

# **EVIDENCE BASED ASSESSMENT (EBA) INITIATIVE FINAL RESULTS BHSB – SCHOOL YEAR 2019-2020**

Summer 2020



**Behavioral Health System**  
Baltimore

# OBJECTIVES

- Describe the Expanded School Behavioral Health Program and historic evaluation tools utilized
- Provide an overview of the Evidence Based Assessment (EBA) Initiative purpose and process
- Review the results of the EBA Initiative for the 2019-200 School Year
- Discuss the findings summary and lessons learned to improve future EBA Initiatives

# **EXPANDED SCHOOL BEHAVIORAL HEALTH (ESBH)**

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Overview- School Year 2019-2020

**SCHOOL  
YEAR  
2019-2020**

**PROGRAM  
OVERVIEW**

- **Early Childhood Mental Health**
  - FY2020 ECMH program facilitates access to early childhood mental health consultation in **3 Head Start Programs**
- **Expanded School Mental Health**
  - FY2020 Expanded School Mental Health (ESMH) program facilitates access to school-based outpatient services in **119 public schools.**
- **School Based Substance Use Disorder Program**
  - FY2020 School Based SUD Program facilitates access to school-based outpatient services in **15 public schools.**
- **Includes**
  - Prevention
  - Early Intervention
  - Ongoing Care

# **EVIDENCE BASED ASSESSMENT (EBA) INITIATIVE**

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Overview- Historic and School Year 2019-2020

## **HISTORIC OVERVIEW**

## **IDENTIFIED OUTCOMES**

- Student Attendance: percentage of students attending at least 90% of school days
- Suspension: percentage of students with no suspensions after beginning services
- Special Education referrals: decrease in the number of behavior-based referrals to IEP teams
- Promotion: percentage of students promoted to the next grade

## **HISTORIC OVERVIEW**

## **PREVIOUS EVALUATIONS**

- Georgetown University
  - Comprehensive program evaluation
  - Found that students receiving ESMH services had increased promotions, better attendance and less suspensions than their peers not receiving services
- 2015 Re-Evaluation
  - Conducted of a sample of schools
  - Found better attendance and fewer suspensions

**SCHOOL  
YEAR  
2019-2020**

**EVIDENCE  
BASED  
ASSESSMENT  
(EBA)  
INITIATIVE**

- **Evidence-Based Assessment (EBA)** Initiative involves:
  - Use of assessments that are reliable, valid, and clinically useful for the intended population
  - Data collection at regular intervals throughout treatment
  - Informing diagnosis, treatment planning, and outcome
  - Ongoing progress monitoring to inform changes in treatment



**SCHOOL  
YEAR  
2019-2020**

**EVIDENCE  
BASED  
ASSESSMENT  
(EBA)  
INITIATIVE**

- **Purpose of the EBA Initiative:**
  - Facilitate program evaluation in a way that reduces bias and improves accuracy
  - Support data-informed decision making in schools
  - Support school behavioral health quality and accountability

**SCHOOL  
YEAR  
2019-2020**

**EVIDENCE  
BASED  
ASSESSMENT  
(EBA)  
INITIATIVE**

- **EVIDENCE-BASED ASSESSMENT**
  - Selected Tool: PSC-17
  - Sample Size: Six (6) youth per school
- **THE PEDIATRIC SYMPTOMS CHECKLIST (PSC-17)**
  - A psychosocial questionnaire with 3 subscales:
    - Attention Problems
    - Internalizing Problems
    - Externalizing Problems
  - Assessment Purpose: Screening, Initial Assessment, Progress Monitoring, and Treatment Outcome
  - Two versions:
    - Parent version (PSC-17): Ages 3-16
    - Youth Self-Report (PSC-17): Ages 17-18

**SCHOOL  
YEAR  
2019-2020**

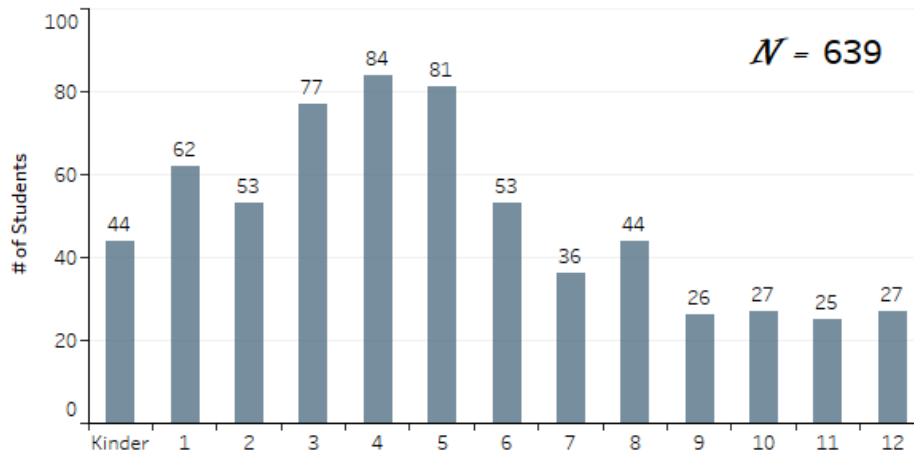
**EVIDENCE  
BASED  
ASSESSMENT  
(EBA)  
INITIATIVE**

- **Subscales:**
  - Attention
    - Fidgety
    - Unable to sit still
    - Daydreams too much
    - Has trouble concentrating
    - Acts as if driven by a motor
    - Distracted easily
  - Externalizing
    - Refuses to share
    - Does not understand other people's feelings
    - Fights with other children
    - Blames others for his/her troubles
    - Does not listen to rules
    - Teases others
    - Takes things that do not belong to him/her
  - Internalizing
    - Feels sad, unhappy
    - Feels hopeless
    - Is down on self
    - Seems to be having less fun
    - Worries a lot

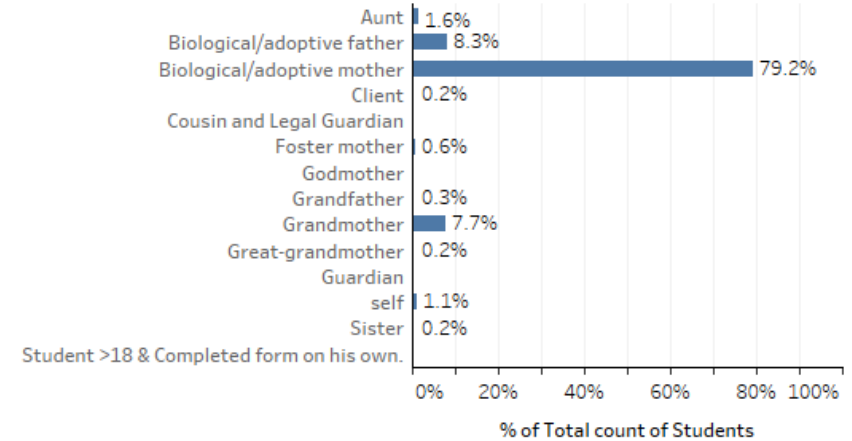
# EBA BASELINE - DEMOGRAPHICS

## EBA Base Line Result

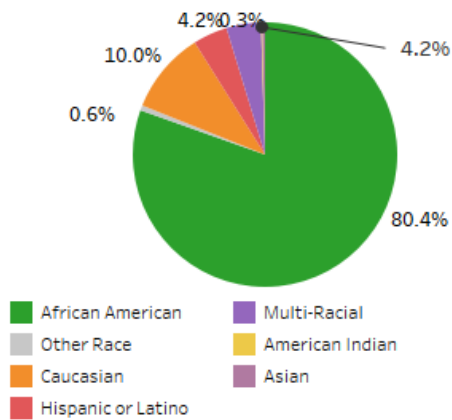
### Grade Distribution



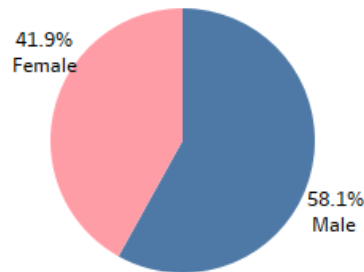
### Caregiver Relationship



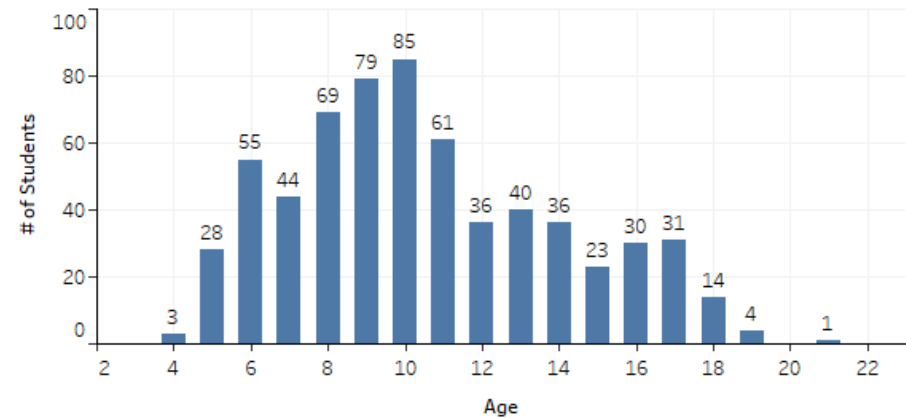
### Race/Ethnicity



### Gender



### Age Distribution

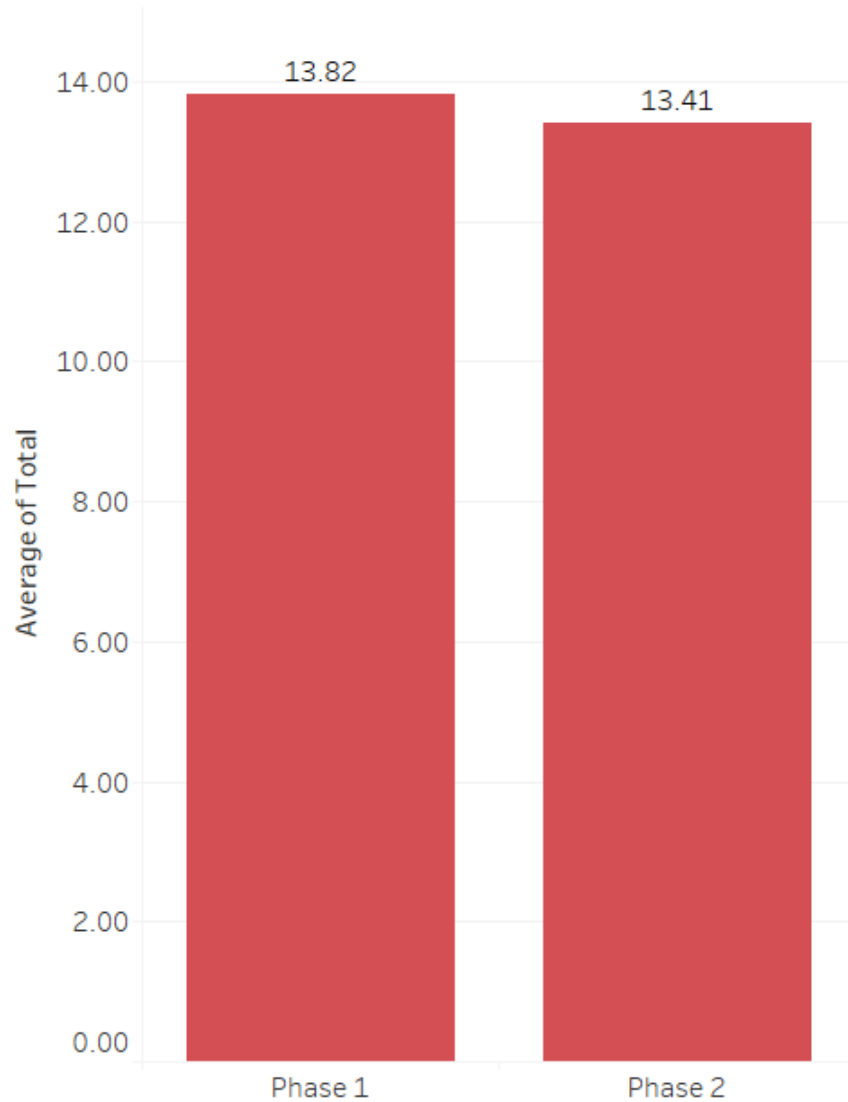


# **EBA RESULTS – MENTAL HEALTH RISK AND SUBDOMAINS**

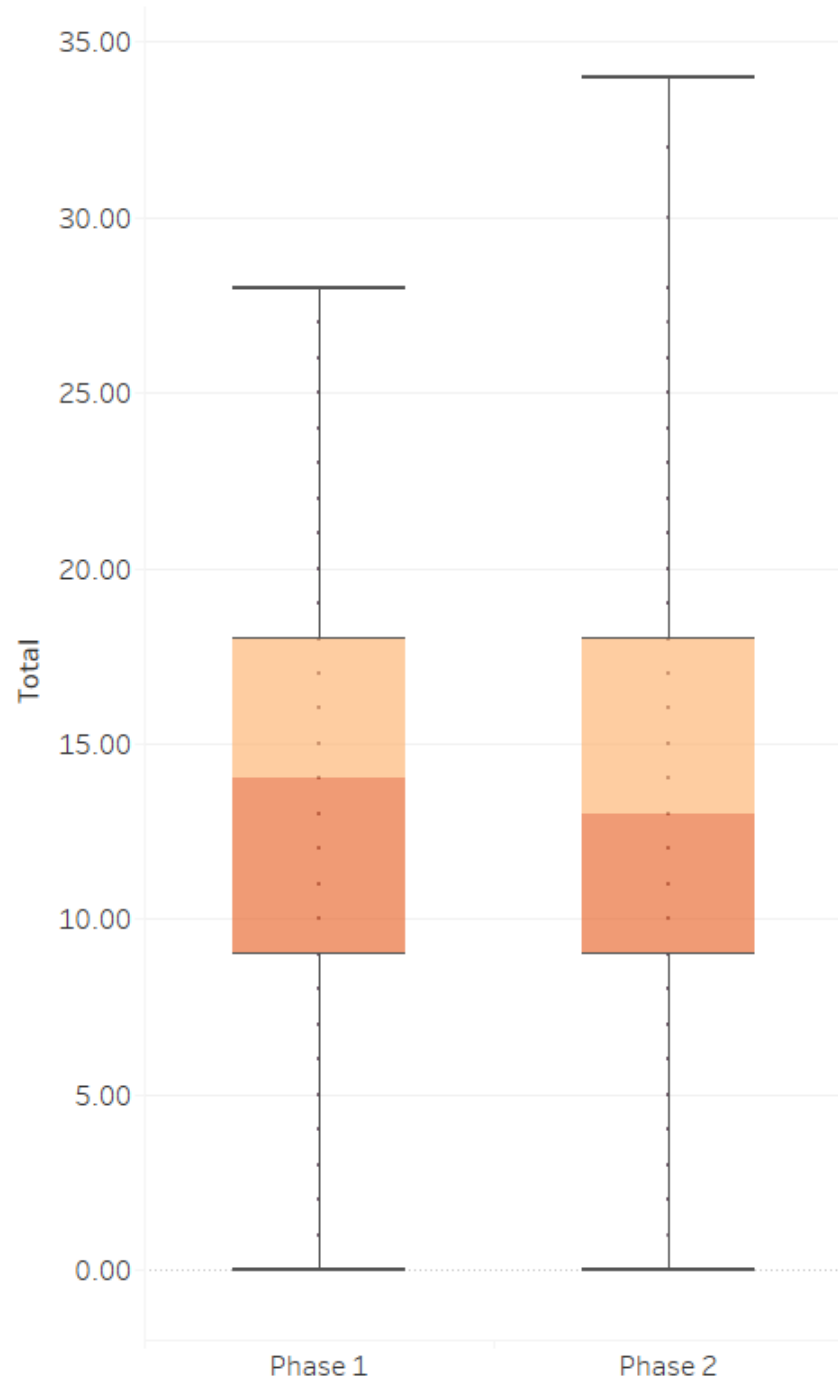
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Overall Results- School Year 2019-2020

