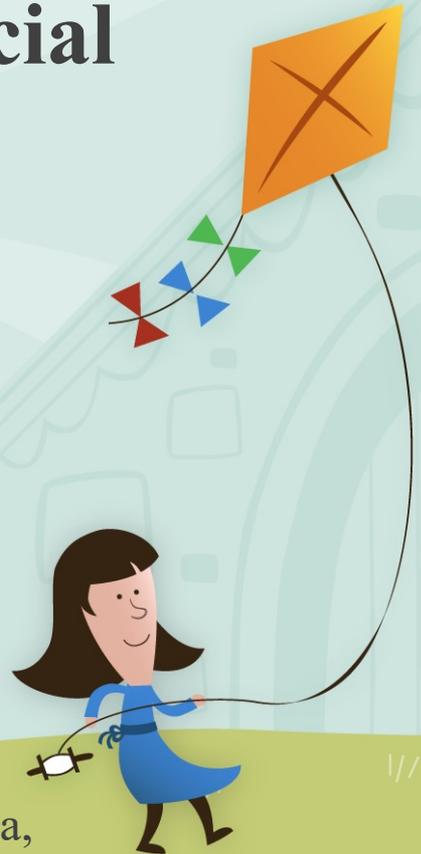


The Impact of Kindness Curriculum Training on Young Children's Social & Emotional Skills: Year Two Findings

The Kindness Project Team



Report prepared by Beth Haines, Kathy Immel, Erin Ijzer, Sharon Edamala, Hannah Burgess, & the Summer 2021 Research Team (especially Noely, Molly, & Olivia)

Kindness Project Team

Project Leaders

Beth Haines, Project Manager
Kathy Immel, Project Manager
Marta Statz, Project Coordinator

Mindfulness Coaches

Miriam Boleyn-Fitzgerald & Joy Jordan

Research Team

| | |
|-----------------|--------------------|
| Hannah Burgess | Passion Freeman |
| Hannah Birch | Sharon Edamala |
| Lainey Harrison | Erin Ijzer |
| Qiushan Liu | Annika Lund |
| Brielle Petit | Michael Reed |
| Violet Ngo | Ashlei Raifsnider |
| John Berg | Isaac Wippich |
| Trang Le | Olivia DeBruin |
| | Callie Greene |
| | Zhi Li |
| | Molly Ruffing |
| | Liliam O. Heredero |
| | Noely Ruiz-Hinkle |

Assessment Team

Assessment Coordinators: Hannah Birch, Sharon Edamala, & Annika Lund

| | | |
|-------------------|-------------------|-------------------|
| Hannah Bleier | Erin Ijzer | Ashlei Raifsnider |
| Hannah Burgess | Cecilia Kakehashi | Biju Rajbhandari |
| Laura Christenson | Qiushan Liu | Alexis Shannon |
| Olivia DeBruin | Tylor Losser | Emma Starek |
| Ellie Dicker | Grace Minogue | Becky Swanson |
| Hannah Guo | Violet Ngo | Sam Taylor |
| Lainey Harrison | Victoria Passie | Shreeja Vachhani |
| Nimi Herard | Brielle Petit | Isaac Wippich |
| Emily Hoelt | Kelli Quick | |

Planning Committee Members

| | |
|----------------------------|-----------------------|
| Miriam Boleyn-Fitzgerald | Phan Hong-Lishner |
| Stephanie Burdick-Shepherd | Lamont Houston |
| Nicole Desten | Kathy Immel, Co-Chair |
| Daniell DiFrancesca | Joy Jordan |
| Pam Franzke | John Mielke |
| Jane Garton | Sally Mielke |
| Beth Haines, Co-Chair | Marchelle Moten |
| Lynn Hammen | Suzette Preston |
| Gayle Hardt | Joan Roy |
| Stephan Harrison | Marta Statz |
| Donna Hodges | Kevin Steinhilber |
| | Jenny Thorn |
| | Michelle Wranosky |

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- Sincere gratitude to our funders who made the Project possible & helped to establish mindfulness training as a best practice in early childhood education (see [Acknowledgements](#) page for specifics)!

Background: Introduction to the Kindness Project

- The Kindness Project brings **mindfulness training** to preschoolers, their families, and teachers. One aim of the Project was to **assess the impact of the Kindness Curriculum (KC)** on children's **social-emotional** and cognitive skills.
- In Year 2, the 2019-2020 school year, many children, their families, & their teachers faced a variety of **stressors** in their lives, especially as the **COVID-19 pandemic** emerged in the spring of 2020. Thankfully, much of the mindfulness-based Kindness Curriculum training was completed by February 2020, & **we continued to study impact & benefits into the spring.**
- This report examines the impact of the **Kindness Curriculum (KC)** on preschoolers' **social skills & emotional regulation** skills in the 2019-20 school year.



Earlier Work Using the Kindness Curriculum with Young Children

The Kindness Project for Preschool Children was based on a study done by
Flook, Goldberg, Pinger, & Davidson (2015)

- They studied **68 preschool children** (4-5 years old) in a public-school setting, randomly assigned by classroom to Kindness Curriculum (KC) Intervention group or Control group.
- Children who received the Kindness Curriculum (KC) showed **greater improvement in teacher-reported social competence (TSC)** in the areas of **prosocial behavior, emotional regulation, & total scores** than those in the Control group.
- **Children in the KC Group** had **higher report card grades** in the areas of approaches to learning, health & physical development, & social-emotional development.
 - On the **Sharing task**, the **control group demonstrated more selfish behavior**, keeping more stickers for themselves over time than did the KC group.

**** Cognitive results in separate report ****



Our Kindness Project: Comparisons to Flook & Colleagues' (2015) Study

Our Kindness Project was based on the study by **Flook & colleagues**:

- We used **many of the same outcome measures**: Sharing, Social Competence, Executive Function measures (Card Sort & Flanker Task), and School Grades.
- We **added measures** of: Social Self-Efficacy, Physical Self-Regulation, Empathy Skills, Social-Emotional Competency (ASQ-SE), School Success Skills (TS-Gold), & Mindfulness Skills.
- Their Mindfulness Coaches trained our Coaches & our teachers in June 2018. Teachers from 10 classrooms received training in 2018, with 6 classrooms serving as a waitlist control group. **In June 2019, teachers from the waitlist were trained by our Coaches & all 16 classrooms used the Kindness Curriculum in 2019-20.**

We expanded their work in 3 important ways:

- 1. A larger, more diverse sample of over 225 children, more than 50% from lower income and non-White families, participated in both years 1 and 2.**
- 2. Younger children, preschoolers (3-4 years), were included in addition to 4K (4-5 years) children.**
- 3. Our mindfulness coaches trained the classroom teachers to implement the Kindness Curriculum (KC) → a “train the teacher model,” instead of using the mindfulness coaches to implement the KC.**
 - The goal of the “train the teacher model” was to make the Kindness Curriculum available more broadly & our Mindfulness Coaches offered ongoing support to teachers in their implementation of the KC & in their personal mindfulness practices.

Our Year 1 Findings: Supports & Extends Previous Work

- The mindfulness-based *Kindness Curriculum* led to improved **social skills**
 - The Curriculum contributed to children's improved **Sharing** – e.g., KC children shared more, especially with a sick child.
 - **Empathy**—e.g., KC children improved significantly in both cognitive understanding of empathy & display of empathetic behaviors.
- The mindfulness-based *Kindness Curriculum* led to improved **cognitive & academic skills**
 - The Curriculum contributed to improved **Executive Function** – e.g., KC children showed better mental flexibility, planning, inhibition of impulsive responses, & overall executive functioning.
 - **TS Gold** – e.g., KC children had better language, cognitive, literacy, & math skills.
 - **Report Cards** – e.g., KC children had stronger scores in social-emotional, language, math, & health/physical scales.
 - **Card Sort** – e.g., KC children did better on this matching & cognitive flexibility task in several areas including overall percent correct.
- *The Kindness Curriculum was effective in both preschool (3-4 years) & 4K (4-5 years) classrooms: e.g., even younger children showed significant gains in many areas!*

Research Questions for the Kindness Project

Primary Questions in Year 2: Children in All Classrooms Received KC

- Does the Curriculum improve children's **social skills**?
- Does the Curriculum improve **cognitive & academic skills**?
- Is the *Kindness Curriculum* effective in this larger group of both *preschool (3-4 years) and 4K (4-5 years) classrooms*?
- Did the benefits of the mindfulness-based *Kindness Curriculum* show evidence of carrying over for children who continued in the programs after summer break?
- Is participation in the Kindness Curriculum beneficial to & reaching all children, including younger children & those *from lower income families*?

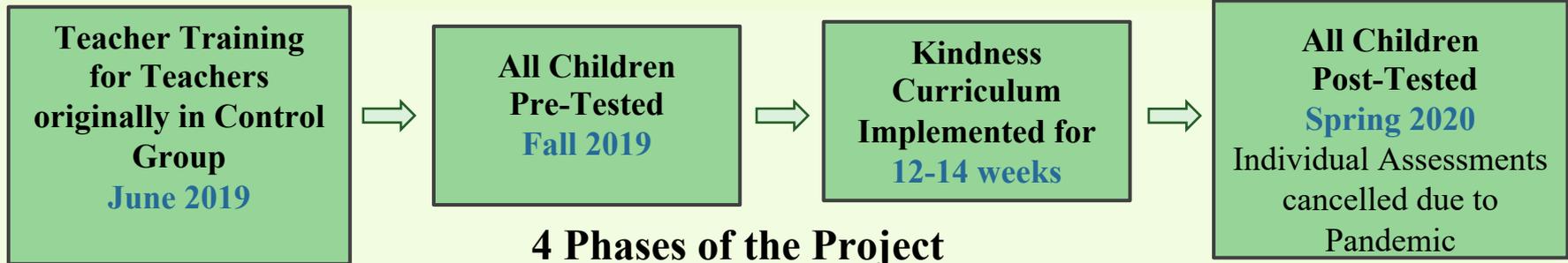
Practical Questions & Logistics:

- Do teachers find the Kindness Curriculum **useful personally & in their classrooms**? Can it be **cost-effectively implemented** in preschool & 4K classrooms?
- Does the Kindness Curriculum provide teachers with **additional tools** to support the positive development of all children?
- Did the mindfulness training help in any way during the **pandemic challenges**?

