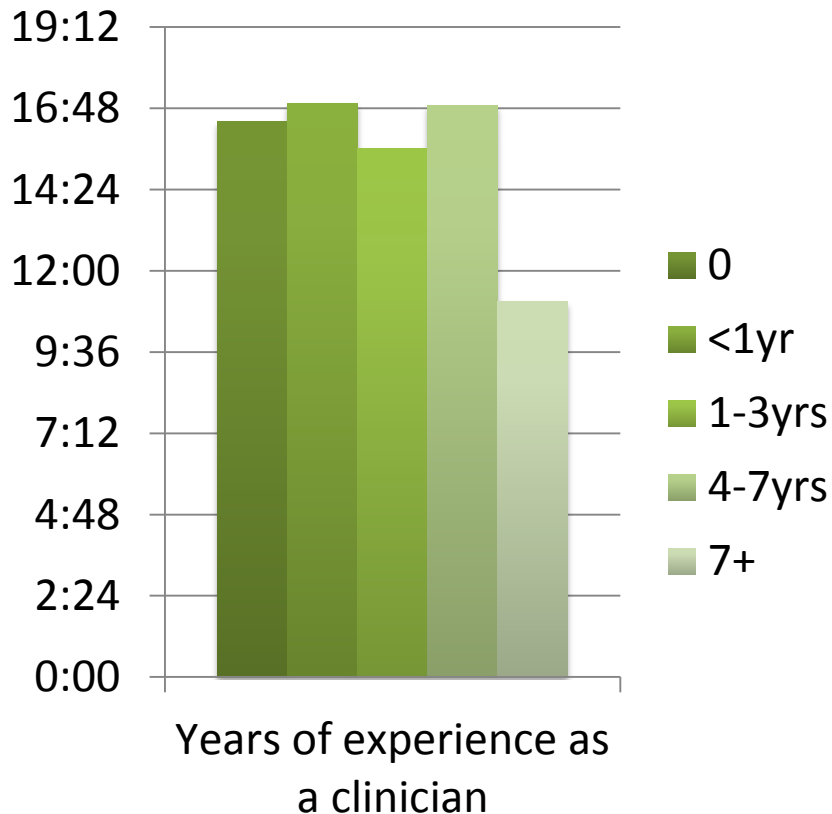


## Page Views per Visit

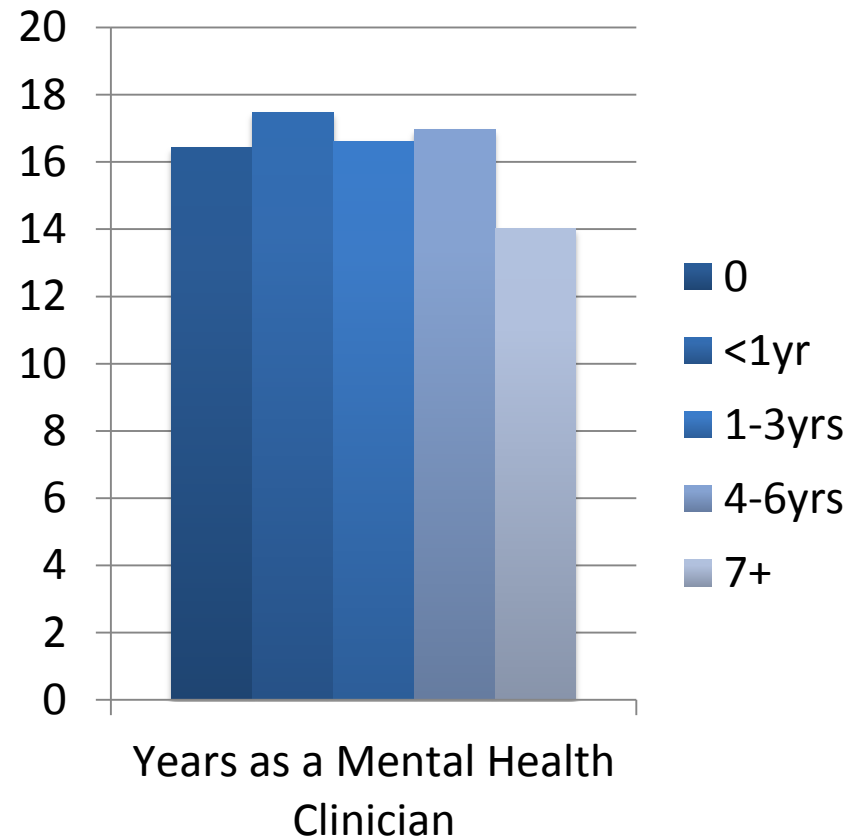