# EBA Results of Total PSC-17 Score SY2019-2020 - Phase 1 vs Phase 2

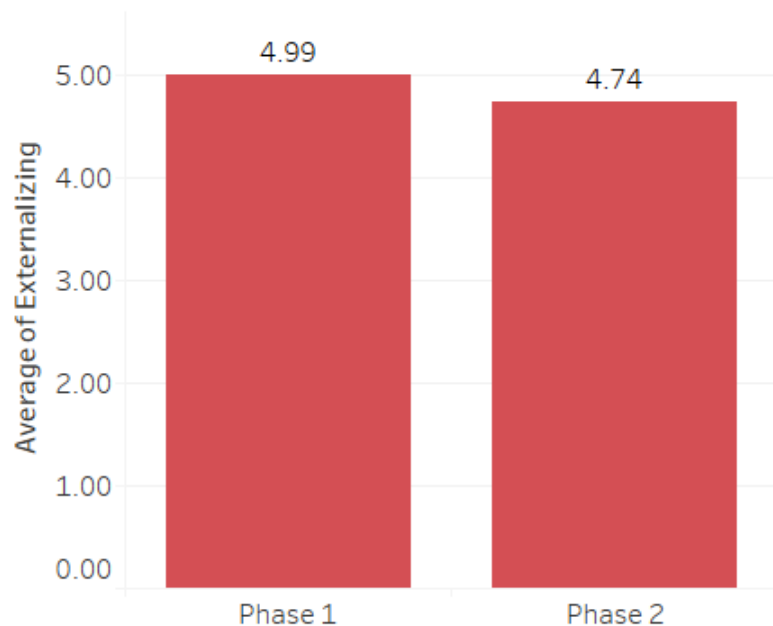
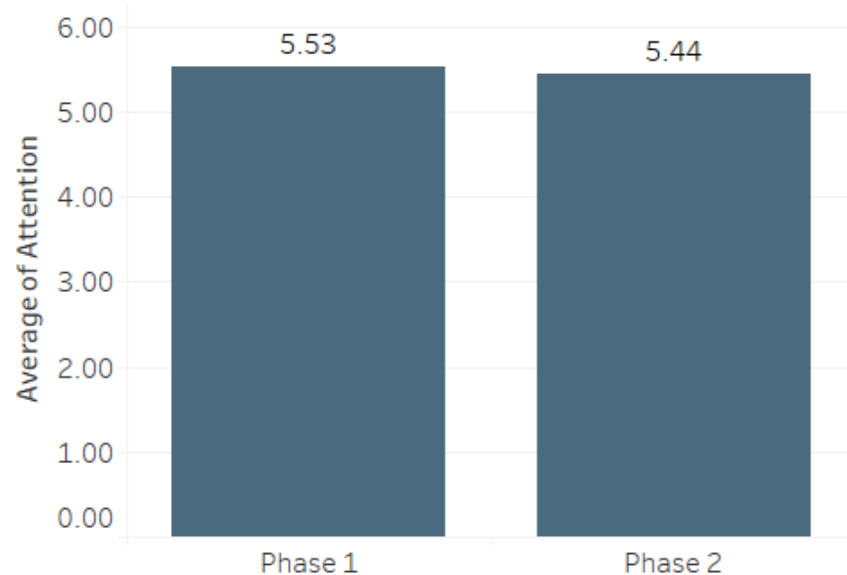
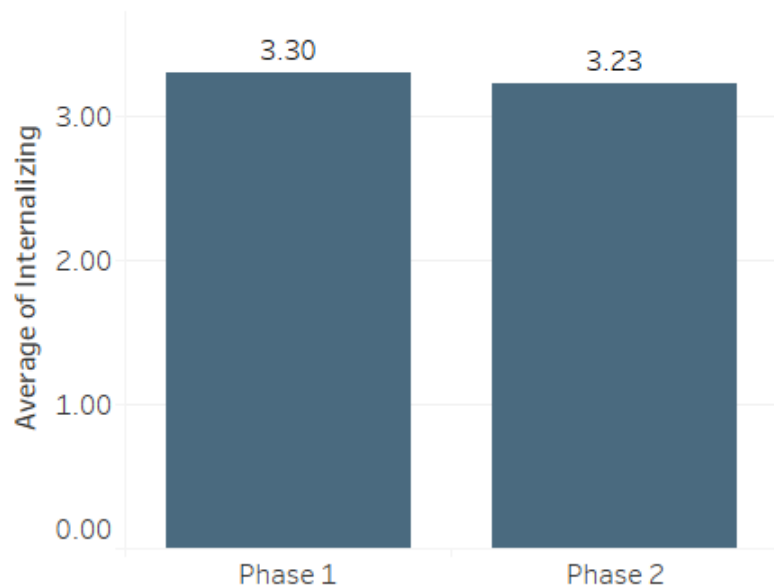


n=511; p < .05\*



# EBA Results of PSC-17 Subscale Scores

## SY2019-2020 - Phase 1 vs Phase 2



Subscale Scores: n=511  
Internalizing:  $p > .05$   
Attention:  $p > .05$   
Externalizing:  $p < .05^*$

# **EBA RESULTS – MENTAL HEALTH RISK BY GENDER\* AND RACE**

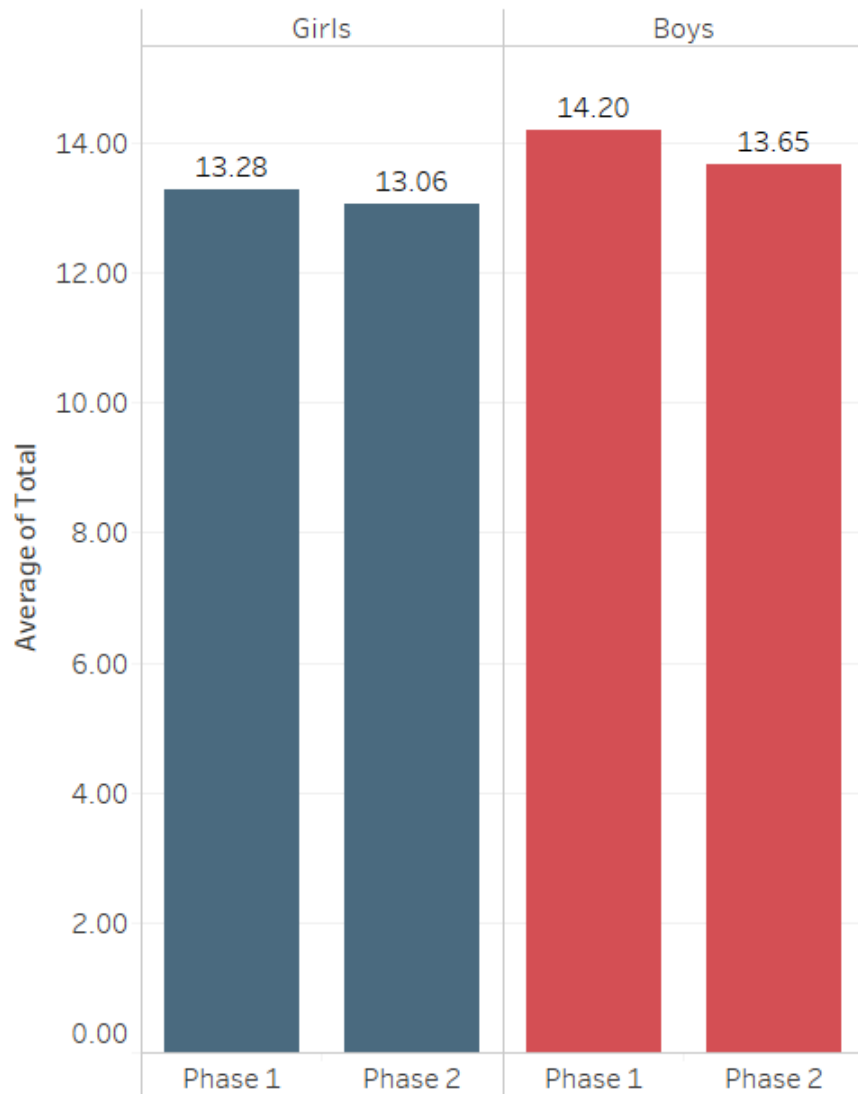
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Stratified Data Analysis- School Year 2019-2020



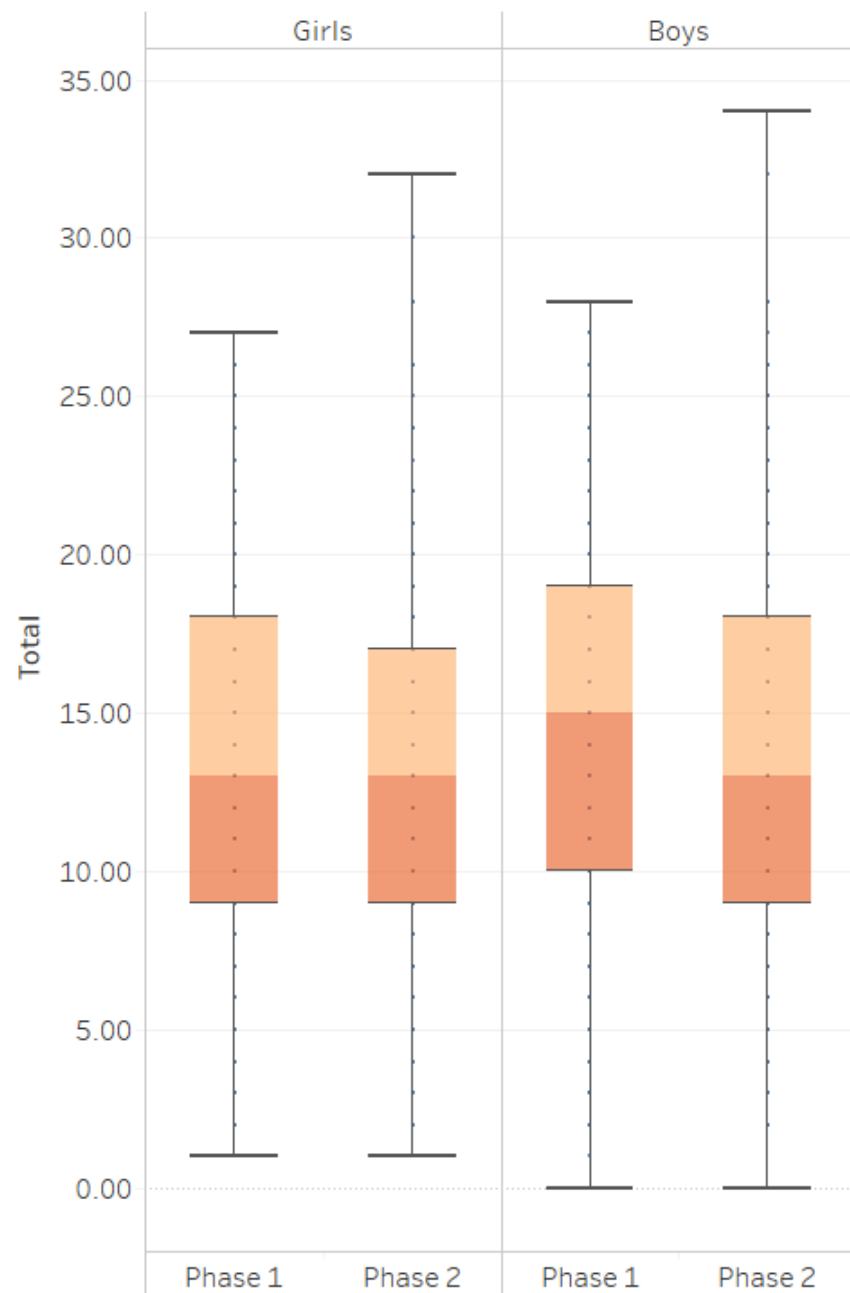
# EBA Results of Total PSC-17 Score by Gender

## SY2019-2020 - Phase 1 vs Phase 2



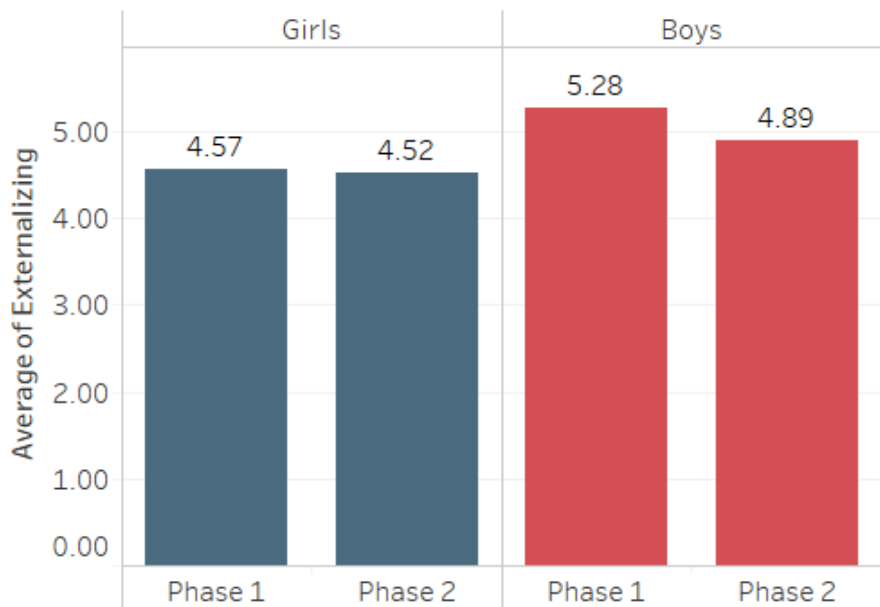
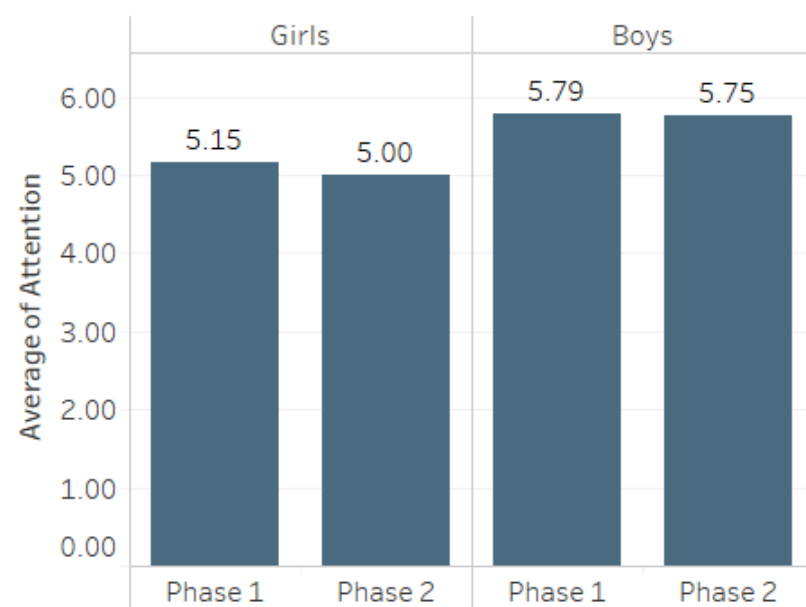
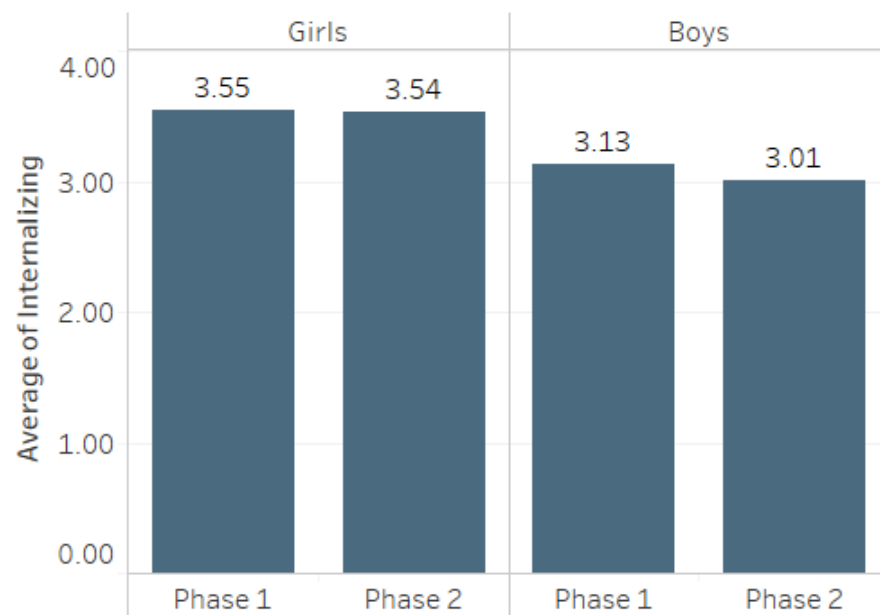
Girls:  $n=210$ ;  $p > .05$