Study Design –Year 2: 2019 - 2020

Goals:

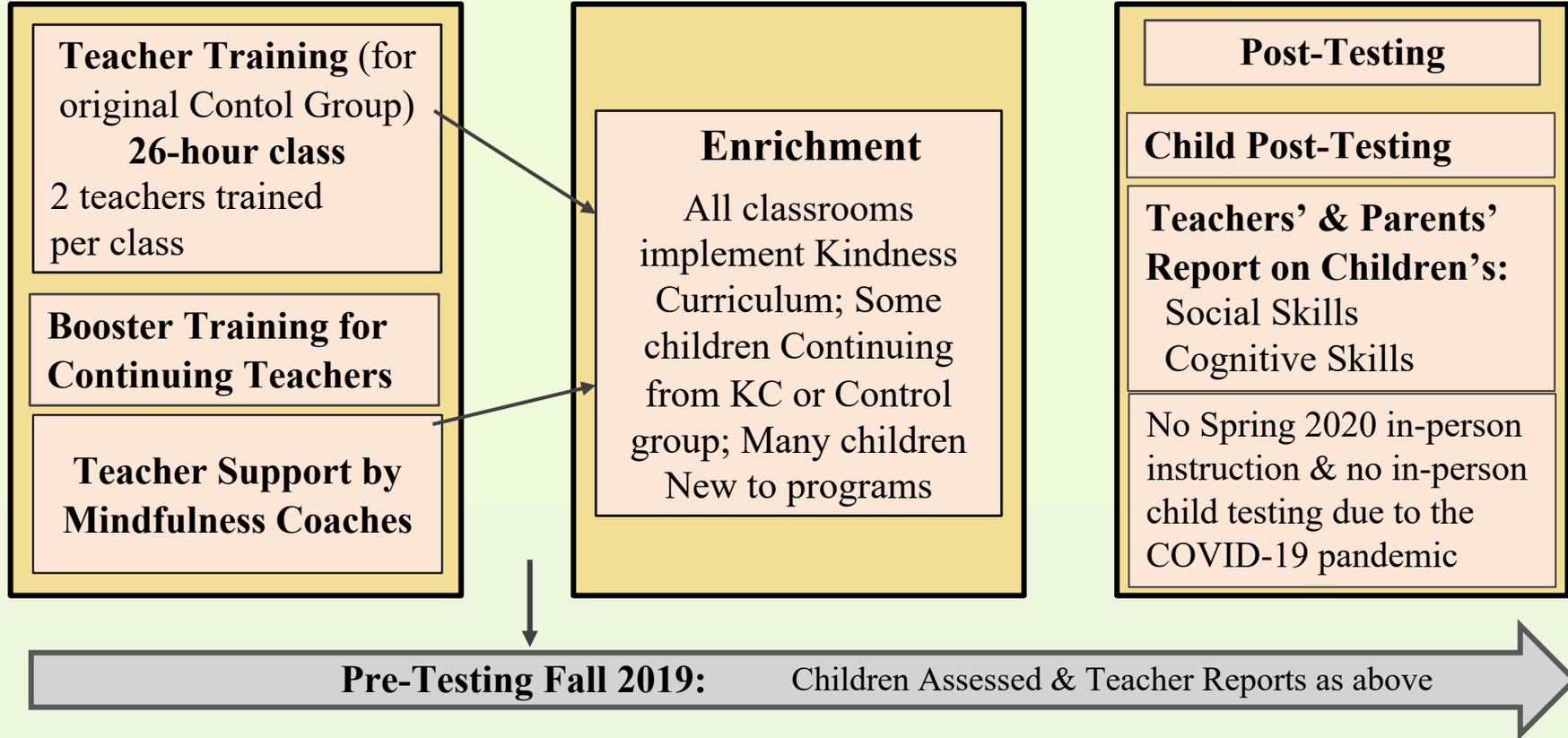
1. Bring the Kindness Curriculum (KC) to waitlist children & measure impact. In year 2, **children in all 16 participating classrooms received the KC** beginning in fall 2019.
 2. Compare the **effectiveness of the mindfulness-based Kindness Curriculum** across age (preschool or 4K), socioeconomic status (lower or higher), previous KC training (new to KC or continuing), & gender (girls or boys).
- All teachers received Kindness Curriculum training, either in **June 2018** or in **June 2019** (i.e., the Control Group teachers from 2018-19 received training in 2019).
 - All children assessed on **social, cognitive, & developmental skills, & report cards**, as reported by teachers & parents. Children continuing in the programs were individually assessed on the **Card Sort Task, Sharing, & Mindfulness Scenarios**.



Study Design: Phase Descriptions

- **Teacher Training – Over two weeks in June 2019**
 - Teachers who were previously in the Control condition participated in **26 hours of mindfulness** and Kindness Curriculum (KC) training led by **local Mindfulness coaches** focused on personal mindfulness practices, mindful teaching, & teaching the KC.
 - Coaches provided “**booster sessions**” for continuing teachers and supported all teachers in developing their personal and teaching mindfulness practices.
 - **All teachers implemented** the KC in the 2019-2020 school year.
- **Pre-Testing: September & October 2019 (about 6 weeks)**
 - *All children were assessed by teachers & parents* on social & cognitive skills during the Fall testing period.
 - In September & October 2019, college- student researchers individually assessed **ONLY continuing children** on three measures: Cognitive flexibility & attention (DCCST), Mindfulness scenarios, & a Sharing task.
- **Teachers Implement the Kindness Curriculum (KC) in classroom (about 12 weeks)**
 - The curriculum began in fall 2019 going through 24 lessons total over 12 weeks. Each lesson is about 20-30 minutes. Teachers encouraged to break-up lessons as needed to meet the needs in their classrooms.
 - Teachers completed reflection measures about how each lesson went. Teachers finished teaching the curriculum in January or February of 2020. Teachers were encouraged to continue mindfulness practices regularly.
- **Post-Testing of Children – March 2020 pandemic adaptation**
 - In March 2020, teachers & parents reported on children’s social & cognitive skills.
 - Individual assessment for **continuing children** was cancelled because the children were no longer in the classrooms due to the COVID-19 pandemic which forced schools to close.

Study Design Overview: 248 Children from 16 classrooms



Methodology: Participating Agencies

- From the **Community Early Learning Center**, all **Six preschool** and **Eight 4K classrooms** participated:
 - **UW-Oshkosh Head Start (Four 4K & 2 preschool classrooms)**
 - **Appleton Even Start Family Literacy (2 preschool classrooms)**
 - **Bridges Child Enrichment Center (Four 4K & 2 preschool classrooms)**
- In addition, the **Children's Center at the University of Wisconsin Oshkosh, Fox Cities Campus (2 preschool classrooms)** also participated.
- **All 16 classrooms participated in a 12-week mindfulness-based Kindness Curriculum (KC)** developed by Healthy Minds Innovation (2017).
- **Parental consent to participate** given for **98%** of the children.



The Mindfulness-based Kindness Curriculum for Preschoolers

Healthy Minds Innovation (2017)

- Available at <https://centerhealthyminds.org/join-the-movement/sign-up-to-receive-the-kindness-curriculum>
- This Project trained classroom teachers to implement the Kindness Curriculum (i.e., “Train the Teacher” Model)

8 Themes, each with 3 lessons

**Theme 1: Mindful Bodies & Planting
Seeds of Kindness**

Theme 2: I Feel Emotions on the Inside

**Theme 3: How I Feel on the Inside,
Shows on the Outside**

**Theme 4: Taking Care of Strong Emotions
on the Inside & Outside**

**Theme 5: Calming & Working Out
Problems**

Theme 6: Gratitude

**Theme 7: All People Depend on Each
Other & The Earth**

**Theme 8: Gratitude & Caring for Our
World & Wrap Up**

The Kindness Curriculum Themes are designed around these A to G Principles

- **Attention.** Children learn that what they focus on is a choice. Through focusing attention on a variety of *external* sensations (the sound of a bell) & *internal* sensations (feeling happy or sad), children learn they can direct their attention & maintain focus.
- **Breath & Body.** Children learn to use their breath to cultivate peace & quiet. The children rest on their backs with a stuffed toy on their belly. The toy provides an object to “rock to sleep” with the breath, while the breathing calms the body.
- **Caring.** Children learn to think about how others are feeling & cultivate kindness. Children experience books that teach about struggles & brainstorm ways to help—even if just offering a smile.
- **Depending on other people.** We emphasize that everyone supports & is supported by others. Children learn to see themselves as helpers & begin to develop gratitude for the kindness of others.
- **Emotions.** Teachers & children take turns pretending to be mad, sad, happy or surprised, guessing which emotion was expressed & talking about what that emotion feels like in the body.
- **Forgiveness.** Young children can be particularly hard on themselves – and others – and we teach them that everyone makes mistakes. Children learn to forgive themselves & others.
- **Gratitude.** Children learn to recognize the kind acts that other people do for them. Then, they talk about being thankful to those people for how they help us.

| *SES Categories based on the eligibility for free/reduced lunch | | Demographics Year 2: 2019-2020 | | | | | | |
|---|----------------|------------------------------------|--|------------------------|---|-----------------------------------|------------------------|----------------------------|
| Breakdowns by Groups | | Fall 2019 (n= 241) | | | Spring 2020 (n= 239) | | | Overall T1 or T2 (n = 248) |
| | | Continuing Kindness Group (n = 48) | Continuing from Control Group (n = 30) | New Children (n = 163) | Continuing from Kindness Group (n = 43) | Continuing Control Group (n = 30) | New Children (n = 166) | n = 248 |
| Gender | Female | 25 | 15 | 79 | 24 | 15 | 77 | 120 |
| | Male | 23 | 15 | 84 | 19 | 15 | 89 | 128 |
| Age | <48 months | 13 | 2 | 62 | 13 | 2 | 64 | 84 |
| | 4-5 years | 35 | 28 | 100 | 30 | 28 | 101 | 164 |
| SES* | Lower Income | 24 | 17 | 97 | 21 | 17 | 100 | 144 |
| | Higher Income | 24 | 13 | 48 | 22 | 13 | 49 | 86 |
| Ethnicity | NON-WHITE | 19 | 18 | 95 | 17 | 18 | 96 | 136 |
| | • Black | 3 | 6 | 22 | 2 | 6 | 23 | 33 |
| | • Latinx | 9 | 4 | 39 | 8 | 4 | 37 | 52 |
| | • Asian | 2 | 3 | 13 | 2 | 3 | 13 | 18 |
| | • Other/ Mixed | 5 | 5 | 21 | 5 | 5 | 23 | 33 |
| | WHITE | 29 | 12 | 67 | 26 | 12 | 69 | 111 |