# Website engagement by years of experience as clinician

## Average Visit Duration

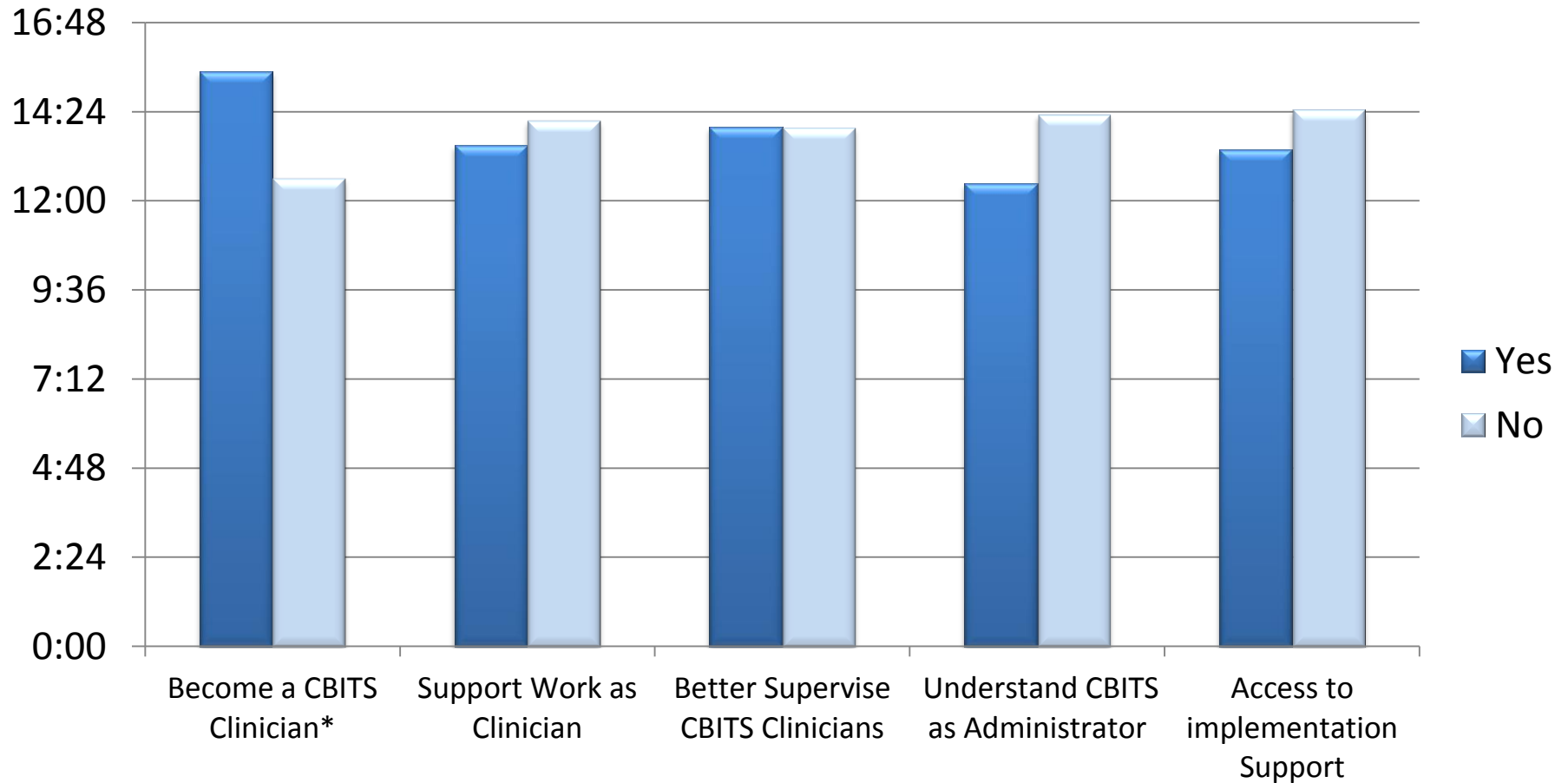


## Page Views per