

# Predicting engagement of evidence-based interventions for at-risk youth with differential mental health needs.



Jennifer Duan<sup>2</sup>, Kimberlye E. Dean<sup>1</sup>, Nicole LeBlanc<sup>1</sup>, Lianna Karp<sup>1</sup>, E. David Zepeda<sup>3</sup> Derri L. Shtasel<sup>1</sup>, Luana Marques<sup>\*1,</sup> Soo Jeong Youn<sup>\*1</sup>

- Department of Psychiatry, Massachusetts General Hospital/Harvard Medical School
   Department of Psychiatry, Massachusetts General Hospital
   Department of Health Policy, Boston University School of Public Health
- \*Joint senior authorship

#### BACKGROUND

- Youth from high-risk communities lack access to traditional care from clinical providers. [1]
- Emotional health needs of youth from high-risk communities have been addressed by non-mental health specialists delivering evidence-based interventions. [2]
- The Thoughts, Emotions, and Behaviors (TEB) skills are 5 evidence-based emotion regulation interventions adapted specifically to be delivered by non-mental health specialists [3]
- Youth with differing levels of emotional health needs may require different dosages of evidence-based strategies to adequately address them. [2]

**Study Aim:** To examine whether youth with higher emotional health challenges are provided with more evidence-based intervention encounters from non-mental health specialists than those with less challenges.

#### METHODS

#### **Participants**

- Youth from a community organization (N=50)
  - Considered disengaged and disconnected
  - Mean GAD-7 score: 8.00 (+ 5.65)
  - Mean DERS-SF score: 41.00 (± 14.72)

#### Data Collection

 Organization staff recorded encounters with youth that included the TEB Skills using their programming platform.

#### Measures

- Generalized Anxiety Disorder-7 (GAD-7)
  - Total score: Higher scores indicate higher levels of anxiety
- Difficulties in Emotion Regulation Scale-Short Form (DERS-SF)
- Total score: higher scores indicate higher levels of emotion dysregulation
- DERS-SF subscales (higher scores indicate higher levels of dysregulation in each of the subscale domains)
  - Awareness: lack of emotional awareness
  - Clarity: lack of emotional clarity
  - Goals: difficulty engaging in goal-directed thinking and behaviors when distressed
  - Impulse: difficulty regulating behavior when distressed
  - Non-acceptance: unwillingness to accept certain emotional responses
- Strategies: lack of access to strategies for feeling better when distressed

#### METHODS Cont.

#### Measures cont.

 Total number of TEB Skill encounters: A total number of encounters with TEB skills was calculated for each youth.

#### Data Analysis

Note: R<sup>2</sup>=.015 (N=50, p=.701)

Note:  $R^2$ =.15 (N=50, p=.408) \*=p<.05

- Multiple linear regression
  - used to determine the relationship between total anxiety scores, total emotion dysregulation scores, and total number of TEB skill encounters.
  - used to determine the relationship between total anxiety scores, emotion dysregulation subscale scores, and total number of TEB skill encounters.

#### RESULTS

## Regression Coefficients for predicting Total TEB Skill Encounters in vouth

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Variable	В	95% CI (LB)	95% CI (UB)	β	t	p
Total Generalized Anxiety Score	214	767	.338	146	780	.439
Total Emotion Dysregulation Score	.079	133	.291	.105	.746	.459

### Regression Coefficients for predicting Total TEB Skill Encounters in

			youth			
Variable	В	95% CI (LB)	95% CI (UB)	β	t	p
Total Generalized Anxiety Score	037	669	.596	025	117	.908
Emotion Dysregulation Subscale: Awareness	.347	561	1.254	.113	.771	.445
Emotion  Dysregulation  Subscale: Clarity	.403	832	1.637	.134	.658	.514
Emotion  Dysregulation  Subscale: Goals	911	-1.897	.075	418	-1.865	.069
Emotion Dysregulation Subscale: Impulse	1.107	.173	2.041	.522	2.392	.021*
Emotion Dysregulation Subscale: Nonacceptance	.015	-1.014	1.044	.976	.030	.976
Emotion Dysregulation Subscale: Strategies	441	-1.720	.838	.490	696	.490

#### RESULTS Cont.

- No significant relation between youth total anxiety scores, total emotion dysregulation scores, and total number of TEB encounters
- Youth with greater difficulties in regulating behavior when distressed (Impulse subscale) at baseline had more TEB skill encounters
- No significant relationships between Total number of TEB skills encounters and the other DERS-SF subscales

#### CONCLUSIONS

- Non-mental health specialists are having more TEB skill encounters with youth with baseline higher impulsivity.
- These staff may identify at-risk youth more easily through externalizing behavior, such as impulsivity, compared to internal markers of emotional health issues.
- Consideration for future investigations:
  - Explore whether different types of mental health challenges (eg., anxiety, depression, trauma) differentially predict more or less encounters of TEB skills, and whether it affects impact/effectiveness
  - Explore whether youth level characteristics, such as youth willingness to engage with the TEB skills, impact the number of encounters with TEB skills

#### REFERENCES

- 1.Mihaila, I., Berg, K. & Acharya, K. (2021). Associations Between Participation and Mental Health for Vulnerable Youth with Special Healthcare Needs. *Maternal and Child Health Journal*, *25*, 1482–1490. <a href="https://doi.org/10.1007/s10995-021-03186-4">https://doi.org/10.1007/s10995-021-03186-4</a>
- 2. Valentine, S. E., Ahles, E. M., Dixon De Silva, L. E., Patrick, K. A., Baldwin, M., Chablani-Medley, A., Shtasel, D. L., & Marques, L. (2019). Community-Based Implementation of a Paraprofessional-Delivered Cognitive Behavioral Therapy Program for Youth Involved with the Criminal Justice System. *Journal of health care for the poor and underserved*, 30(2), 841–865.

https://doi.org/10.1353/hpu.2019.0059

3.Marques, L., LeBlanc, N.J., Bartuska, A.D., Kaysen, D., and Youn, S.J. (2020). *TEB Skills: Empower Youth and Build Resilient Communities through Skills that Impact Thoughts, Emotions, and Behaviors.* The Massachusetts General Hospital, Inc.