Study Measures: Completed in Fall (before the KC) & Spring (after the KC)

| MEASURE | REPORTER | WHAT IT MEASURES | SUBSCALE/ No. of items |
|--|--------------------|---|--|
| Strengths and Difficulties (SDQ) | Teacher/ Parent | Children’s social-emotional behavior & behavioral problems | <ol style="list-style-type: none"> 1. Emotional symptoms (5 items) 2. Conduct problems (5 items) 3. Hyperactivity/inattention (5 items) 4. Peer relationship problems (5 items) 5. Prosocial behavior (5 items) |
| Teacher-Rated Social Competence (TRSC) | Teacher | Prosocial behavior and emotion regulation | <ol style="list-style-type: none"> 1. Prosocial behavior (5 items) 2. Emotion Regulation (7 items) 3. Empathy scale (3 items) |
| Behavior Rating Inventory of Executive Function—Preschool Version (BRIEF-P) | Teacher | The child’s ability to control their behavior, to respond in accordance with their environment , to move between tasks, to remember & use instructions to complete a task. Teacher reports on problem behavior in multiple areas of children’s executive functioning. | <ol style="list-style-type: none"> 1. Inhibitory Self-Control (16 items) 2. Emotional Control (10 items) 3. Shift Scale (10 items) 4. Working Memory Scale (17 items) 5. Plan/Organize Scale (10 items) |
| Parent-Rated Social Competence (PRSC) | Parent | Assesses a child's prosocial behaviors, communication skills, & self control | <ol style="list-style-type: none"> 1. Prosocial/Communication Skills (6 items) 2. Emotional Regulation Skills (6 items) |
| Griffith Empathy | Parent | Child’s ability to recognize and understand another’s emotional state and to respond appropriately to another’s emotions | <ol style="list-style-type: none"> 1. Cognitive empathy (6 items) 2. Affective empathy (9 items) |

Study Measures continued

| MEASURE | REPORTER | WHAT IT MEASURES | SUBSCALE/No. of items |
|--|--------------------|---|--|
| Ages and Stages Questionnaire: Social-Emotional (ASQ-SE) — <i>only completed in fall</i> | Teacher/ Parent | Social-emotional competency in seven areas: Adaptive function, Self-regulation, Communication, Autonomy, Affect, Compliance and Interaction with people | Total score 19 to 33 items, based on the child's age |
| Teaching Strategies Gold (TS-Gold) | Teacher | Measures the knowledge, skills, and behaviors most predictive of school success, including social-emotional development , physical, language, cognitive development & in the content areas of literacy, mathematics, and English-language acquisition | 38 objectives |
| Report Card | Teacher | Report Cards assess children's academic achievement & school progress at the end of Semester 1 (January), but not in June due to COVID | Social emotional, Language, Mathematics, Health & Physical |
| Impact on classroom | Teacher | Teachers' perceptions of the usefulness of the curriculum and training , whether the children remembered it, and whether it had a positive impact on the classroom | Eight rating scale items with open-ended follow ups |
| Home Impact – Parent Survey | Parent | Parents' perceptions of the impact of the Kindness Curriculum on their child(ren) | Four rating scale questions & open-ended follow ups |

Study Measures continued

Note that child assessments on these 2 tasks were *only done in Fall* due to COVID closures in Spring.

| MEASURE | REPORTER | WHAT IT MEASURES | SUBSCALE/ No. of items |
|-----------------------|----------|--|--|
| Modified Sharing Task | Child | Participants are asked to distribute stickers between a target recipient and themselves | <p>4 trials, 10 stickers each</p> <ul style="list-style-type: none"> • Trials 1-3 (Three target recipients): Unknown child; most-liked peer; sick child • Trial 4: Child asked to share stickers with the 3 target recipients but can't keep any for themselves |
| Mindfulness Scenarios | Child | <p>Three social scenarios: Children are interviewed about the feelings of the main character, how they would feel themselves, & what they would do in that situation</p> <ol style="list-style-type: none"> 1. Boy dresses up & is teased by peers 2. Child asks to join in a game & is turned away 3. Child accidentally pushes another child down, but the victim scolds the child | <p>3 scenarios, open ended questions, & quantitative ratings of emotion on a 7-point scale</p> <ul style="list-style-type: none"> • Other-Oriented Kindness: Measures empathy and kindness toward others. • Self-Oriented Kindness: Measures emotion regulation and kindness toward self. • Self- and Other-Oriented Kindness: Measures kindness to self and others in a situation that elicits a negative emotion. |

COVID-19 Story from Agencies for the 2019-20 School Year

University Children's Center

- **Required to close from March 17, 2020 until June 8, 2020.** They used **Facebook Live** to offer **1 hour-long activities** Monday-Friday.
- Some components of the **Kindness Curriculum (KC)** were reinforced during this time. For example, a lead teacher reported doing **breathing exercises** on Facebook & families had the opportunity to participate in web-based activities together.
- **UCC re-opened in June** & during the Summer of 2020.
- **UCC remained open in the 2020-21 school year** & implemented the KC beginning in fall.

Head Start CELC

- Teachers reported teaching/connecting with children **virtually** during **Spring 2020** when the CELC closed. They sent **daily emails** with videos explaining lesson plans & started **class Zoom calls once/week**.
- Some teachers reported using components of the **KC to support & help children** cope during this time, e.g., they taught **breathing techniques, social stories, yoga cards & kindness**.
- Some teachers reported that KC mindfulness, including **journaling, yoga, breathing & meditation personally helped them** cope during this difficult time.

All agencies completed the Kindness Curriculum *PRIOR TO COVID-19* closures in the Spring of 2020. However, many of them continued to use KC mindfulness practices during these difficult times.



COVID-19 Story from Agencies for the 2019-20 School Year

Bridges Child Enrichment Center

- **Preschool classrooms were in-person all year except 4 weeks of the Spring semester** when the center closed due to **low enrollment**.
- **4K classrooms** were required to go online in spring. However, all 4K classrooms **started the KC early in Fall & consequently finished the KC lessons by February 2020, prior to the center's closure**.
- Teachers reported that **the mindfulness training, including the concept of thankfulness, practicing taking breaks, doing body scans, stretching and reflecting** at the beginning and end of each day, **personally helped them** during this stressful time.

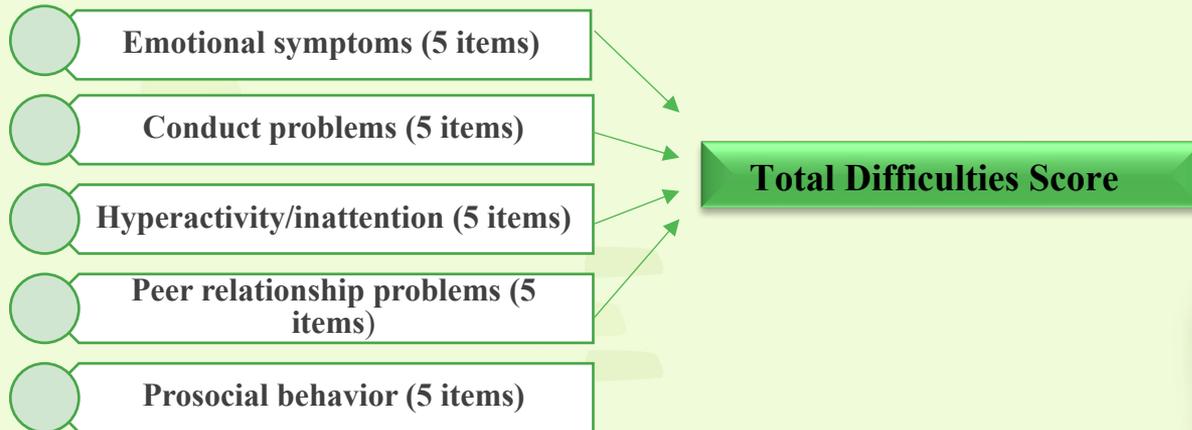
Even Start CELC

- Teachers **completed the Curriculum prior to COVID closure in Spring 2020**. They used the **Remind app** to check in with children & families and the **district's curriculum** to reduce learning gaps for children.
- Some teachers reported finding the **mindfulness teacher training** personally **helpful to them during this difficult time**. For example, a lead teacher reported **listening to how her body feels, doing yoga & pausing to breathe**.



Strengths and Difficulties (SDQ)

- This measure is a brief behavioral screening questionnaire. We used the version for 2- to 4-year-olds.
- It has 25 items (about both positive & negative behaviors) rated by teachers on a 3-point scale (not true, somewhat true, certainly true). Parents completed a short supplement.
- Sample positive strength item: “Considerate of other people’s feelings.”
- Sample difficulty item: “Often loses temper.”