Visit



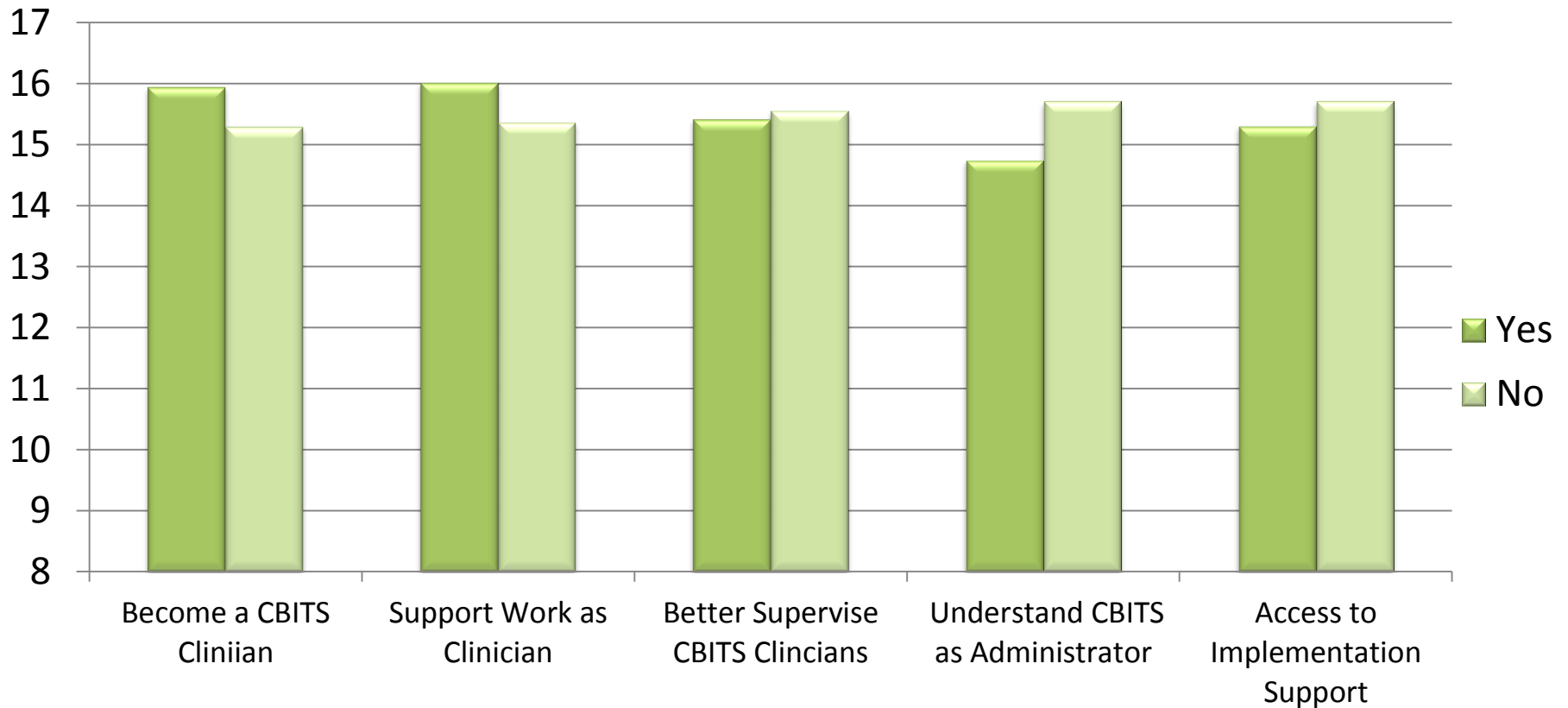
# Website engagement

## Average Visit Duration



# Website engagement

## Pages