Boys:  $n=301$ ;  $p < .05^*$



# EBA Results of PSC-17 Subscale Scores by Gender

## SY2019-2020 - Phase 1 vs Phase 2



Girls: n=210

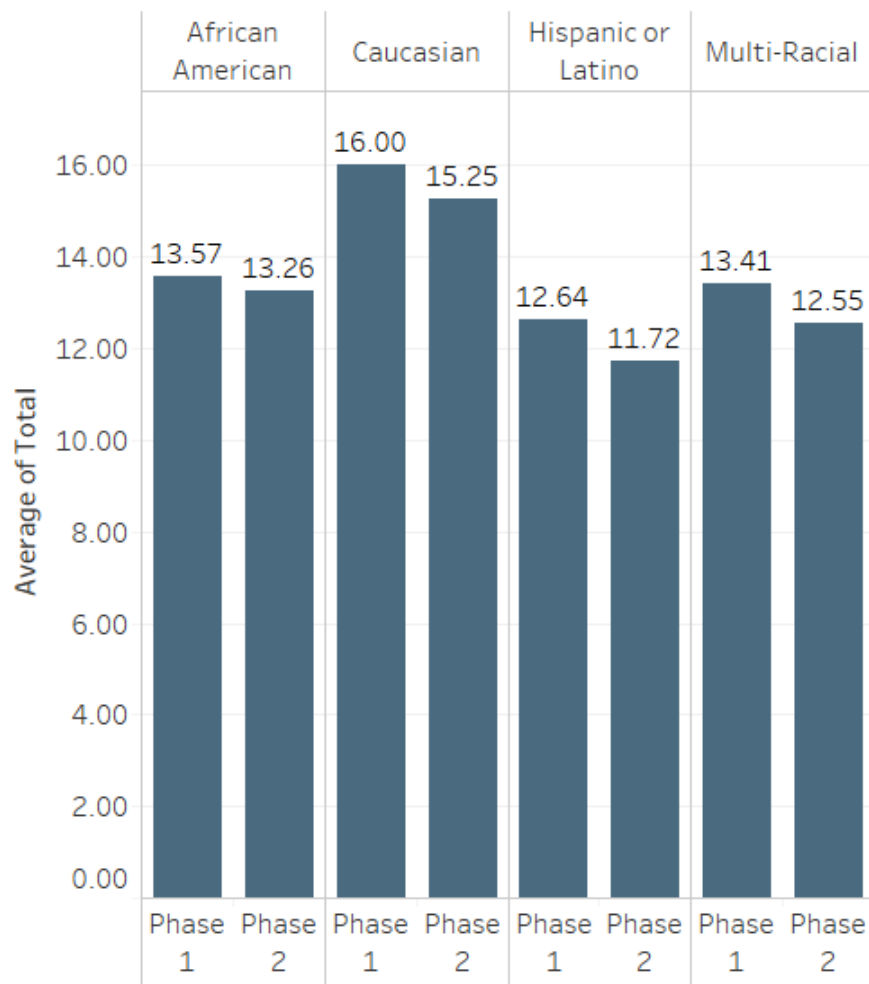
- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

Boys: n=301

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p < .05^*$

# EBA Results of Total PSC-17 Score by Race

## SY2019-2020 - Phase 1 vs Phase 2

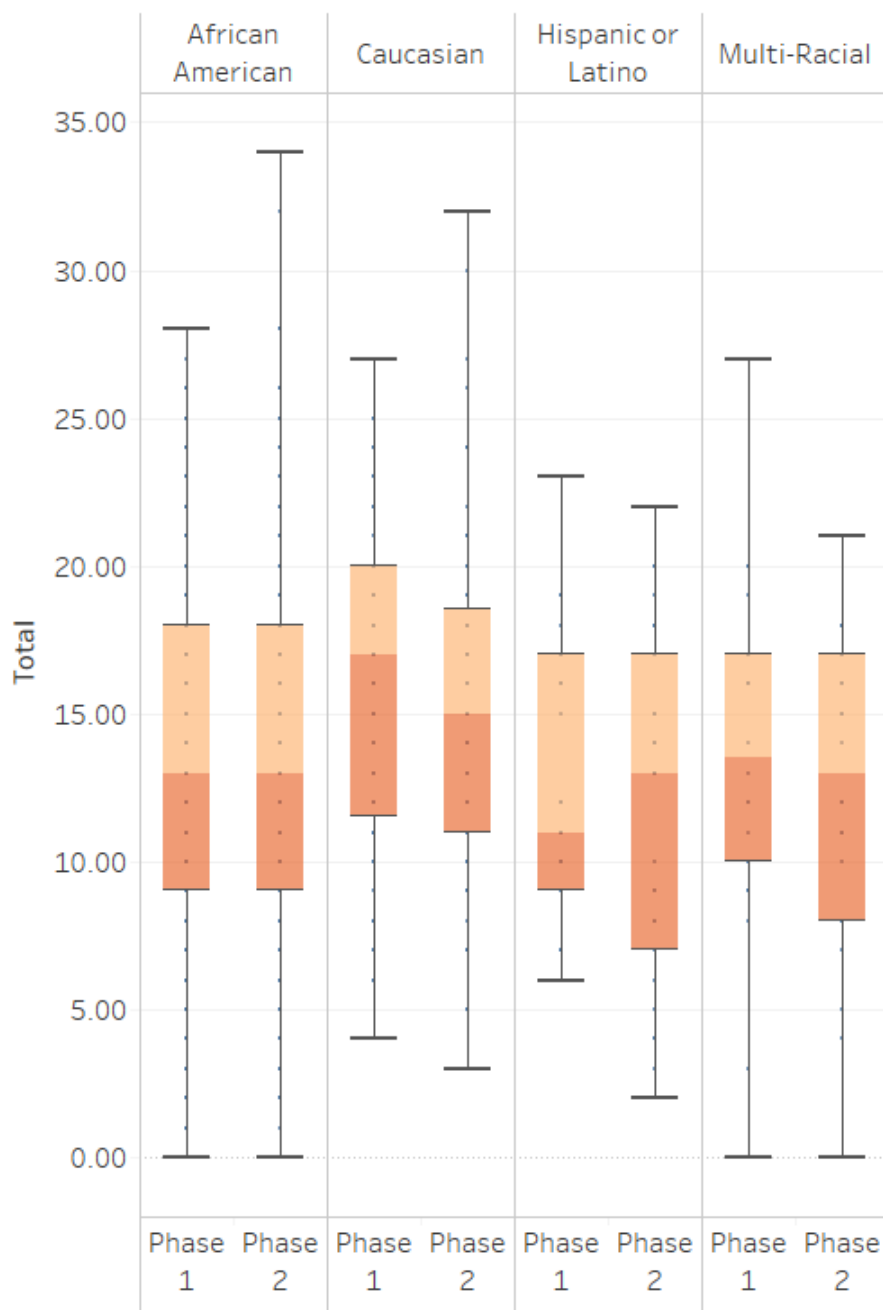


African American: n=399;  $p > .05$

Caucasian: n=60;  $p > .05$

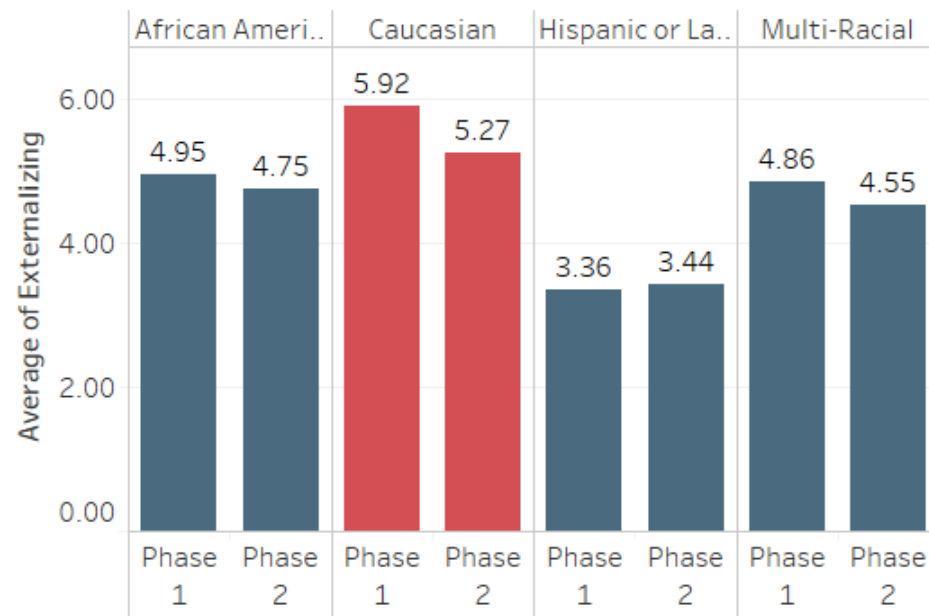
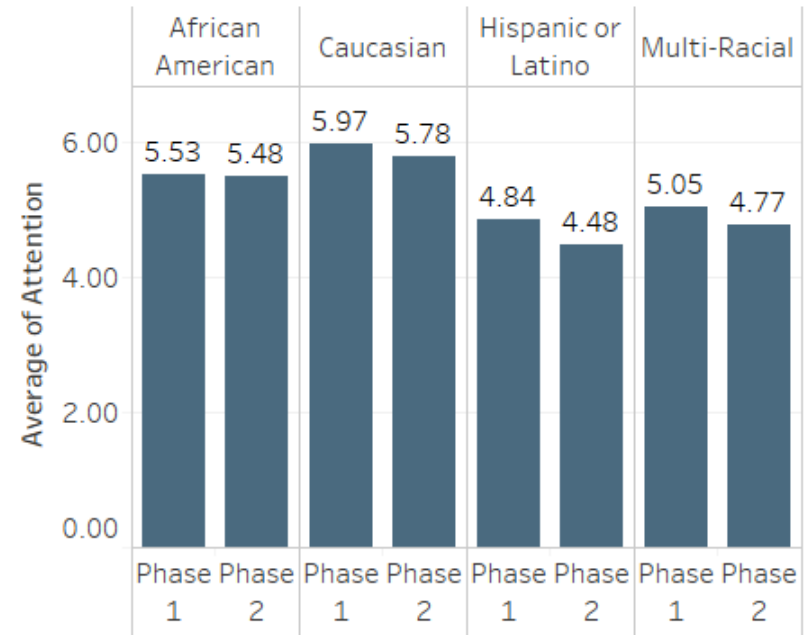
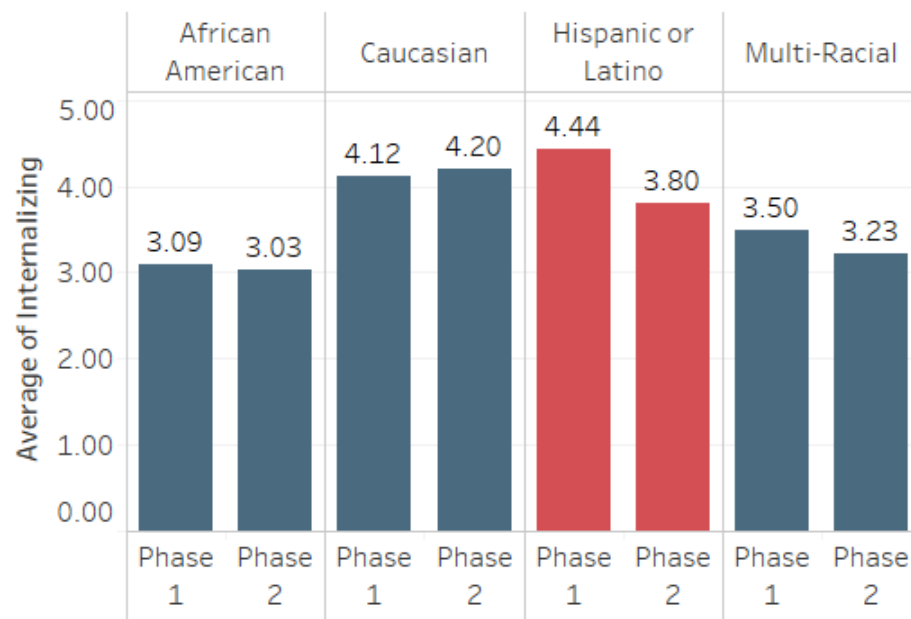
Hispanic or Latino: n=25;  $p > .05$

Multi-Racial: n=22;  $p > .05$



# EBA Results of PSC-17 Subscale Scores by Race

## SY2019-2020 - Phase 1 vs Phase 2



African American: n=399

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

Caucasian: n=60

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p < .05^*$

Hispanic or Latino: n=25

- Internalizing:  $p < .05^*$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

Multi-Racial: n=22

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

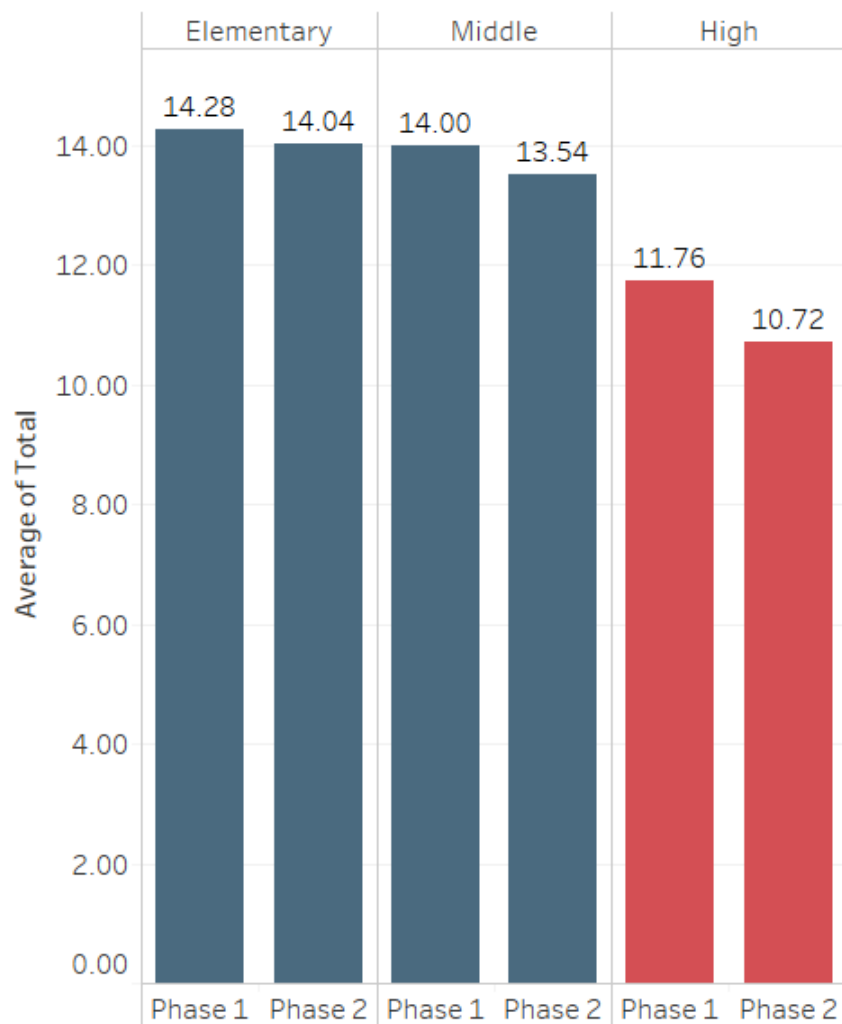
# **EBA RESULTS – MENTAL HEALTH RISK BY GRADE**

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Stratified Data Analysis- School Year 2019-2020