Strengths and Difficulties (SDQ)

Teacher (your) Name: _____ Age: ___ Gender (circle): M F Other: _____

Child's Name: _____ Date: _____

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of the child's behavior over the last six months or this school year.

| | Not True | Somewhat True | Certainly True |
|---|--------------------------|--------------------------|--------------------------|
| Considerate of other people's feelings | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Restless, overactive, cannot stay still for long | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Often complains of headaches, stomach-aches or sickness | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Shares readily with other children, for example toys, treats, pencils | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Often loses temper | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Rather solitary, prefers to play alone | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Generally well behaved, usually does what adults request | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Many worries or often seems worried | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Helpful if someone is hurt, upset or feeling ill | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Constantly fidgeting or squirming | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Has at least one good friend | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Often fights with other children or bullies them | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Often unhappy, depressed or tearful | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Teacher's version



(A) Overall, do you think that your child has difficulties in one or more of the following areas:

| | No | Yes-minor difficulties | Yes-definite difficulties | Yes-severe difficulties |
|-------------------------------|--------------------------|--------------------------|---------------------------|--------------------------|
| (1) Emotions | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (2) Concentration | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (3) Behavior | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (4) Getting along with others | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

(B) If you have answered "Yes" above, please answer the following question about these difficulties:

Do the difficulties interfere with your child's everyday life in the following areas?

| | Not at all | Only a little | A medium amount | A great deal |
|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| HOME LIFE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| FRIENDSHIPS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| CLASSROOM LEARNING | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| LEISURE ACTIVITIES | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Parent's version (Impact supplement)



Overview of Findings on Strengths & Difficulties (SDQ)

In fall, how did children *continuing vs. new* to the programs compare?

- Children continuing in the programs had significantly *fewer Hyperactivity Problems & Peer Problems*, as well as fewer *total difficulties* than new children. The continuing group had higher scores on *Prosocial Behavior* too!

Was there improvement over time?

- There was significant overall improvement over time in three of five areas: *Hyperactivity Problems & Peer Problems* decreased, & *Prosocial Behaviors* increased. There were not significant changes in *Conduct Problems* or *Emotional Problems*.

Was improvement over time comparable for continuing & new children?

- Continuing children did **better in the three areas listed above** & had fewer *Total Difficulties*, but both groups (continuing & new) improved comparably over time.

Was improvement over time comparable across socioeconomic status (SES)?

- **Although both lower & higher SES** children improved significantly over time, **higher SES children** showed *fewer hyperactivity problems & more prosocial behavior & improved somewhat more in peer problems & total difficulties over time*.
- **Higher SES** children had *fewer conduct problems over time* whereas **Lower SES** children did not improve.

Overview of Findings on Strengths & Difficulties (SDQ)

Was improvement over time comparable for preschool & 4K children?

- There were very few differences between preschool & 4K children on the SDQ measure.

Was improvement over time comparable for girls & boys?

- Girls showed *fewer hyperactivity problems and conduct problems*, as well as *fewer total difficulties*. They also showed *more prosocial behaviors* than boys.
- However, **boys** did show *more improvement* than girls in all 4 keys areas above over time.

Detailed graphs & results on significant findings follow!



Strengths & Difficulties: Improvement by Age (Preschool or 4K)

| Selected Measures | Group | Percentage Improved over 2019 – 2020 | Chi-Square |
|---------------------------|----------------------------------|--------------------------------------|---|
| Peer Problems | Preschool (3-year-olds) (n = 78) | 51.3% (40) | Chi Square = .032, $p = .857$; similar rates - no significant differences. |
| | 4K Children (n = 134) | 50.0% (67) | |
| Hyperactivity | Preschool (3-year-olds) (n = 78) | 67.9% (53) | Chi Square = 2.386, $p = .122$; higher 4K rates but no significant differences. |
| | 4K Children (n = 134) | 77.6% (104) | |
| Prosocial | Preschool (3-year-olds) (n = 78) | 85.9% (67) | Chi Square = .032, $p = .857$; slightly higher Pre-K rates - no significant differences. |
| | 4K Children (n = 134) | 78.4% (105) | |
| Total Difficulties | Preschool (3-year-olds) (n = 78) | 67.9% (53) | Chi Square = .322, $p = .570$; slightly higher 4K rates - no significant differences. |
| | 4K Children (n = 134) | 71.6% (96) | |

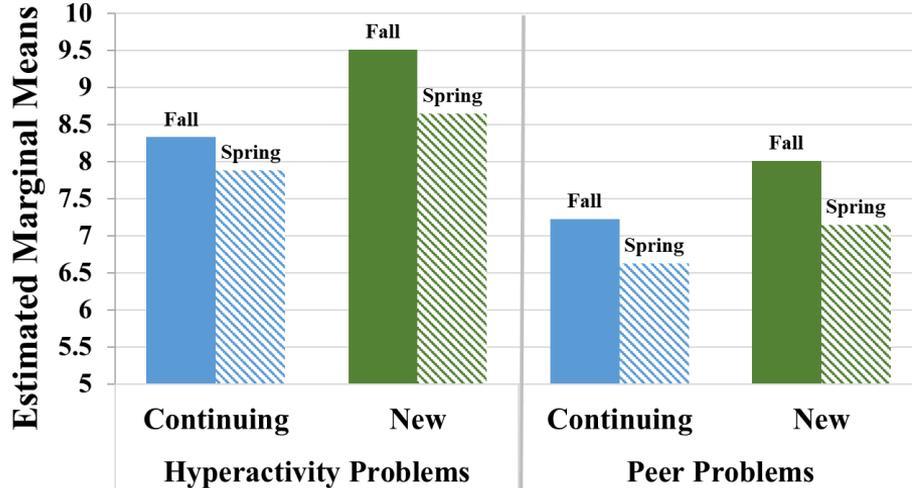
Strengths & Difficulties: Improvement by Socioeconomic Groups (SES)

| Selected Measures | Group | Percentage Improved over 2019 – 2020 | Chi-Square |
|---------------------------|---------------------|--------------------------------------|--|
| Peer Problems | Lower SES (n = 140) | 75.7% (106) | Chi Square = 7.904, $p = .005$; more higher SES children improved – there is a significant difference |
| | Higher SES (n = 72) | 91.7% (66) | |
| Hyperactivity | Lower SES (n = 140) | 73.6% (103) | Chi Square = .051, $p = .822$; no significant differences between low & high SES children |
| | Higher SES (n = 72) | 75% (54) | |
| Prosocial | Lower SES (n = 140) | 52.1% (73) | Chi Square = .461, $p = .479$; no significant differences between low & high SES children |
| | Higher SES (n = 72) | 47.2% (34) | |
| Total Difficulties | Lower SES (n = 140) | 68.6% (96) | Chi Square = .578, $p = .447$; no significant differences between low & high SES children |
| | Higher SES (n = 72) | 73.6% (53) | |



SDQ Results: Continuing Students showed fewer Hyperactivity & Peer Problems in Fall & Spring than New Students

SDQ: Hyperactivity & Peer Problems varied with Continuing or New Students



The continuing children *displayed significantly fewer hyperactivity & peer problems in fall & overall*, but both groups *improved significantly over time*.

Hyperactivity Problems:

ME Time: $F(1, 210) = 12.71, p < .001, *ES = .057$

ME Continuing or New: $F(1, 210) = 5.43, p = .021, *ES = .025$

Peer Problems:

ME Time: $F(1, 210) = 30.88, p < .001, *ES = .128$

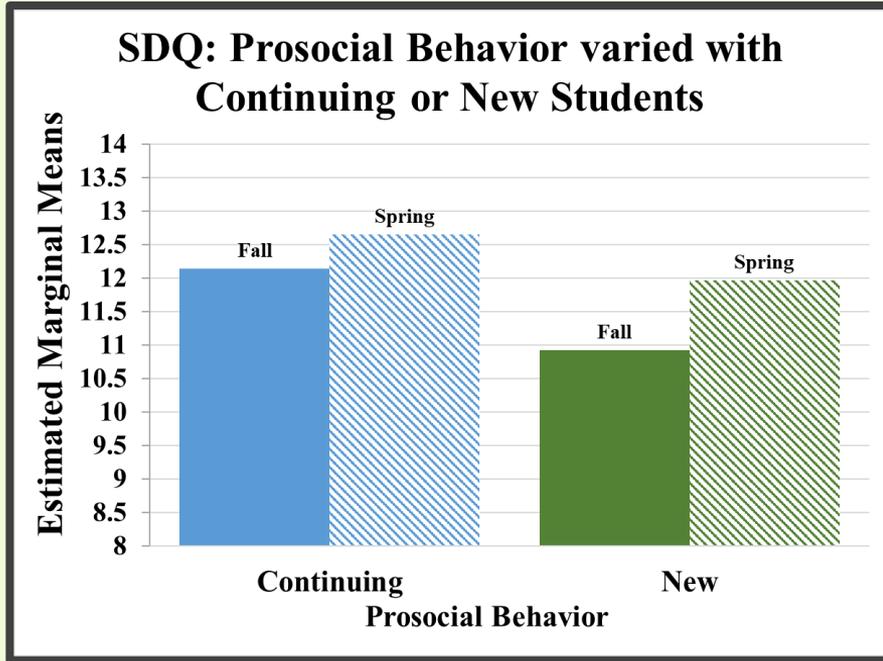
ME Continuing or New: $F(1, 210) = 6.57, p = .011, *ES = .030$

*ES = Effect size, eta squared

Remember: Lower scores are better.



Results: SDQ Prosocial Behavior Varied with Continuing or New Students



The continuing children *displayed significantly more prosocial behaviors*, but both groups *improved significantly over time*.

Prosocial Behavior

ME Time: $F(1, 210) = 17.72, p < .001, *ES = .078$

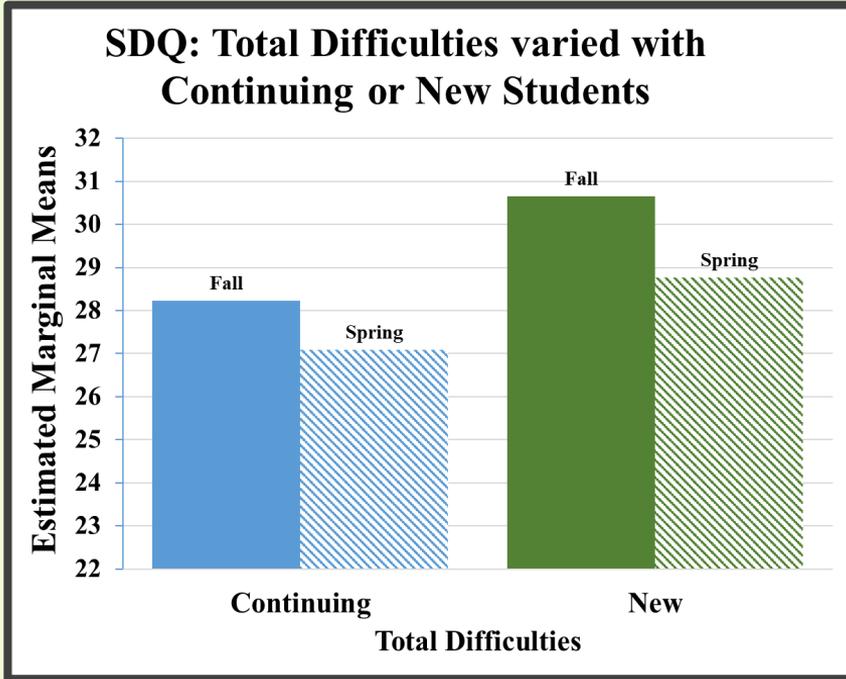
ME Continuing or New: $F(1, 210) = 7.25, p = .008, *ES = .033$

*ES = Effect size, eta squared

Remember: Higher scores are better.