Viewed per Visit

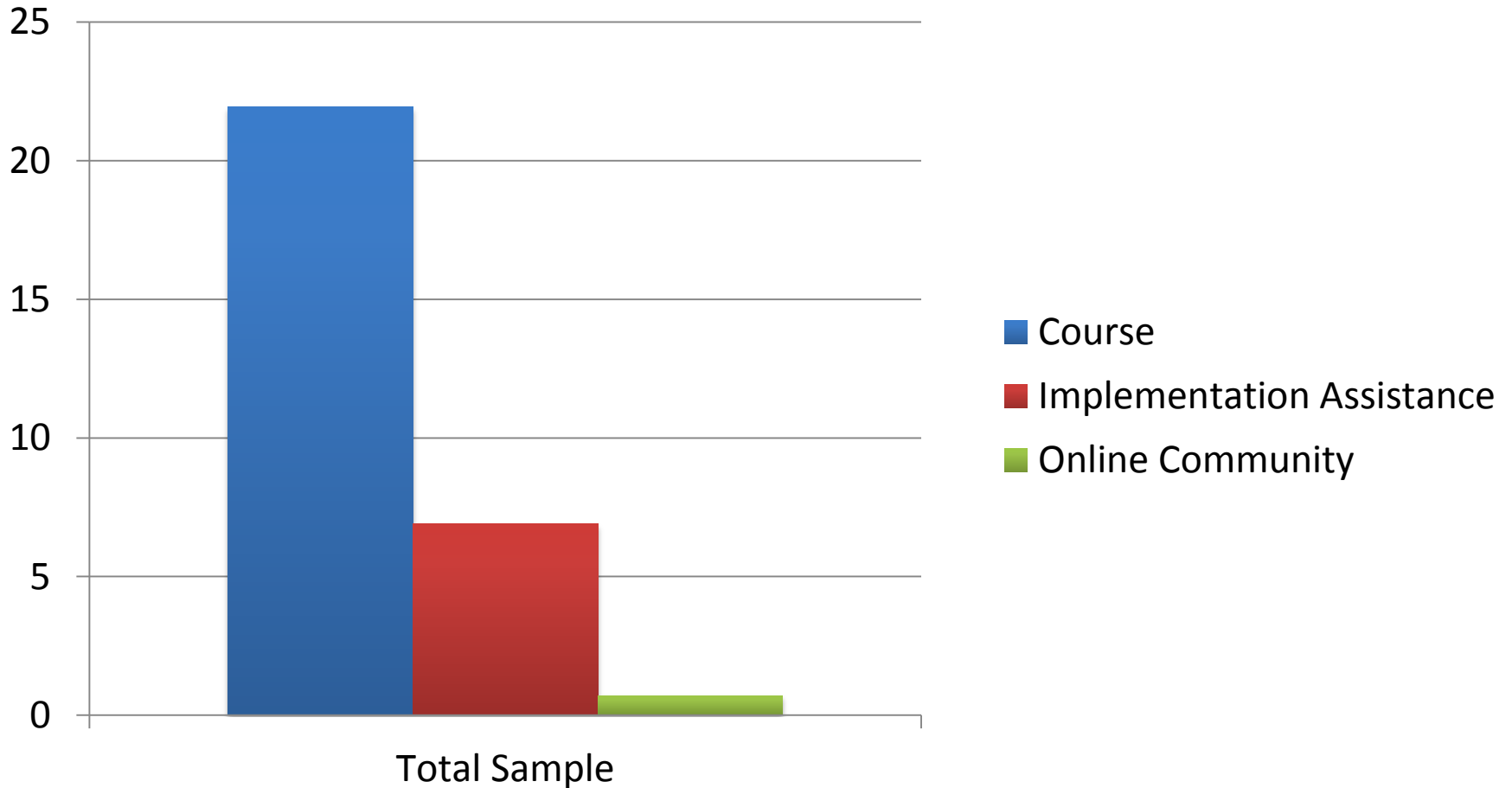


# Usage by content

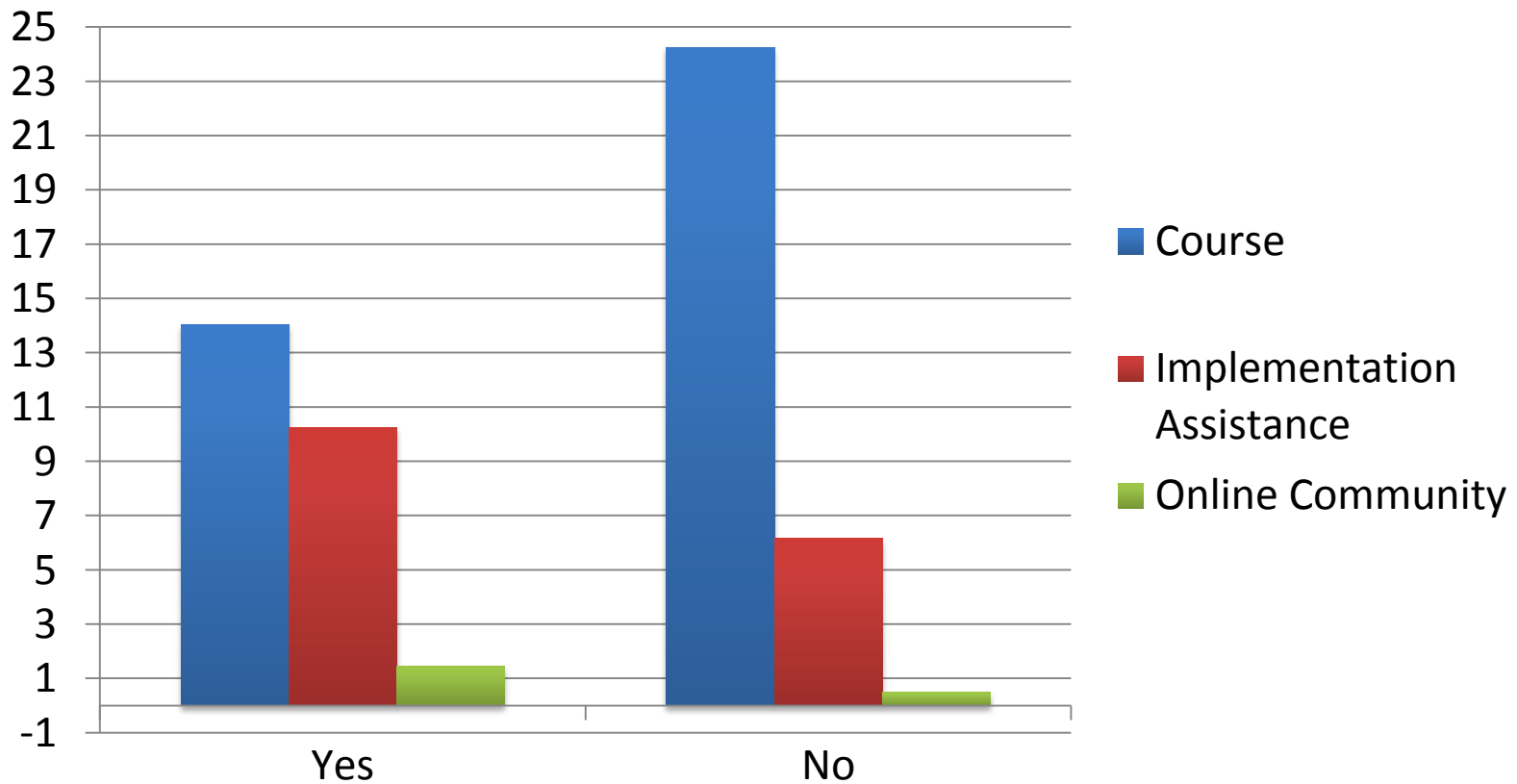
- **Page visits per section:** the number of pages a user visited in a particular section across all of their visits to the website