# EBA Results of Total PSC-17 Score by Grade

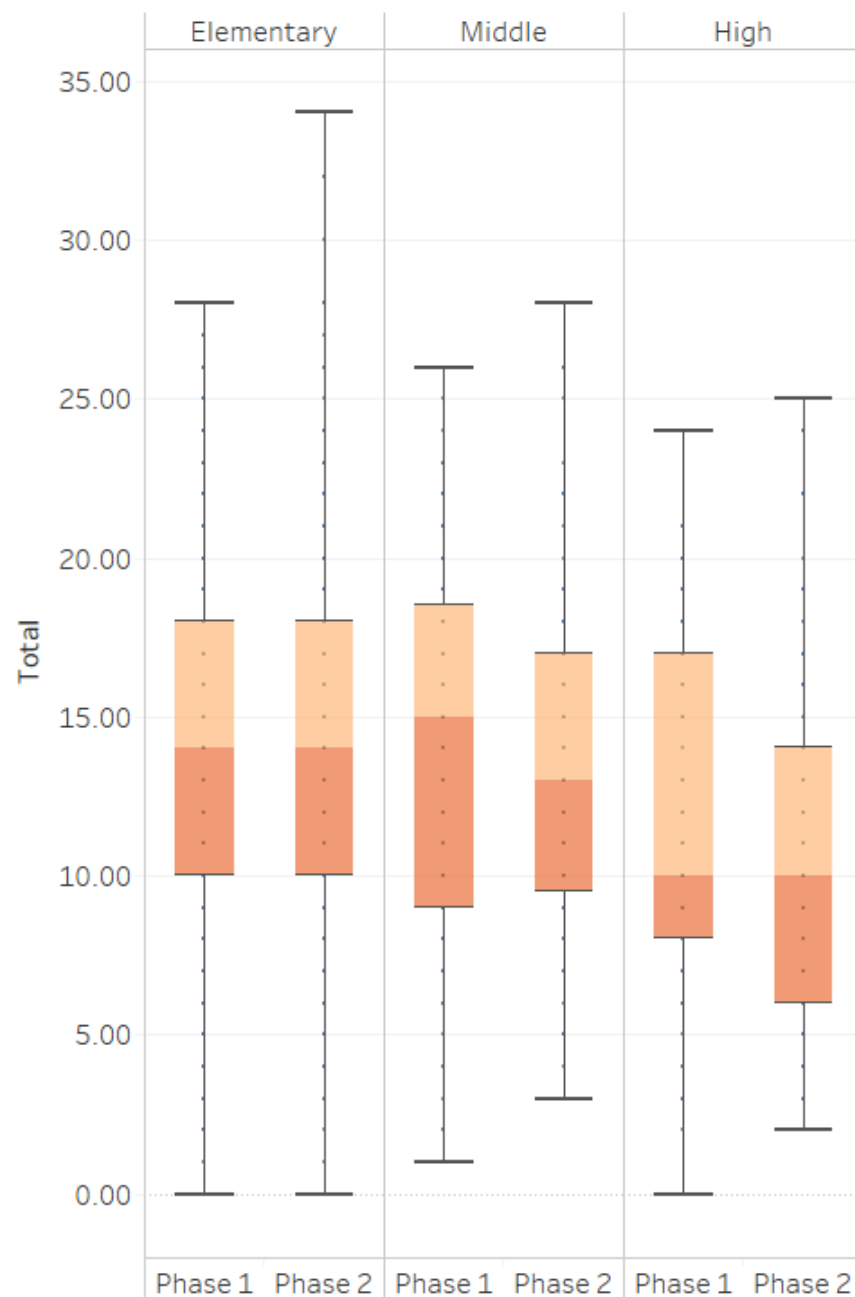
## SY2019-2020 - Phase 1 vs Phase 2



Elementary:  $n=330$ ;  $p > .05$

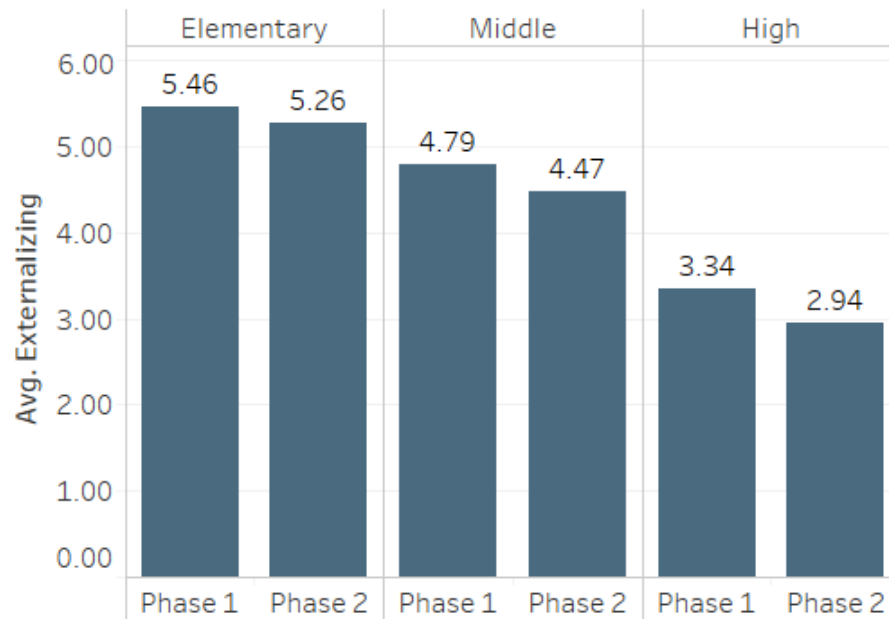
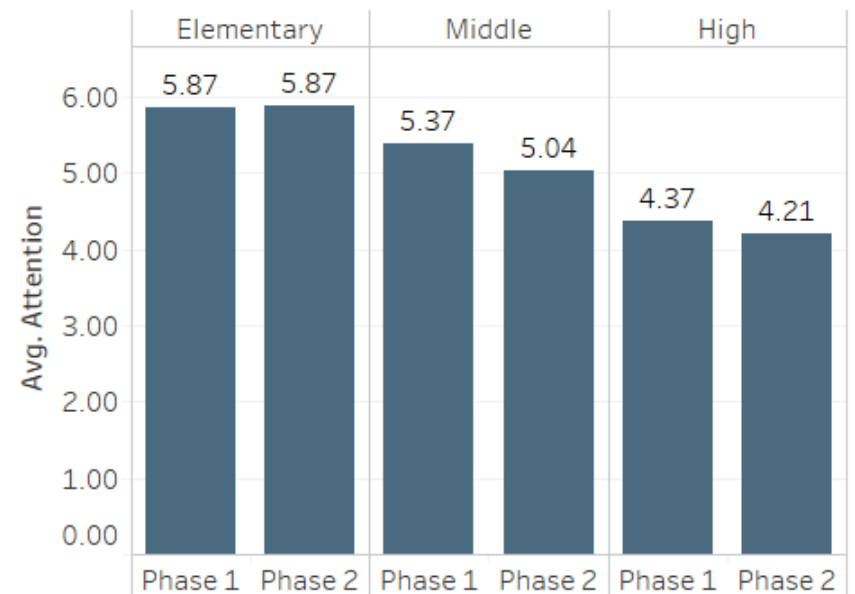
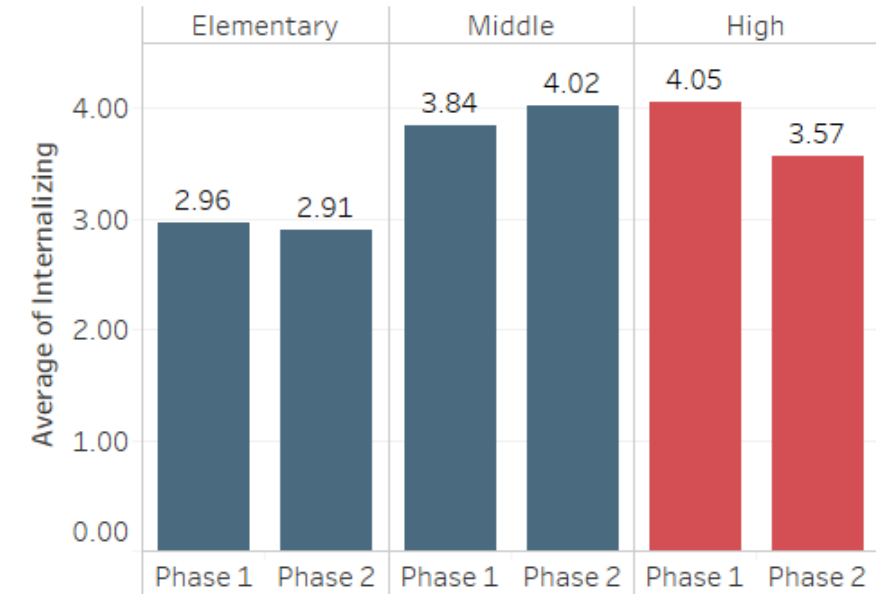
Middle:  $n=99$ ;  $p > .05$

High:  $n=82$ ;  $p < .05^*$



# EBA Results of PSC-17 Subscale Scores by Grade

## SY2019-2020 - Phase 1 vs Phase 2



Elementary: n=330

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

Middle: n=99

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

High: n=82

- Internalizing:  $p < .05^*$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

# **EBA RESULTS – MENTAL HEALTH RISK BY DIAGNOSIS**

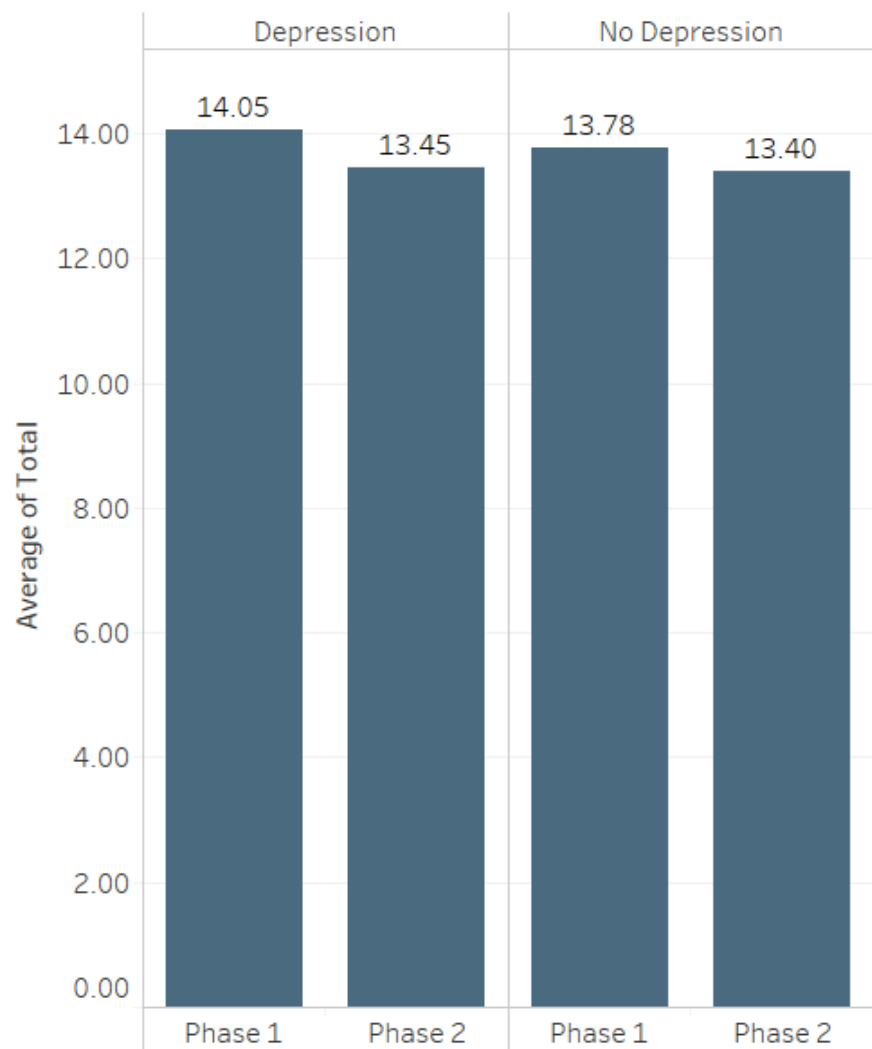
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Stratified Data Analysis- School Year 2019-2020



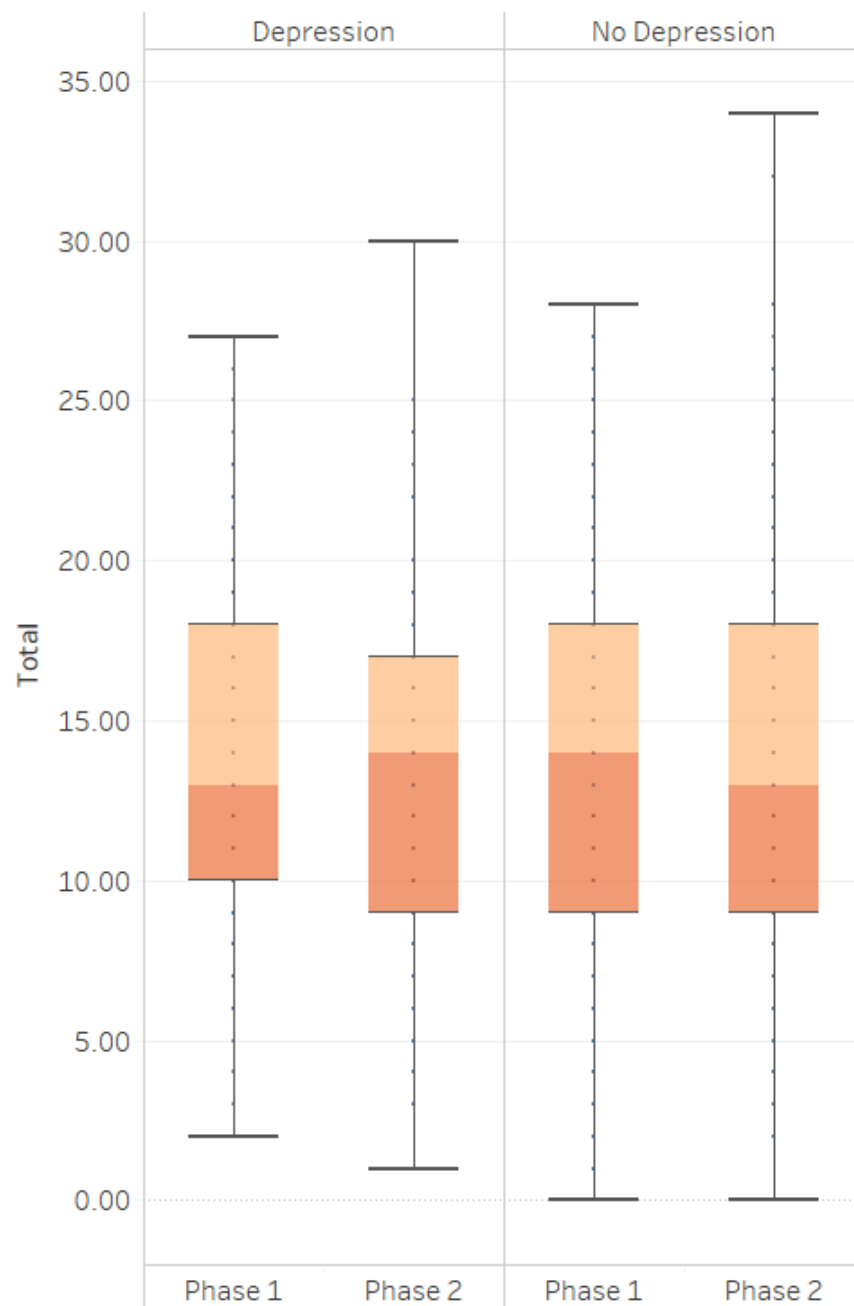
# EBA Results of Total PSC-17 Score by Depression