Results: SDQ Total Difficulties Varied with Continuing or New Students



The continuing children *displayed significantly fewer total difficulties*, but both groups *improved significantly over time*.

Total Difficulties

ME Time: $F(1, 210) = 15.23, p < .001, *ES = .068$

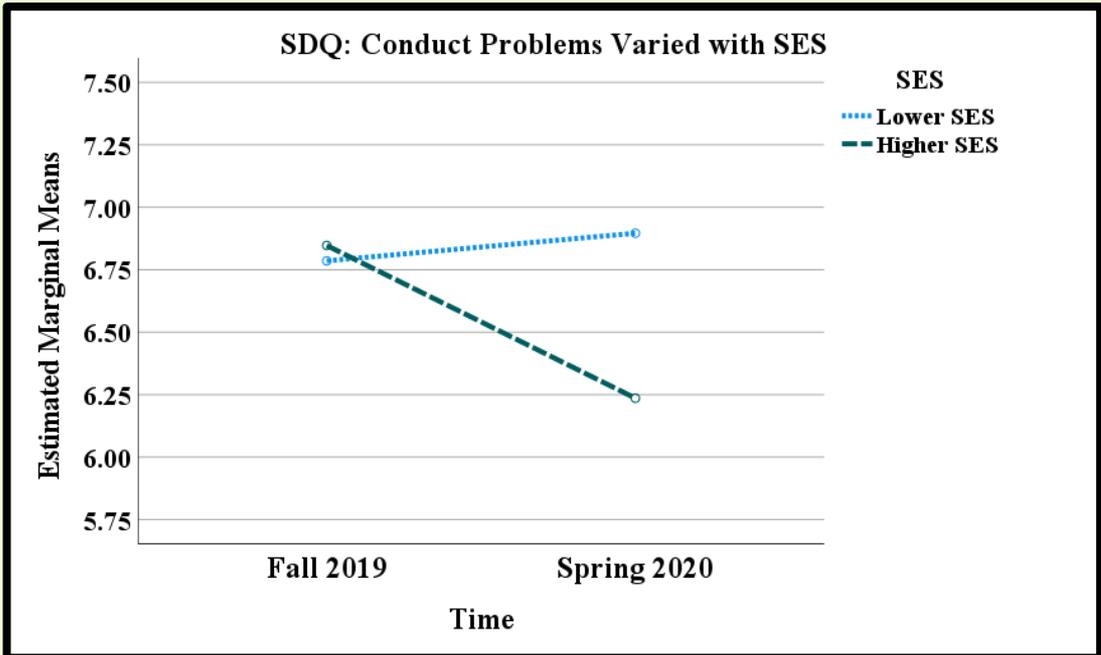
ME Continuing or New: $F(1, 210) = 5.02, p = .026, *ES = .023$

*ES = Effect size, eta squared

Remember: Lower scores are better.



Results: SDQ Conduct Problems Varied with Socioeconomic Status



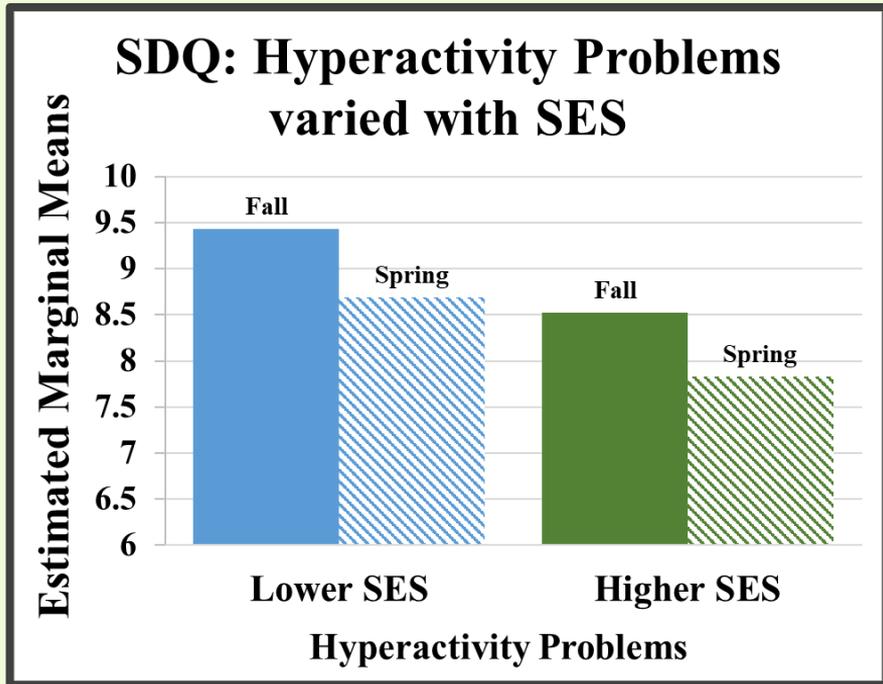
Although the groups were comparable in Fall, higher SES children showed *fewer conduct problems over time* whereas *lower SES* children did not improve.

Conduct Problems
Time x SES: $F(1, 210) = 6.79, p = .010, ES = .031$
*ES = Effect size, eta squared

Remember: Lower scores are better.



Results: SDQ Hyperactivity Problems Varied with Socioeconomic Status



Higher SES children *displayed significantly fewer hyperactivity problems*, but both groups *improved significantly over time*.

Hyperactivity Problems

ME Time: $F(1, 210) = 15.30, p < .001, *ES = .068$

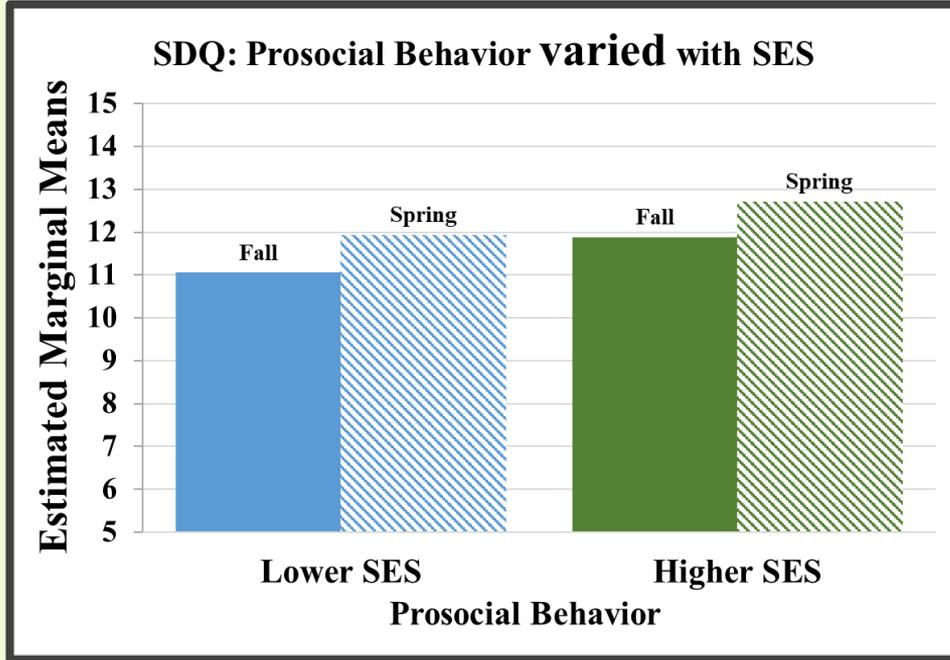
ME SES: $F(1, 210) = 4.44, p = .036, *ES = .021$

*ES = Effect size, eta squared

Remember: Lower scores are better.



Results: Prosocial Behavior Varied with Socioeconomic Status



Higher SES children *displayed significantly more prosocial behaviors*, but both groups *improved significantly over time*.

Prosocial Behavior

ME Time: $F(1, 210) = 21.80, p < .001, *ES = .094$

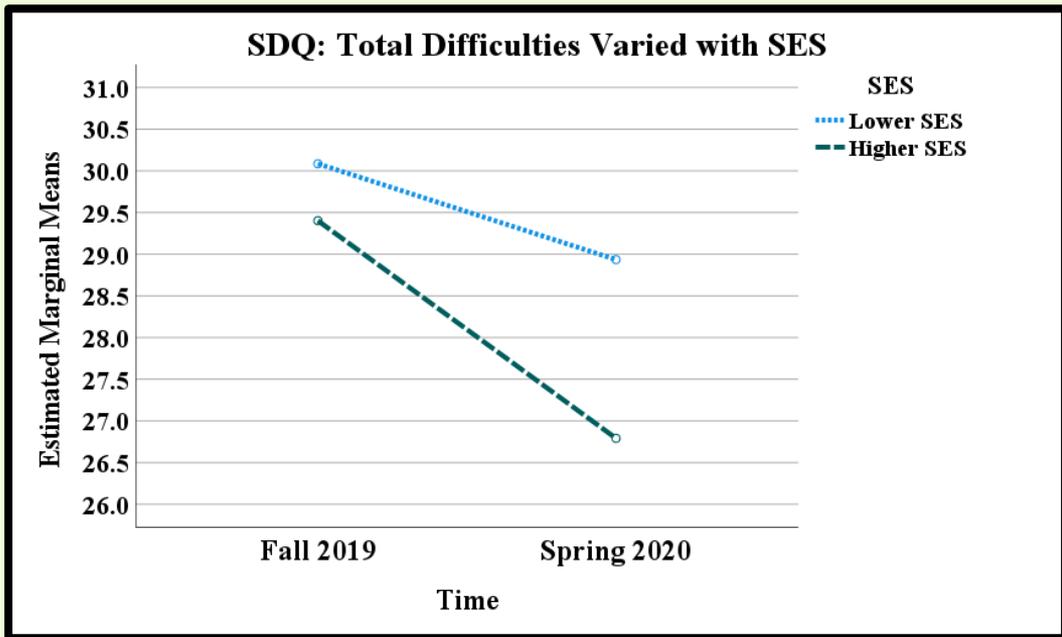
ME SES: $F(1, 210) = 5.09, p = .025, *ES = .024$

*ES = Effect size, eta squared

Remember: Higher scores are better.