# Usage by section: Total sample



# Usage by section: Prior training in CBITS



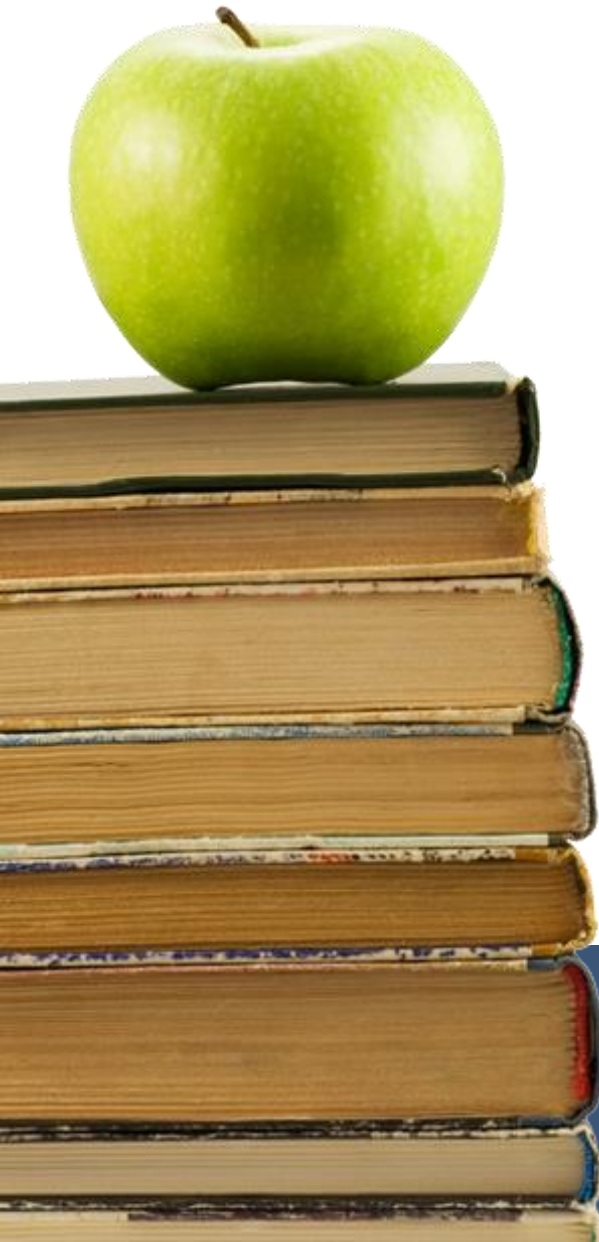


# What can we take away?

- Engagement was high
  - Those with experience in CBT and prior training in CBITS may be using the website to boost or refresh knowledge
- Clinicians using the website for implementation assistance and ongoing support had usage similar to those interested in training
  - May have implications enhancing sustainability
- Administrators were highly engaged
  - May have implications for supporting buy-in
- Course section received the most page views
  - Those previously trained are more likely to use other components of the website to support implementation

# Research Team

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# Discussion

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**School of Medicine**