## SY2019-2020 - Phase 1 vs Phase 2



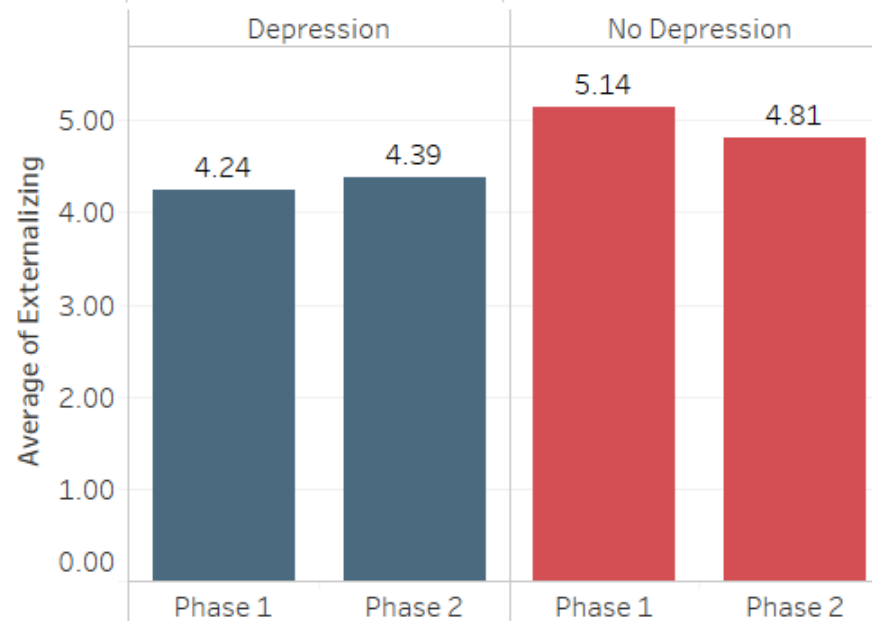
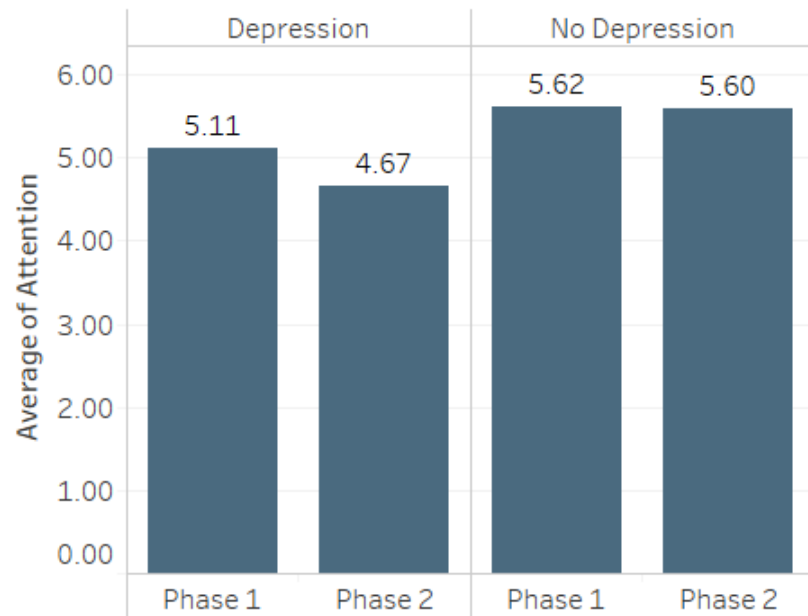
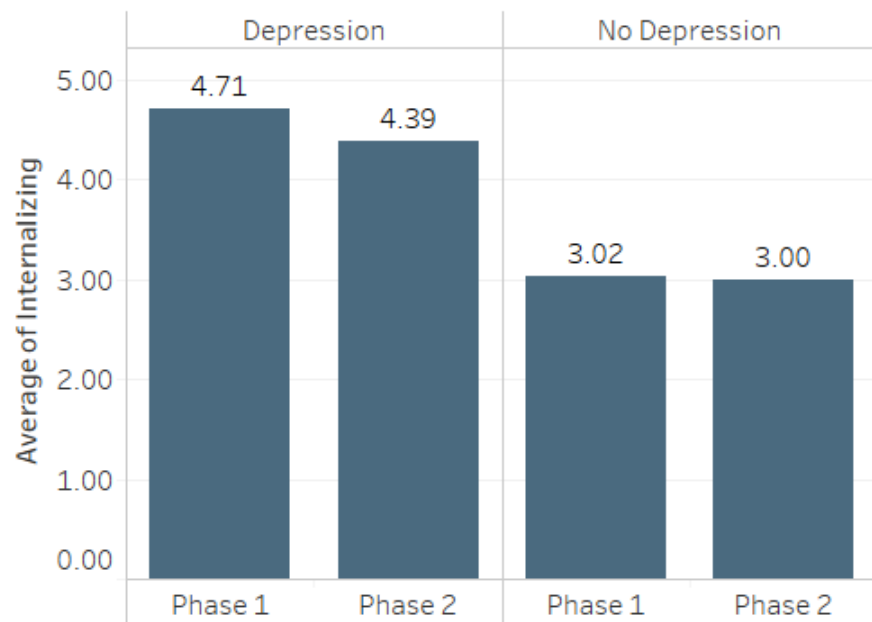
Depression: n=85;  $p > .05$

No Depression: n=426;  $p > .05$



# EBA Results of PSC-17 Subscale Scores by Depression

## SY2019-2020 - Phase 1 vs Phase 2



Depression: n=85

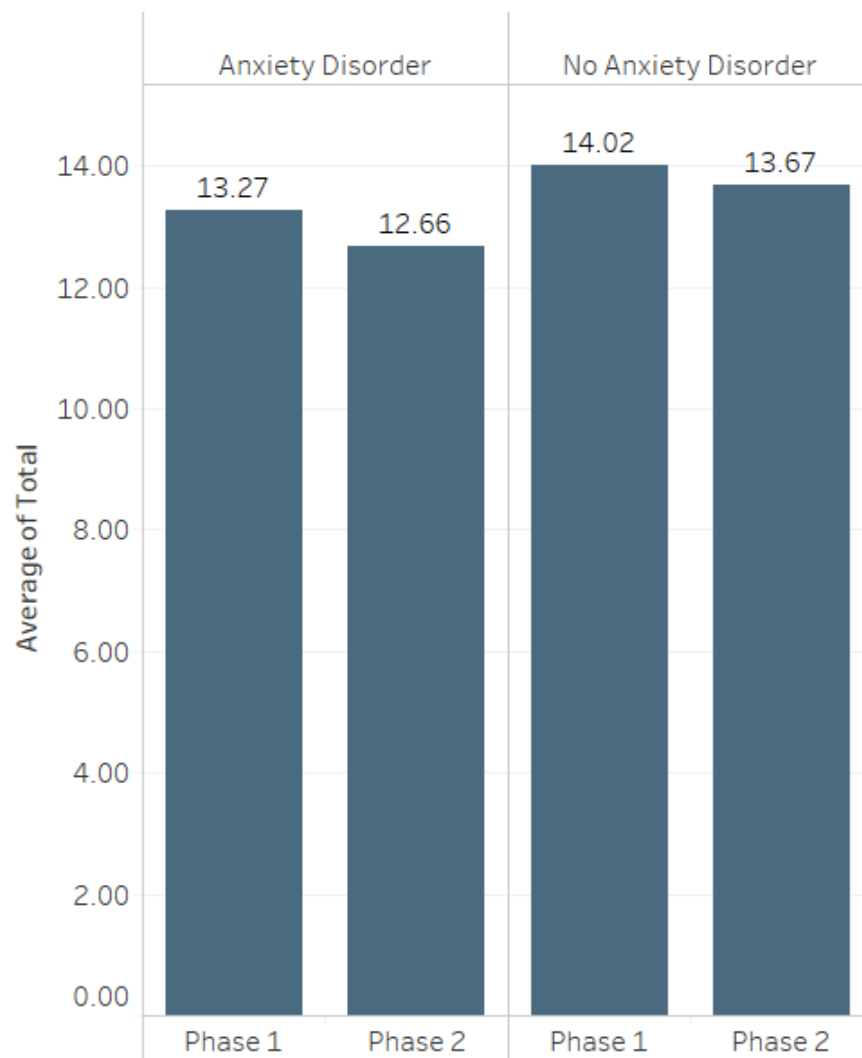
- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

No Depression: n=426

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p < .05^*$

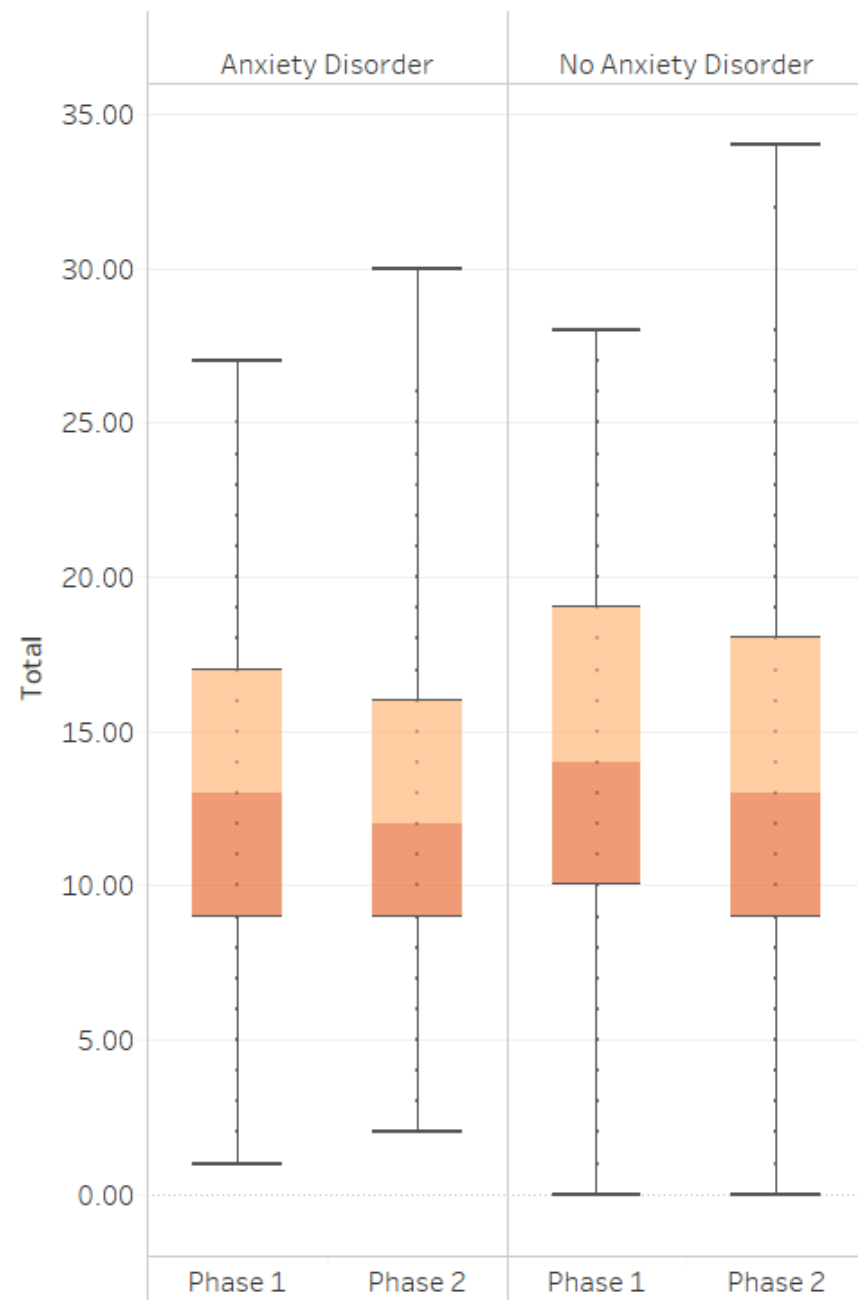
# EBA Results of Total PSC-17 Score by Anxiety Disorder

## SY2019-2020 - Phase 1 vs Phase 2



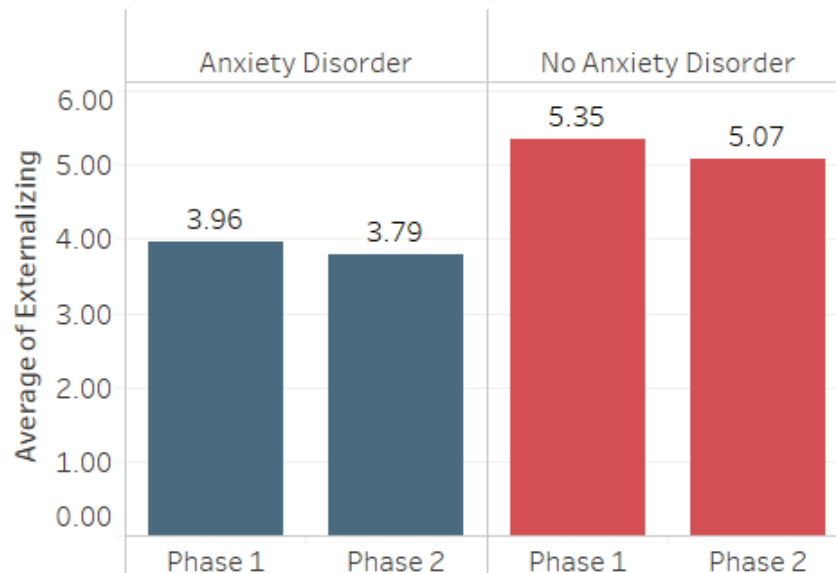
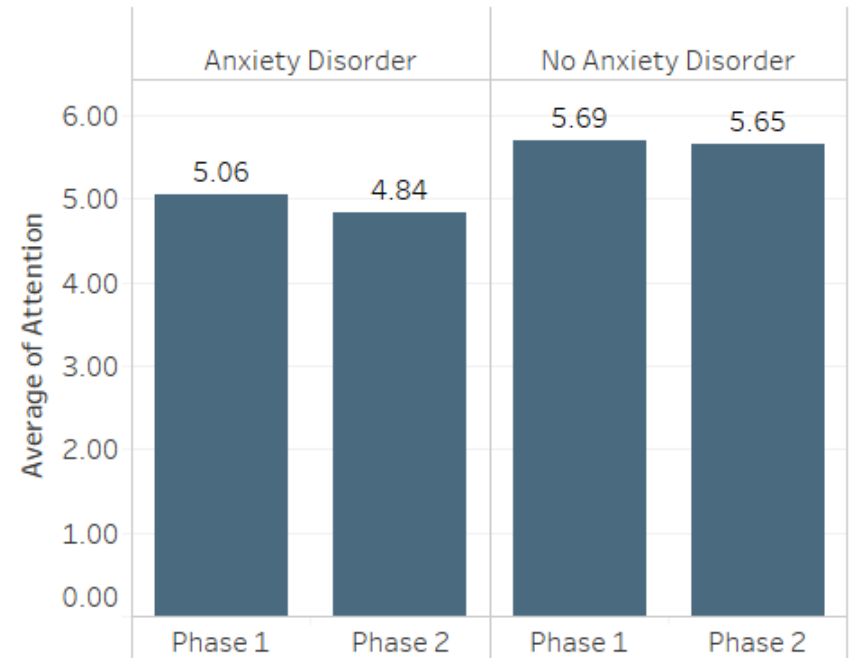
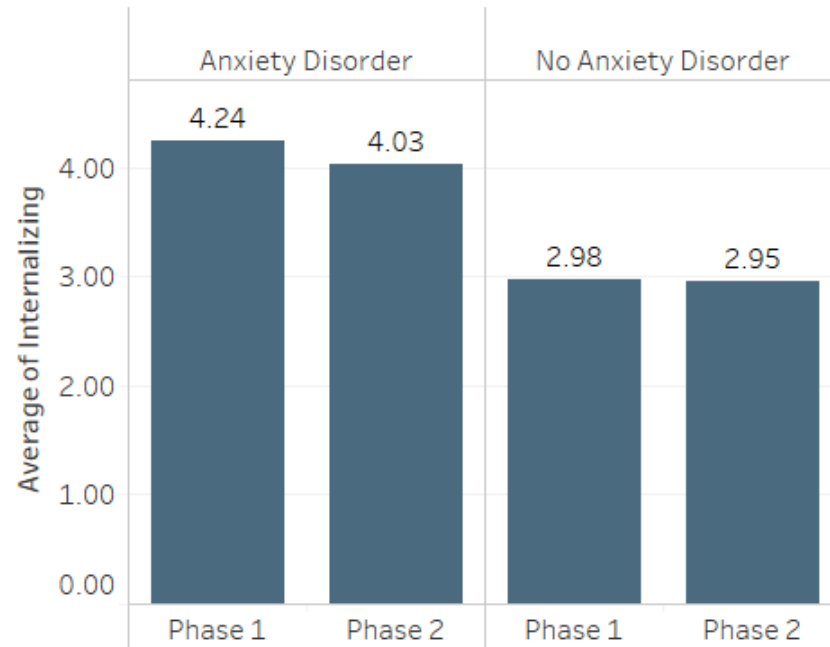
Anxiety Disorder: n=132;  $p > .05$