Results: SDQ Total Difficulties Varied with Socioeconomic Status



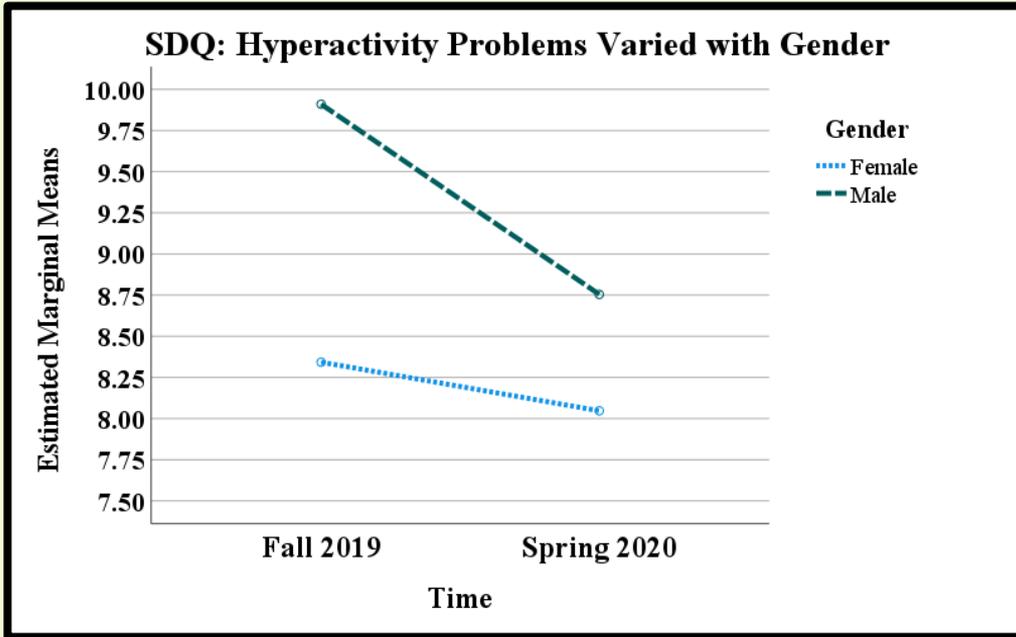
The lower & higher SES children were *comparable in fall*, & both *improved significantly over time*. However, the higher SES students *showed fewer total difficulties* than lower SES children.

Total Difficulties
Time x SES: $F(1, 210) = 3.63, p = .058, *ES = .017$
ME Time: $F(1, 210) = 24.03, p < .001, *ES = .103$
*ES = Effect size, eta squared

Remember: Lower scores are better.



Results: SDQ Hyperactivity Problems Varied with Gender



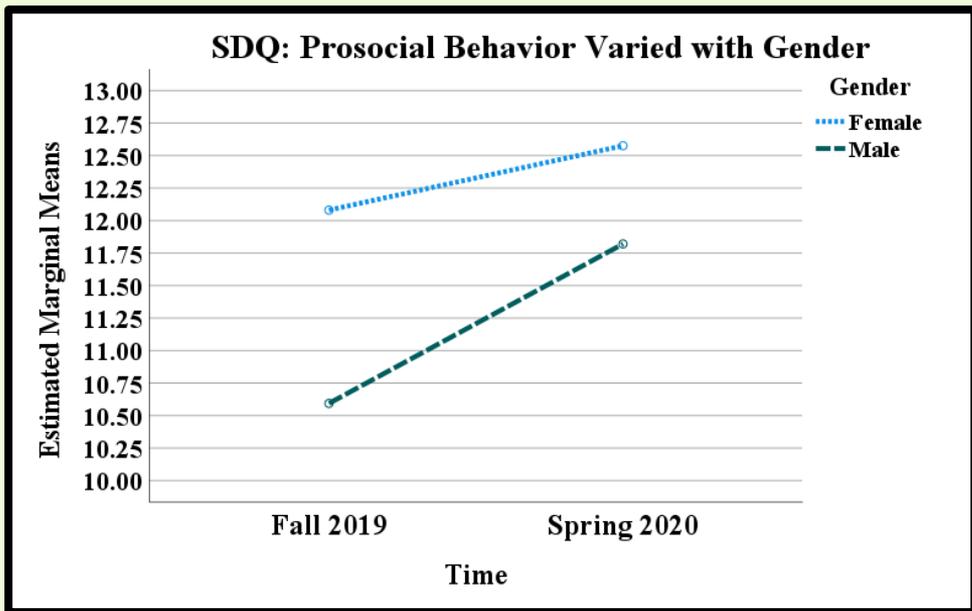
While girls *showed significantly fewer hyperactivity problems overall*, boys *displayed significantly greater improvement*. However, both groups *improved over time*.

Hyperactivity Problems
Time x Gender: $F(1, 210) = 6.30, p = .013, *ES = .029$
ME Time: $F(1, 210) = 17.91, p < .001, *ES = .079$
ME Gender: $F(1, 210) = 8.36, p = .004, *ES = .038$
*ES = Effect size, eta squared

Remember: Lower scores are better.



Results: SDQ Prosocial Behavior Varied with Gender



While girls *showed significantly more prosocial behaviors overall*, boys *displayed significantly greater improvement over time*. Both groups *improved significantly over time*.

Prosocial Behavior

Time x Gender: $F(1, 210) = 4.45, p = .036, *ES = .021$

ME Time: $F(1, 210) = 24.68, p < .001, *ES = .106$

ME Gender: $F(1, 210) = 11.50, p < .001, *ES = .052$

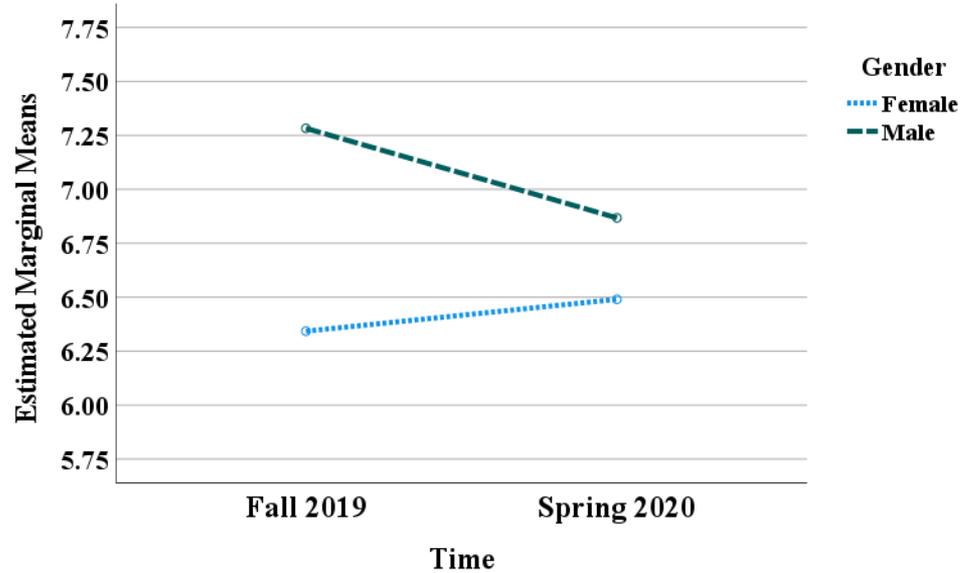
*ES = Effect size, eta squared

Remember: Higher scores are better.



Results: SDQ Conduct Problems Varied with Gender

SDQ: Conduct Problems Varied with Gender



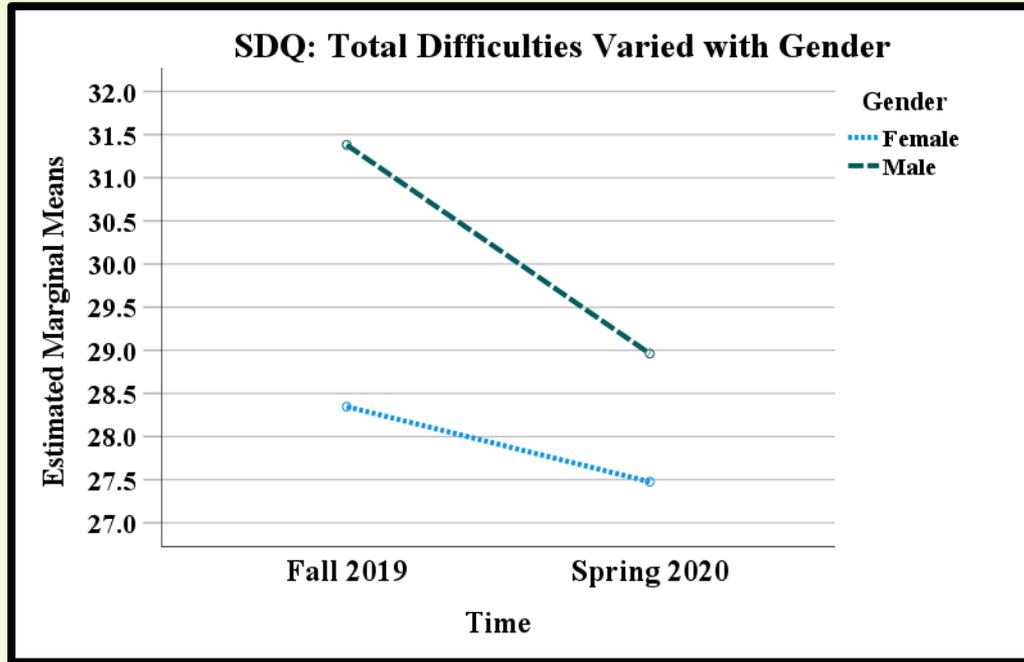
While girls *showed significantly fewer conduct problems overall*, boys *displayed significantly greater improvement over time*. Girls did not change significantly over time.

Conduct Problems
Time x Gender: $F(1, 210) = 4.51, p = .035, *ES = .021$
ME Gender: $F(1, 210) = 4.706, p = .031, *ES = .022$
*ES = Effect size, eta squared

Remember: Lower scores are better.



Results: SDQ Total Difficulties Varied with Gender



While girls *showed significantly fewer total difficulties overall*, boys *displayed significantly greater improvement over time*. Both groups *improved over time*.

Total Difficulties

Time x Gender: $F(1, 210) = 4.52, p = .035, *ES = .021$

ME Time: $F(1, 210) = 20.41, p < .001, *ES = .089$

ME Gender: $F(1, 210) = 6.86, p = .009, *ES = .032$

*ES = Effect size, eta squared

Remember: Lower scores are better.



Teacher Rated Social Competence (TRSC)

TRSC is a measure completed by teachers about children's prosocial behavior, emotion regulation, and empathetic displays.

"Does the child listen carefully to others?"

Prosocial behavior

"Does the child handle disagreements in a positive way?"

Emotion regulation

"Does the child show empathy and compassion for others' feelings?"

Empathy

0-----1-----2-----3-----4-----5
 Almost Never Rarely Sometimes Often Very Often Almost Always

Compared to other boys/girls of about the same age, how often does this child:
 Please circle the number below.

| | Almost Never | Rarely | Some Times | Often | Very Often | Almost Always |
|---|--------------|--------|------------|-------|------------|---------------|
| 1. Show empathy and compassion for others' feelings. | 0 | 1 | 2 | 3 | 4 | 5 |
| 2. Provide help, share materials, and act cooperatively with others. | 0 | 1 | 2 | 3 | 4 | 5 |
| 3. Take turns, play fair, and follow the rules of the game. | 0 | 1 | 2 | 3 | 4 | 5 |
| 4. Listen carefully to others. | 0 | 1 | 2 | 3 | 4 | 5 |
| 5. Initiate interactions and join in with others in an appropriate and positive manner. | 0 | 1 | 2 | 3 | 4 | 5 |



0-----1-----2-----3-----4-----5

From 0=almost never to 5=almost always



Overview of Findings for Teacher Rated Social Competence (TRSC)

In fall, how did children *continuing* vs. *new* to the programs compare?

- Children **continuing** in the programs showed significantly *improved Prosocial Behavior & Empathetic Behavior* when compared to children new to the programs. Emotional Regulation skills were comparable in the two groups.

Was there improvement *over time*?

- There was significant overall **improvement** in *Prosocial & Empathetic Behavior* over time. Emotional Regulation improved for some groups.

Was improvement over time comparable for continuing & new children?

- **Continuing** children did **better** on both *Prosocial & Empathetic Behavior*, but **both continuing & new children improved** comparably over time.



Overview of Findings for Teacher Rated Social Competence (TRSC)

Was improvement over time comparable across socioeconomic status (SES)?

- Higher SES children showed more improvement in *Prosocial & Empathetic Behavior* than Lower SES children.

Was improvement over time comparable for Preschool & 4K children?

- Both groups improved over time, though 4K children showed somewhat greater improvement in *Prosocial Behavior & Empathetic Behavior* than preschool children.

Was improvement over time comparable for boys & girls?

- Both boys & girls improved in all three areas of *Prosocial & Empathetic Behavior & Emotional Regulation*, but girls generally started & ended with higher scores than boys.



*Percentages of children improving over time are listed below.
Detailed graphs & results on selected significant findings follow!*



Improvement in Teacher Rated Social Competence (TRSC)

Given the COVID pandemic, we summarize how many children maintained or improved their skills over the school year.

| Measure | Percentage of Children who maintained or improved their skills over 2019-20 |
|----------------------|---|
| Prosocial Behavior | 75.9% maintained or improved |
| Emotional Regulation | 74.4% maintained or improved |
| Empathy Displays | 76.8% maintained or improved |

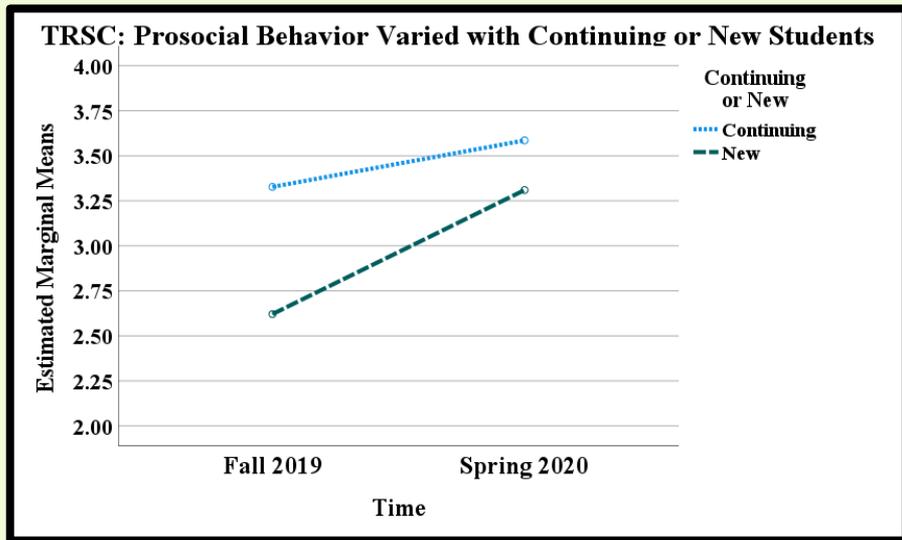


Improvement by Socioeconomic Status (SES) & Age (Preschool or 4K)

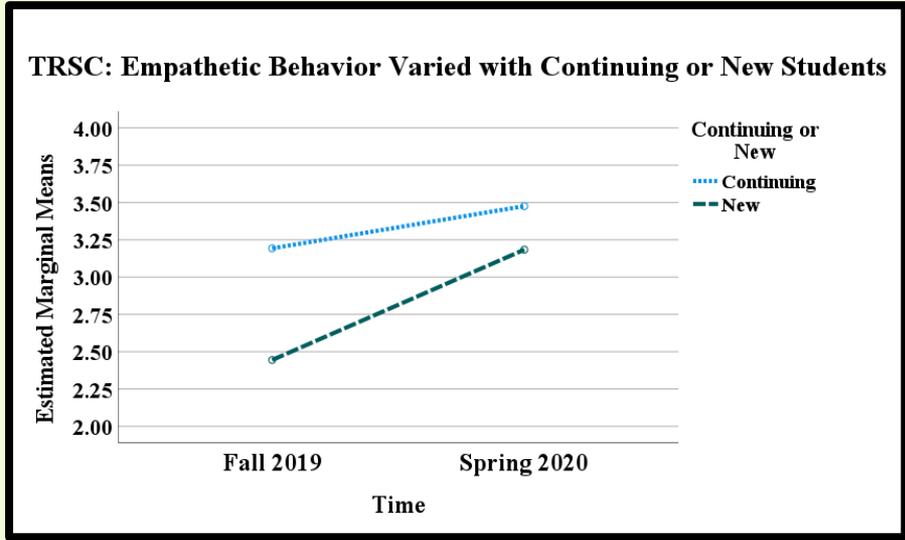
| Measure | Group | Percentage Improved over 2019 – 2020 | Chi-Square |
|----------------------|----------------------------------|--------------------------------------|---|
| Prosocial Behavior | Lower SES (n = 138) | 63.8% (88) | Chi Square = .789, $p = .374$; not significant: low & high SES children improved comparably |
| | Higher SES (n = 73) | 69.9% (51) | |
| Emotional Regulation | Lower SES (n = 138) | 65.2% (90) | Chi Square = .006, $p = .938$; lower SES children improved as much as higher SES children |
| | Higher SES (n = 73) | 65.8% (48) | |
| Empathy Displays | Lower SES (n = 138) | 60.9% (84) | Chi Square = .486, $p = .486$; lower SES children improved as much as higher SES children |
| | Higher SES (n = 73) | 65.8% (48) | |
| Prosocial Behavior | Preschool (3-year-olds) (n = 77) | 53.2% (41) | Chi Square = 8.60, $p = .003$; 4K children improved significantly more than preschoolers |
| | 4K (n = 134) | 73.1% (98) | |
| Emotional Regulation | Preschool (3-year-olds) (n = 77) | 61% (47) | Chi Square = 1.02, $p = .312$; preschoolers improved as much as the 4K children |
| | 4K (n = 134) | 67.9% (91) | |
| Empathy Displays | Preschool (3-year-olds) (n = 77) | 54.5% (42) | Chi Square = 3.32, $p = .068$; marginally significant difference: slightly higher 4K improvement |
| | 4K (n = 134) | 67.2% (90) | |



Results: TRSC Prosocial & Empathetic Behavior Varied with Continuing or New Students



Time x Continuing/New: $F(1, 209) = 6.98, p = .009, *ES = .032$
ME Time: $F(1, 209) = 33.28, p < .001, *ES = .137$
ME Continuing or New: $F(1, 209) = 11.10, p = .001, *ES = .050$



Time x Continuing/New : $F(1, 209) = 8.33, p = .004, *ES = .038$
ME Time: $F(1, 209) = 41.70, p < .001, *ES = .166$
ME Continuing/New : $F(1, 209) = 11.78, p < .001, *ES = .053$