No Anxiety Disorder: n=379;  $p > .05$



# EBA Results of PSC-17 Subscale Scores by Anxiety Disorder

## SY2019-2020 - Phase 1 vs Phase 2



**Anxiety Disorder: n=132**

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

**No Anxiety Disorder: n=379**

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p < .05^*$

# EBA Results of Total PSC-17 Score by ADHD

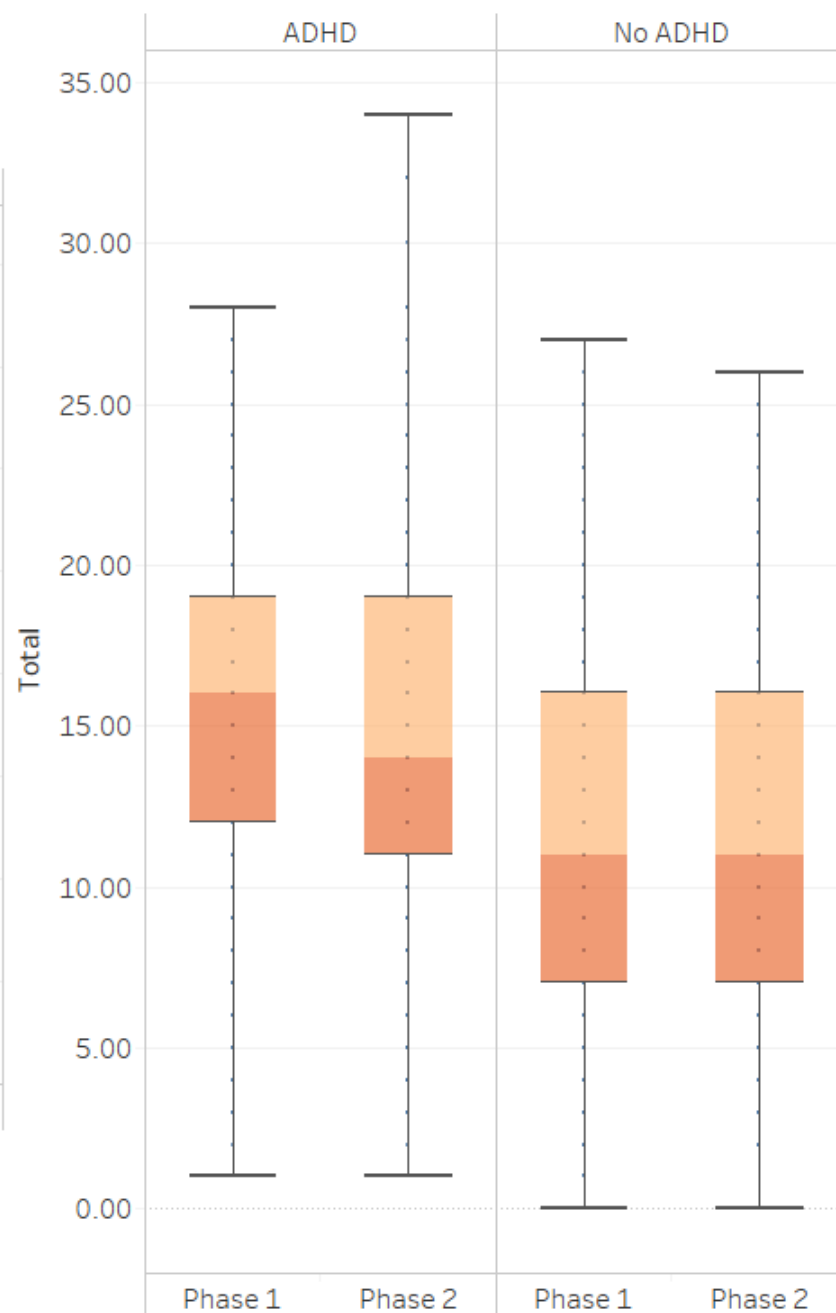
## SY2019-2020 - Phase 1 vs Phase 2

Total by ADHD Bar



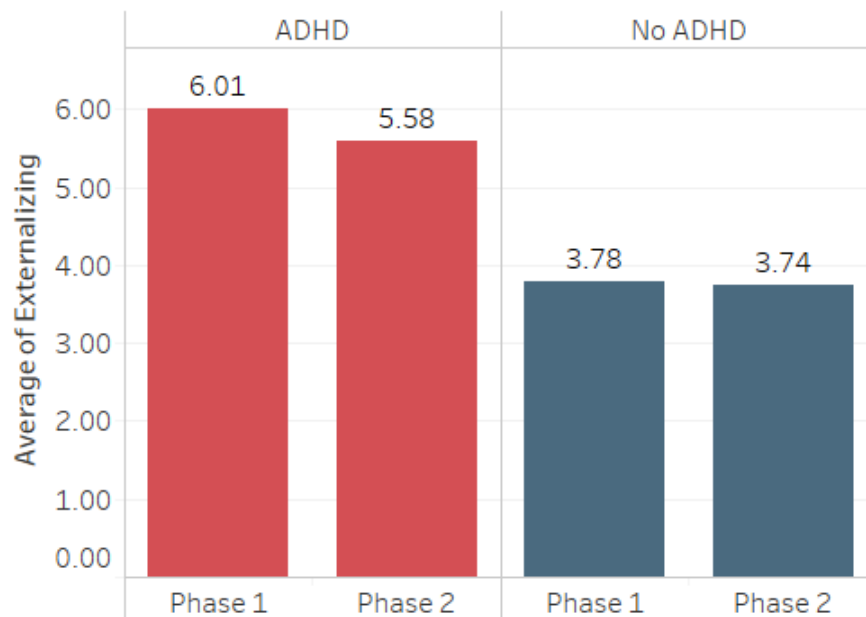
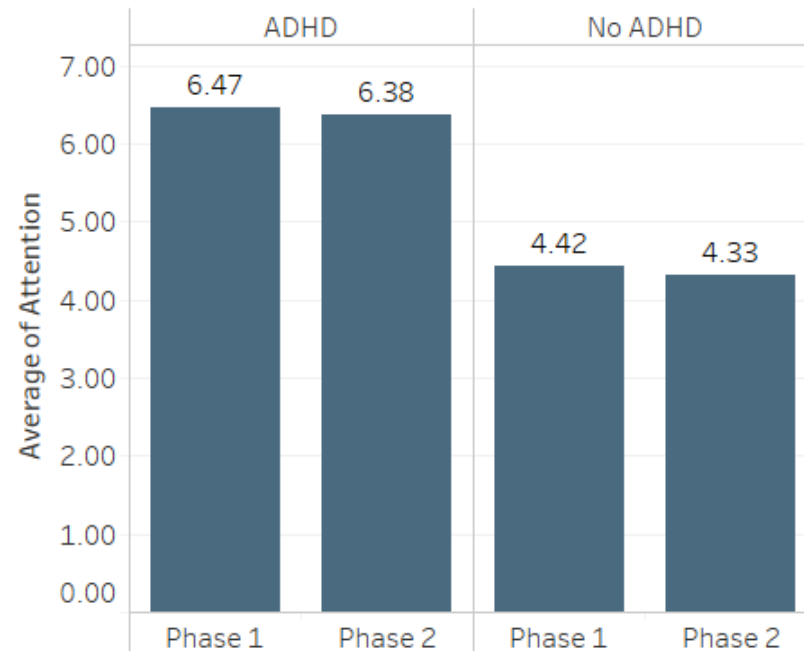
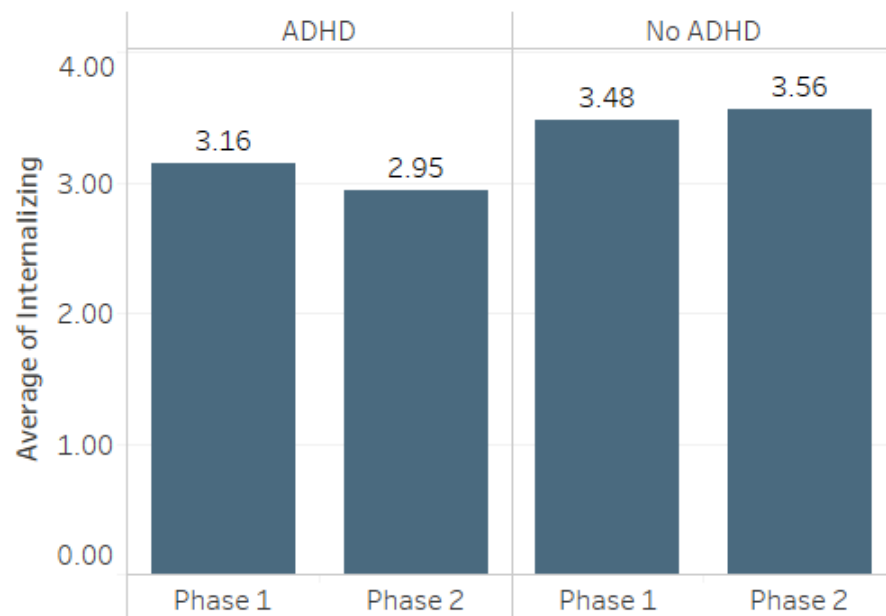
ADHD:  $n=277$ ;  $p < .05^*$

No ADHD:  $n=234$ ;  $p > .05$



# EBA Results of PSC-17 Subscale Scores by ADHD

## SY2019-2020 - Phase 1 vs Phase 2



ADHD: n=234

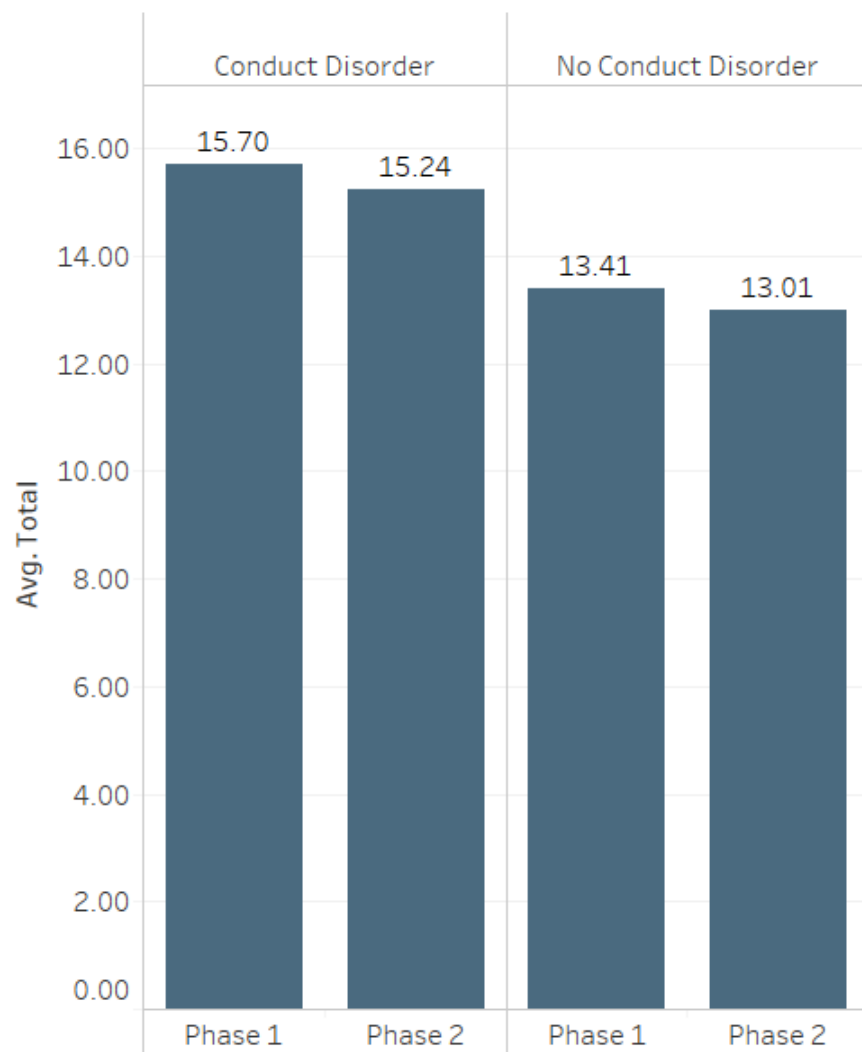
- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $< .05^*$

No ADHD: n=277

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

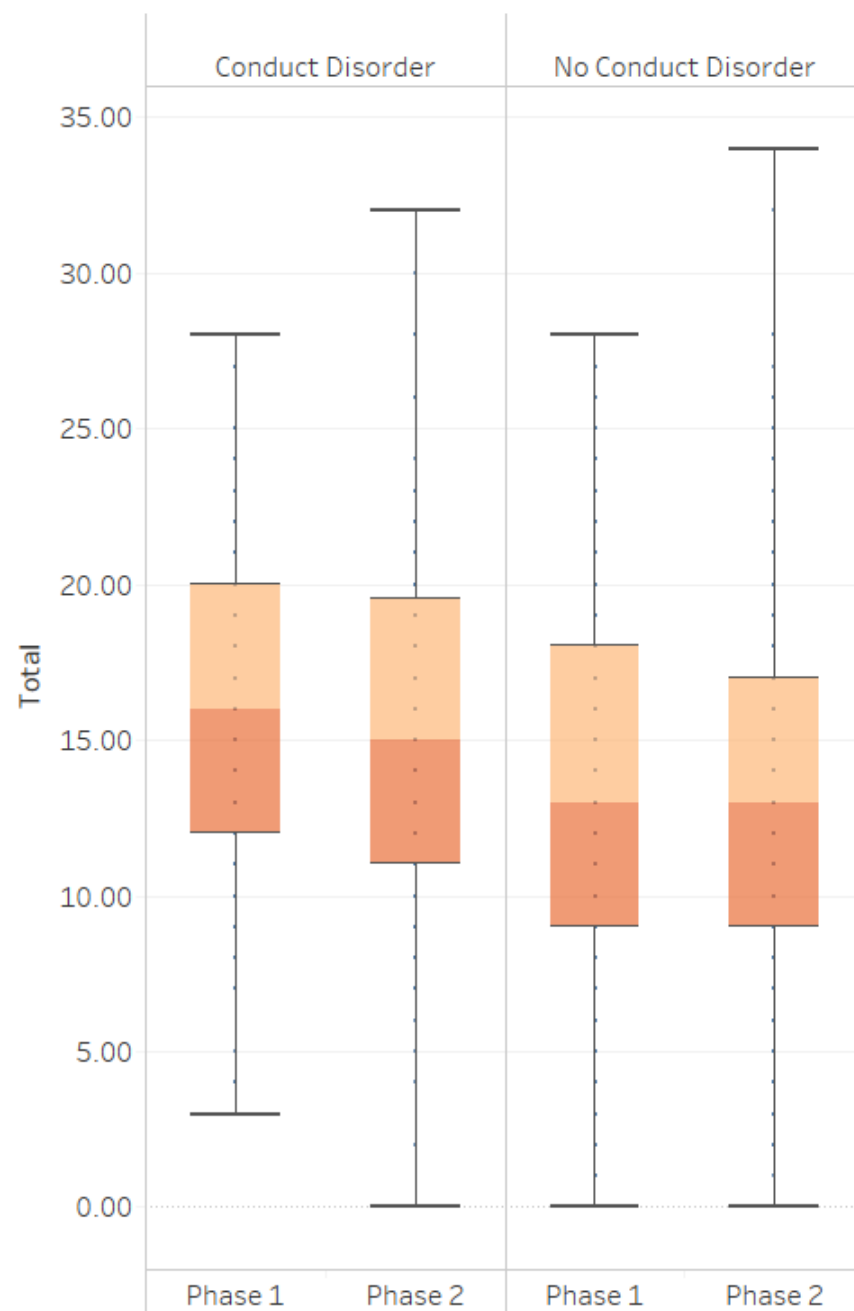
# EBA Results of Total PSC-17 Score by Conduct Disorder

## SY2019-2020 - Phase 1 vs Phase 2

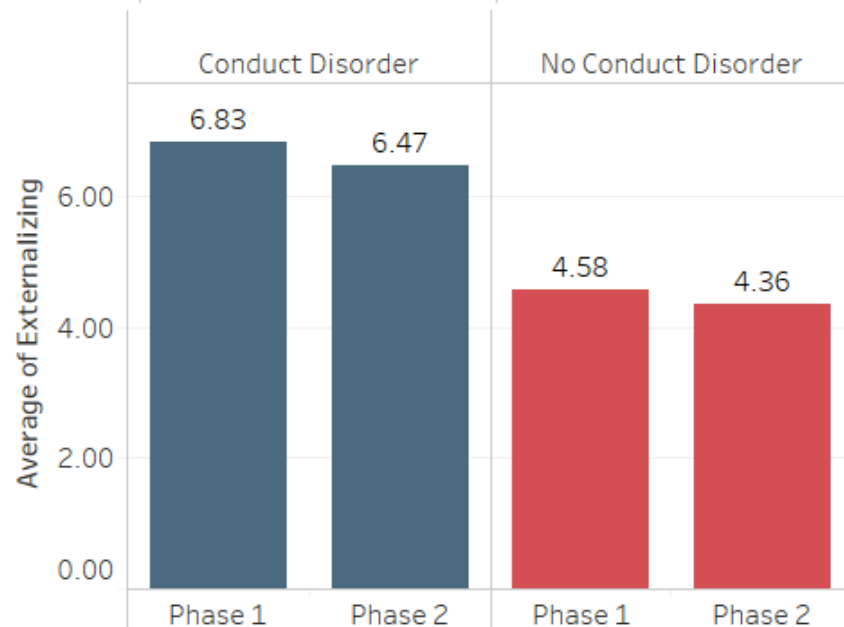
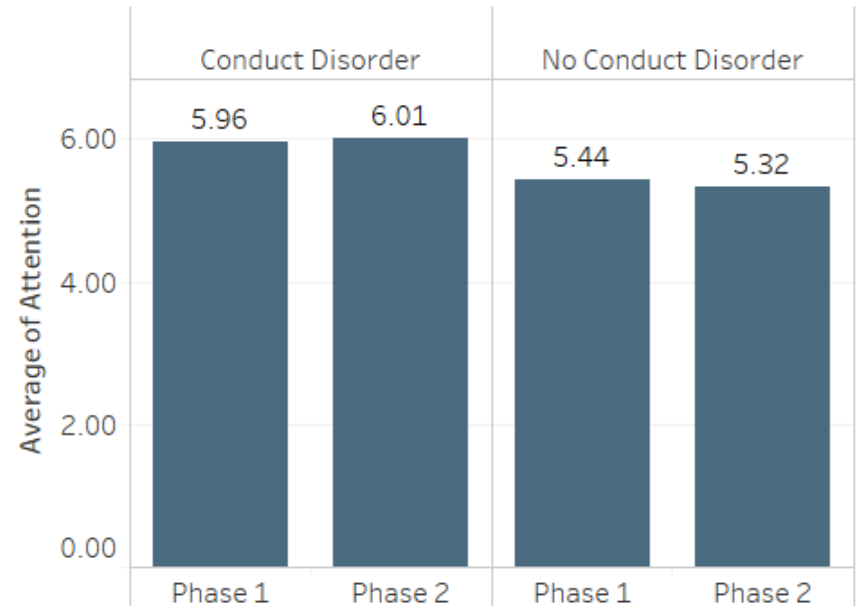
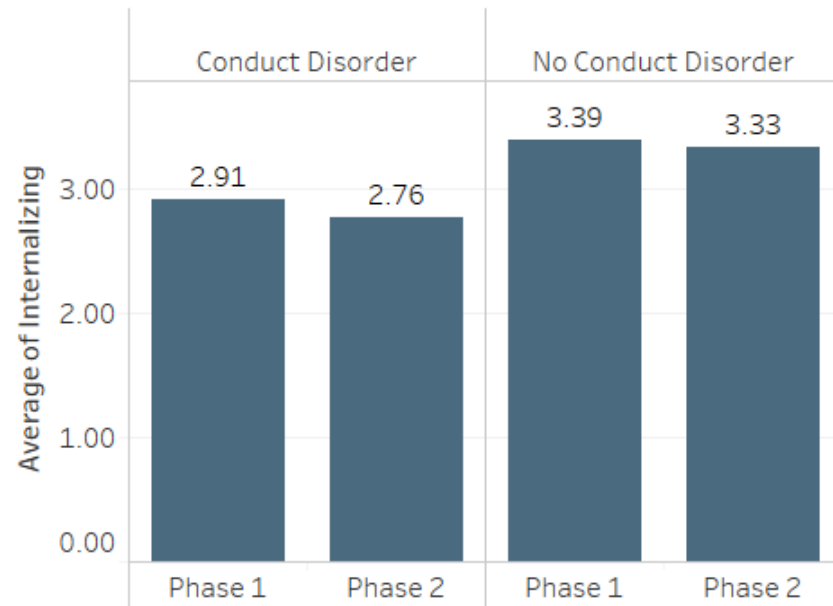


Conduct Disorder: n=92;  $p > .05$

No Conduct Disorder: n=419;  $p > .05$



# EBA Results of PSC-17 Subscale Scores by Conduct Disorder SY2019-2020 - Phase 1 vs Phase 2



Conduct Disorder: n=92

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

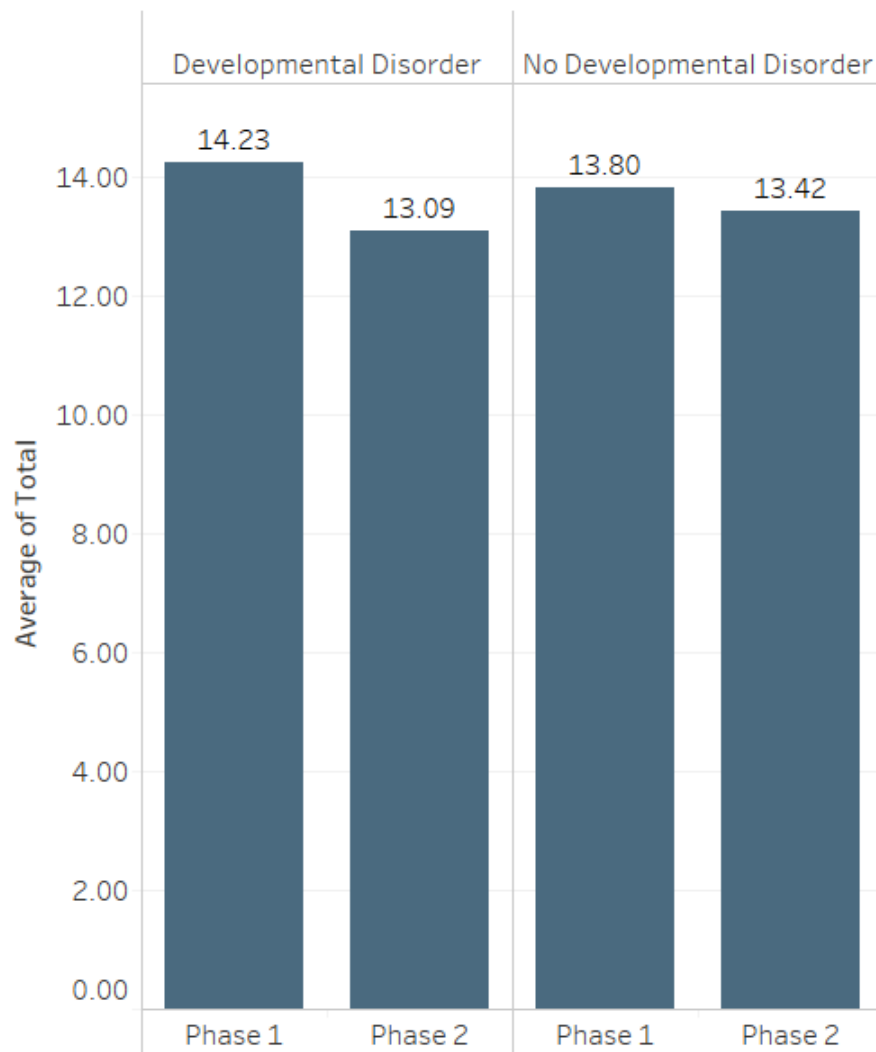
No Conduct Disorder: n=419

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p < .05^*$



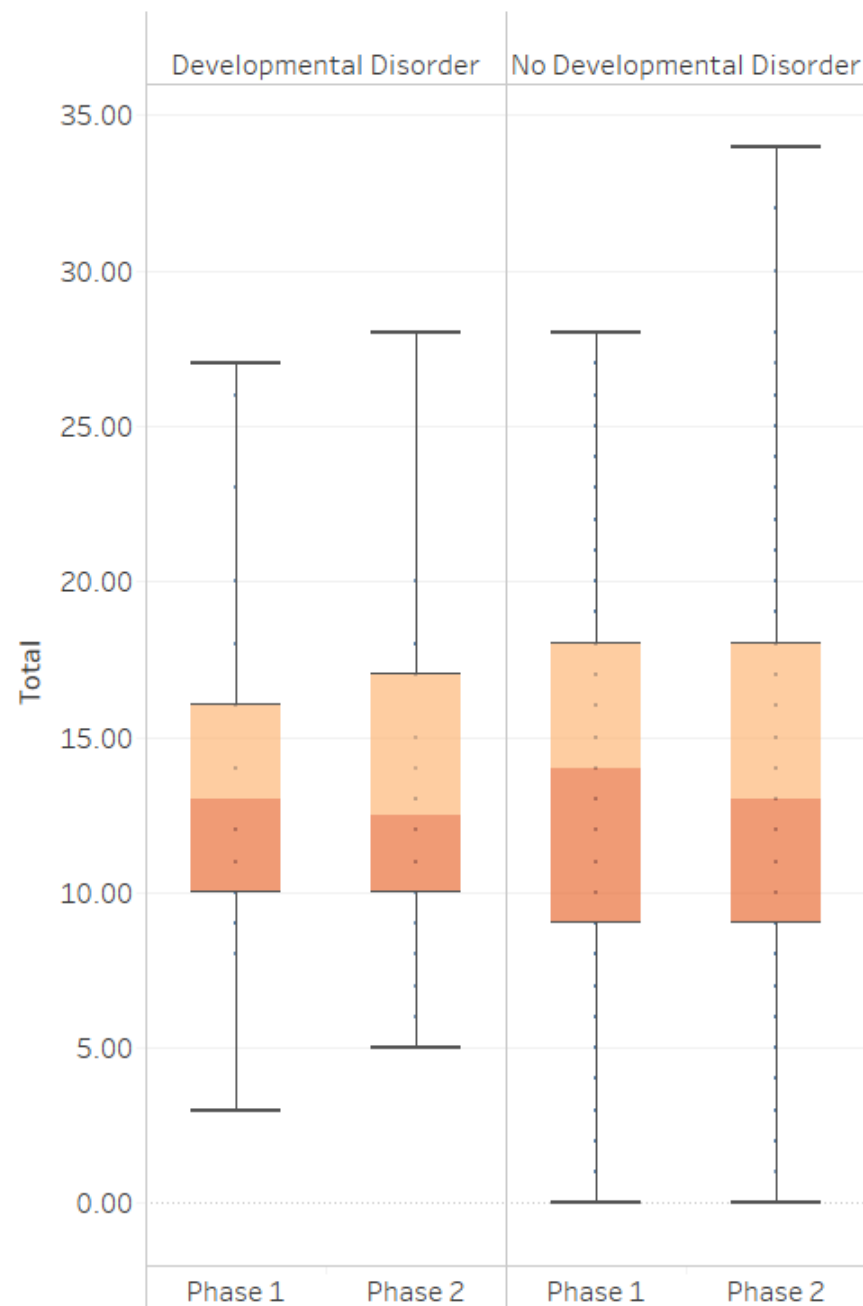
# EBA Results of Total PSC-17 Score by Developmental Disorder

## SY2019-2020 - Phase 1 vs Phase 2

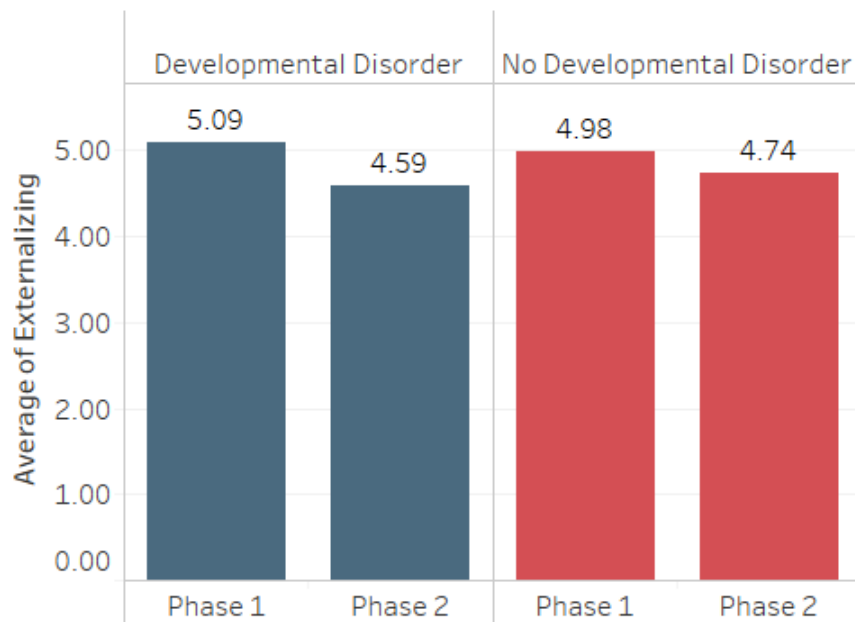
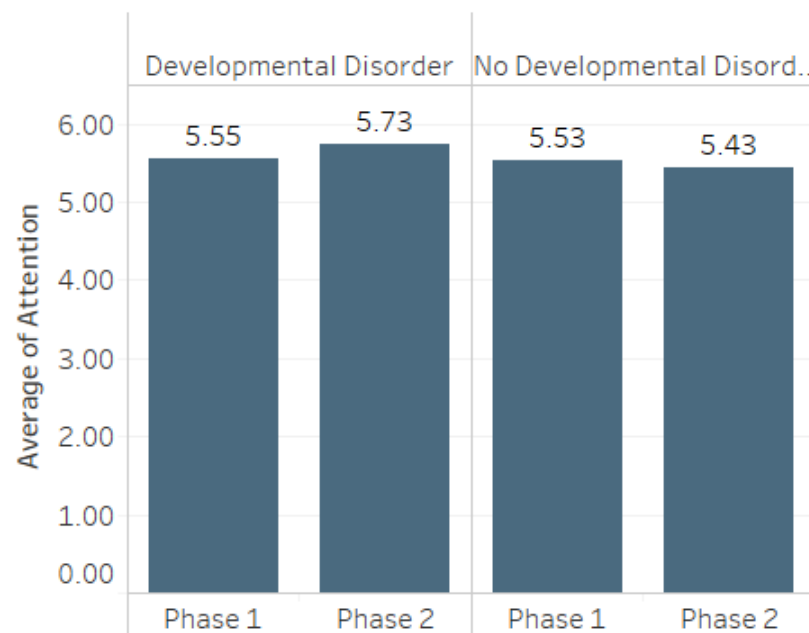
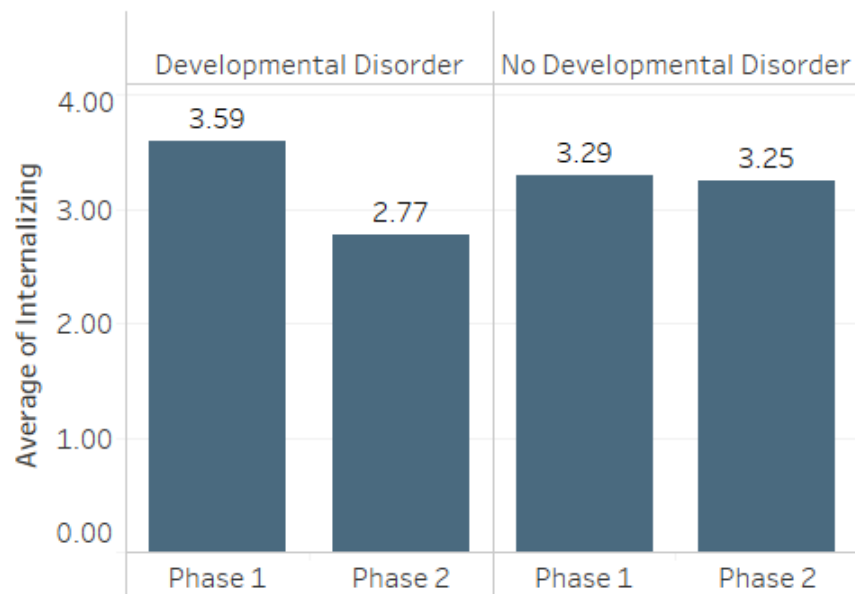


Developmental Disorder: n=22;  $p > .05$

No Developmental Disorder: n=489;  $p > .05$



# EBA Results of PSC-17 Subscale Scores by Developmental Disorder SY2019-2020 - Phase 1 vs Phase 2



Developmental Disorder: n=22

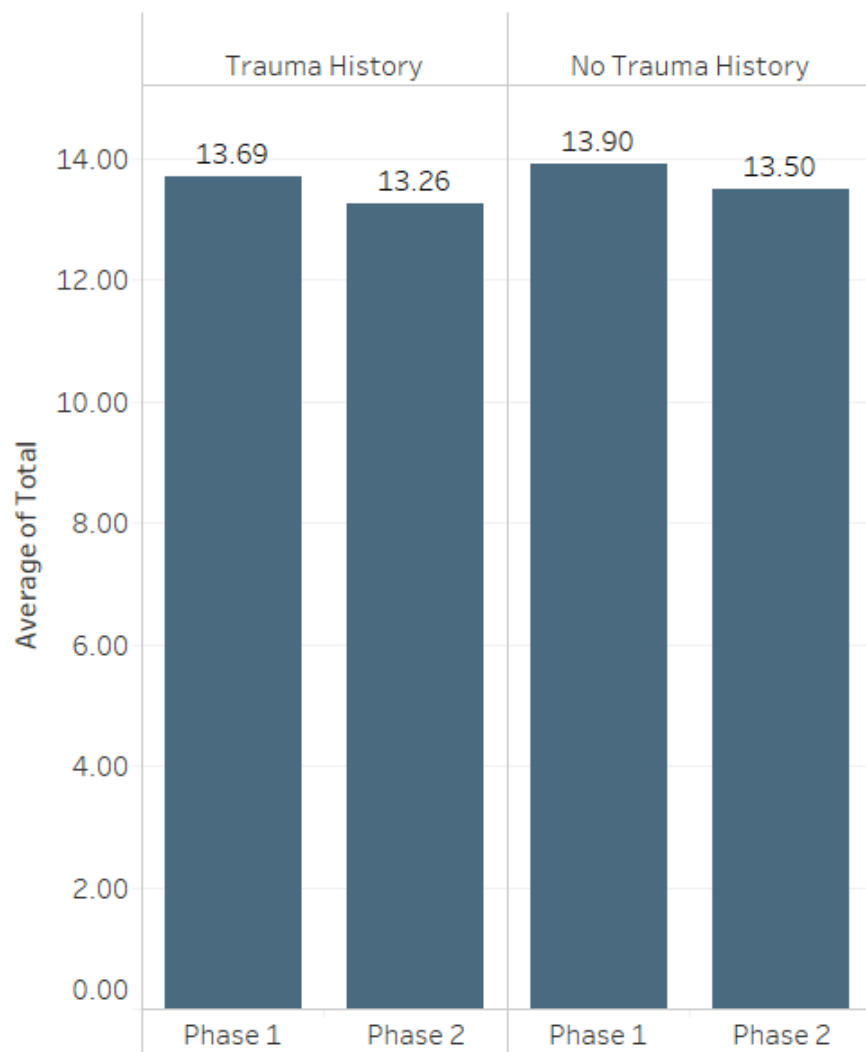
- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

No Developmental Disorder: n=489

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p < .05^*$

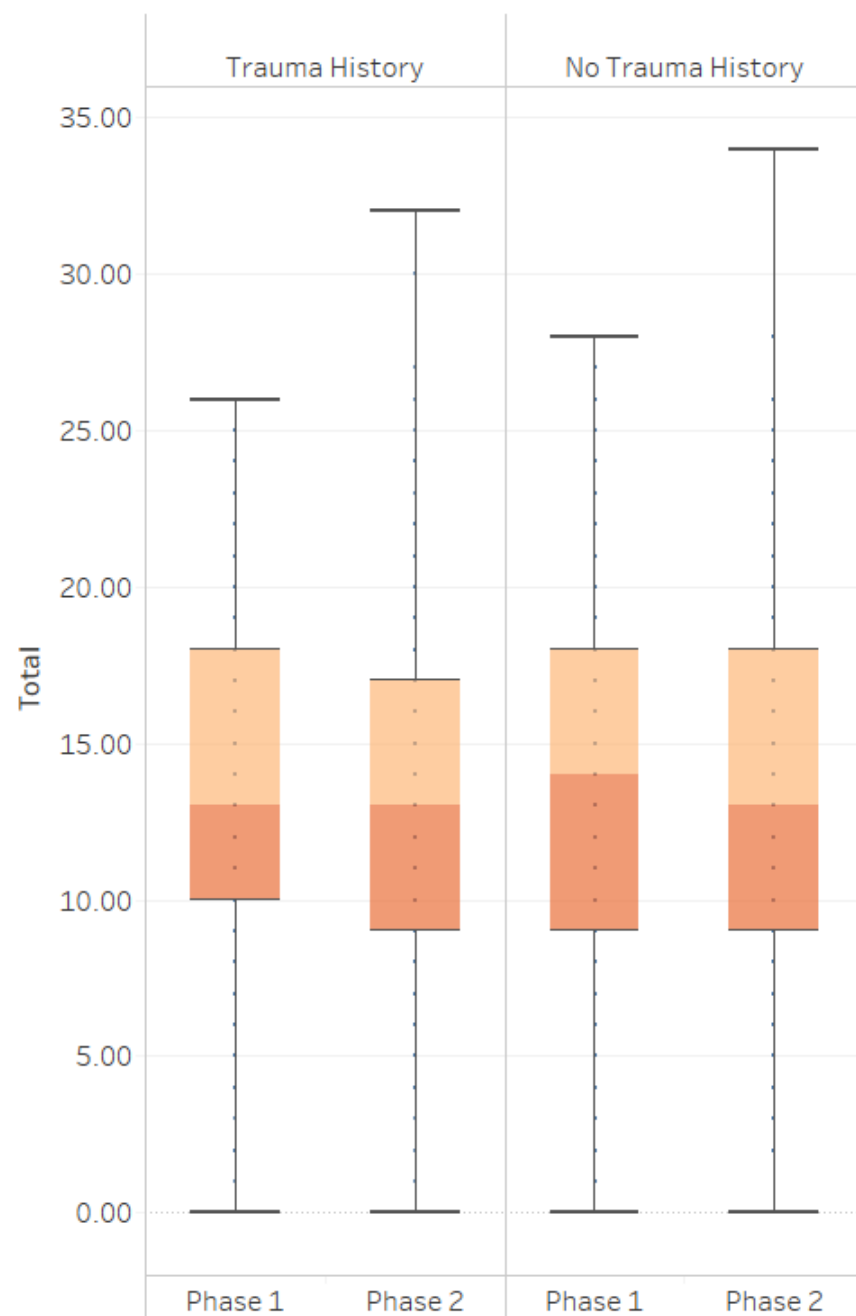
# EBA Results of Total PSC-17 Score by Trauma History

## SY2019-2020 - Phase 1 vs Phase 2



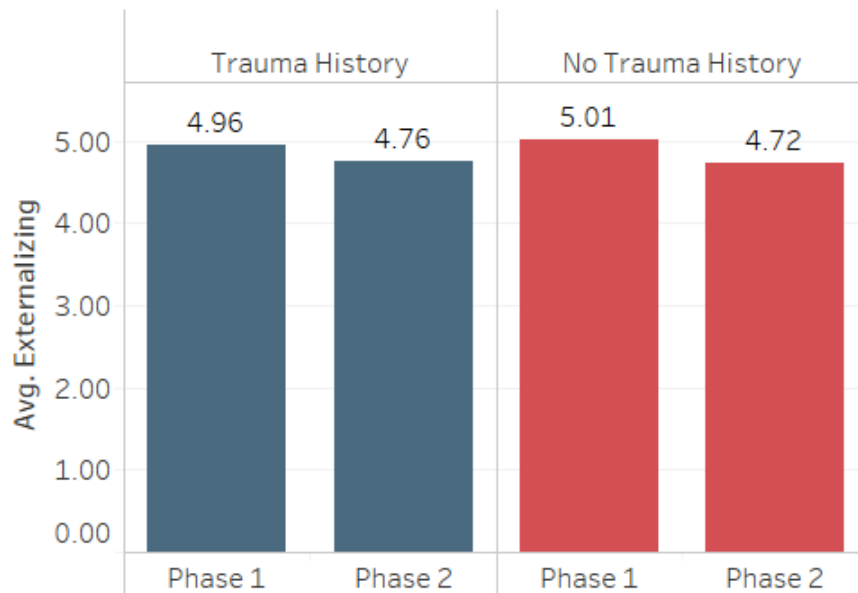
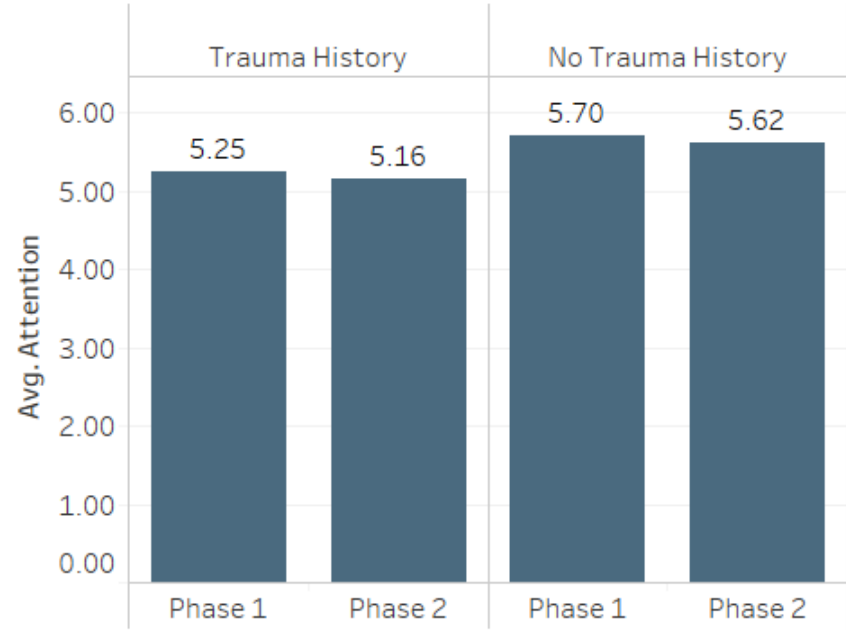
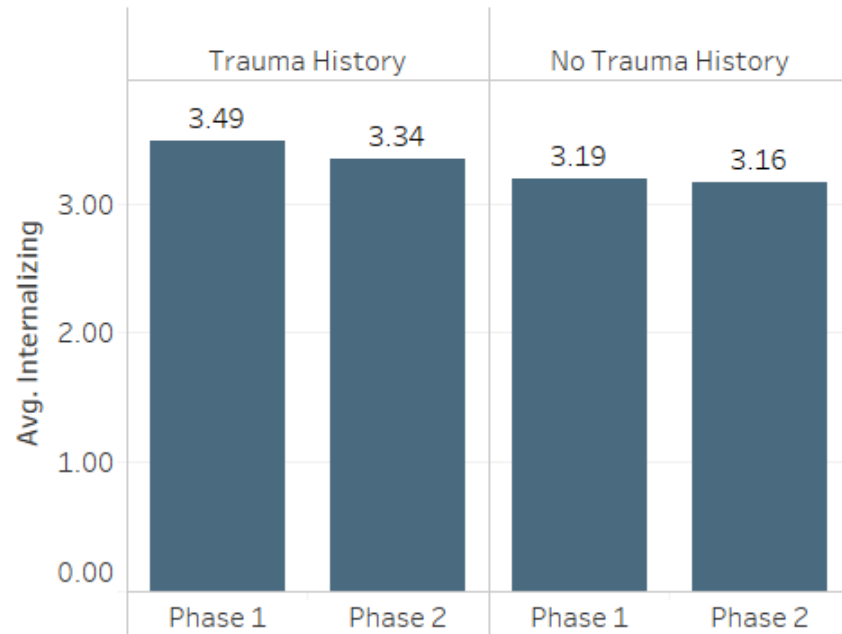
Trauma History: n=193;  $p > .05$

No Trauma History: n=318;  $p > .05$



# EBA Results of PSC-17 Subscale Scores by Trauma History

## SY2019-2020 - Phase 1 vs Phase 2



**Trauma History: n=318**

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p > .05$

**No Trauma History: n=193**

- Internalizing:  $p > .05$
- Attention:  $p > .05$
- Externalizing:  $p < .05^*$

# EBA INITIATIVE

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Findings, Lessons Learned and Lessons Underway

# FINDINGS- SUMMARY

- Mental Health (MH) risk decreased significantly, overall
- Externalizing Subscale decreased significantly, overall
- Stratified Analyses:
  - MH risk decreased significantly in Male students
  - Externalizing Subscale decreased significantly in Male students
  - Internalizing Subscale decreased significantly in Hispanic students
  - Externalizing Subscale decreased significantly in Caucasian students
  - MH risk decreased significantly for High School students
  - Internalizing Subscale decreased significantly for High School students
  - MH risk decreased significantly in students experiencing ADHD
  - Externalizing Subscale decreased significantly for students experiencing ADHD

# LESSONS LEARNED

- **Choice of Tool**
  - Challenge: Identification of tool which provides the needed data and can be easily implemented across service lines
  - Solution: Intensive and ongoing collaboration with sub-vendors, data analysis team and consultants to evaluate tools and determine choices
- **Evidence Based Assessment vs. Evidence Based Intervention**
  - Challenge: Results may allow for hypothesis regarding impact of enrollment/treatment but do not point to a particular intervention
  - Solution: Ongoing data process development and analysis with sub-vendors and the data analysis team
- **Data Analysis (Capacity and Collaboration)**
  - Challenge: Analysis of data takes time and staff which challenges capacity
  - Solution: Monthly collaboration meetings to evaluate and prioritize needs and determine distribution of work

# LESSONS UNDERWAY

- **Academic Demands**

- Challenge: Academic demands of the school day with the common core and PARCC assessment as focus of the program with little left over time for supplemental service
- Solution: Presentation of data that supports better academic achievement when mental health services are provided (Georgetown report)

- **Sub-Vendor Engagement**

- Challenge: Engaging sub-vendors to be willing to participate in the Evidence Based Assessment Initiative via completion and submission of the PSC-17
- Solution: Active and ongoing sharing of results and hypothesis with sub-vendors, including potential benefits of a larger sample size

- **Caregiver Engagement**

- Challenge: Due to services being provided on-site at schools, in person engagement of caregivers can be limited
- Solution: Selection of a tool which can be completed via phone and or electronic device



# ACKNOWLEDGMENTS

- Provider Network
  - Hope Health Systems, Inc.
  - TIME Organization, Inc.
  - University of Maryland, SMHP
  - Villa Maria, Associated Catholic Charities
  - Johns Hopkins Bayview Medical Center
- Baltimore City Public Schools
- School Clinicians
- EBA BHSB Staff with special thanks to Mrugesh Patel, Elizabeth Corrigan, Ashley Collins and Heather Dewey

# QUESTIONS?

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