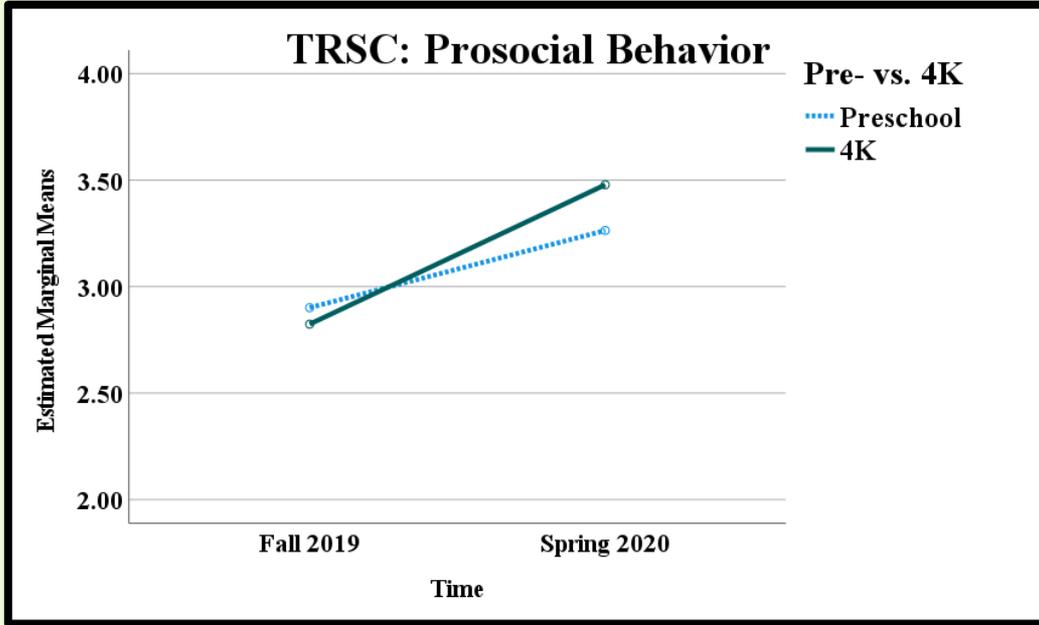


While continuing children displayed *significantly greater prosocial & empathetic behavior overall*, the two groups were *comparable in spring*. Children new to the curriculum *showed significantly greater improvement over time*.



*ES = Effect size, eta squared

Results: TRSC Prosocial Behavior Varied with Age



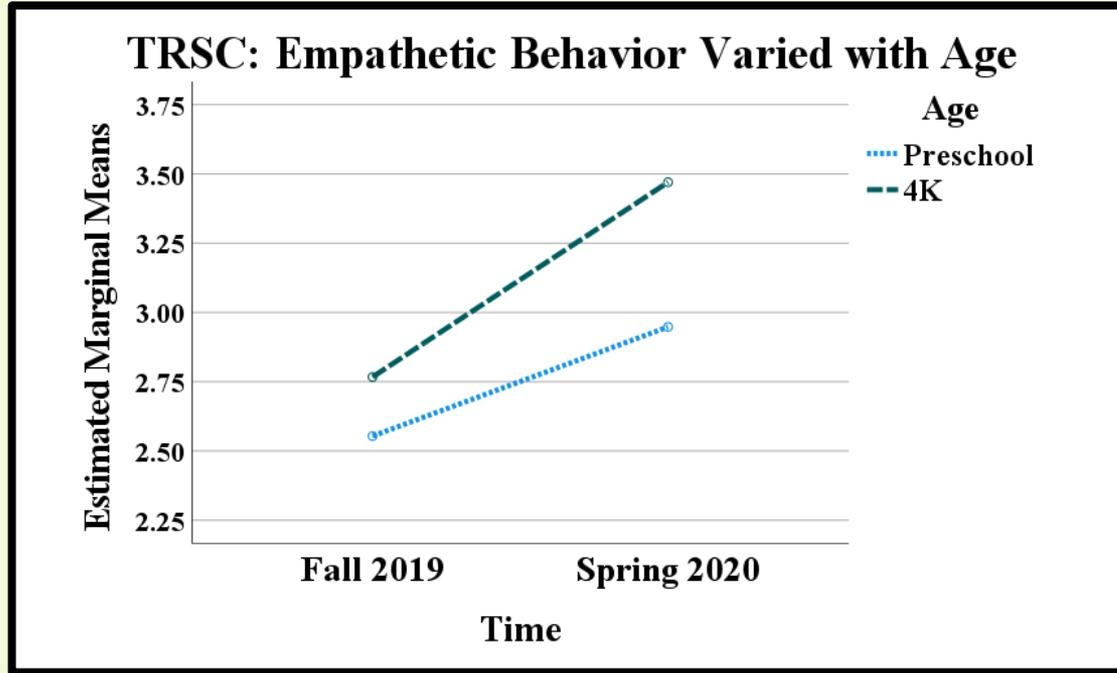
The preschool & 4K children showed *comparable levels of prosocial behavior* in fall, & *both improved over time*. However, the 4K children showed *somewhat greater improvement over time* in prosocial behavior than the preschool children.

Prosocial Behavior

Time x Pre vs. 4K: $F(1, 209) = 3.28, p = .071, *ES = .015$
ME Time: $F(1, 209) = 39.76, p < .001, *ES = .160$
*ES = Effect size, eta squared



TRSC: Empathetic Behavior Varied with Age



While the 4K children displayed *more empathetic behavior overall*, both groups *improved significantly over time*.

The 4K children showed *greater improvement* in empathetic behavior than preschool children.

Empathetic Behavior

Time x Pre vs. 4K: $F(1, 209) = 3.93, p = .049, *ES = .018$

ME Time: $F(1, 209) = 49.54, p < .001, *ES = .192$

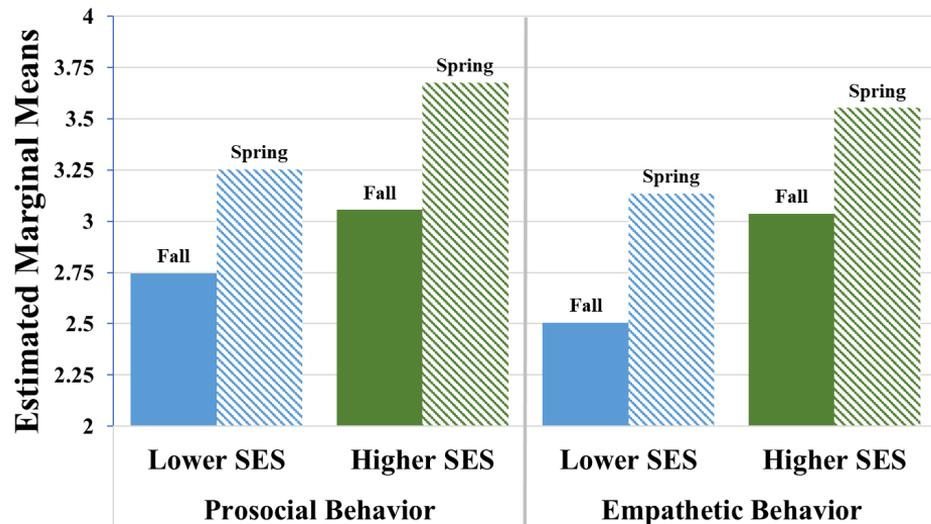
ME Pre vs. 4K: $F(1, 209) = 6.04, p = .015, *ES = .028$

*ES = Effect size, eta squared



TRSC: Prosocial & Empathetic Behavior Varied with Socioeconomic Status

TRSC: Prosocial & Empathetic Behavior varied with SES



Higher SES children *displayed significantly higher prosocial & empathetic behavior overall*, but both groups *improved significantly over time*.

Prosocial Behavior:

ME Time: $F(1, 209) = 47.36, p < .001, *ES = .185$

ME SES: $F(1, 209) = 6.22, p = .013, *ES = .029$

Empathetic Behavior:

ME Time: $F(1, 209) = 51.90, p < .001, *ES = .199$

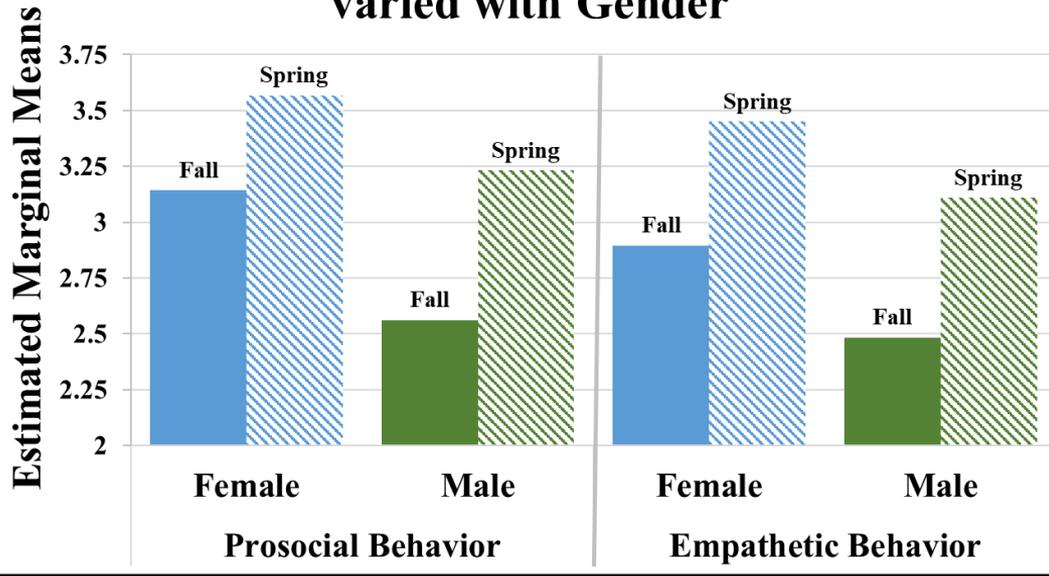
ME SES: $F(1, 209) = 9.98, p = .002, *ES = .046$

*ES = Effect size, eta squared



TRSC: Prosocial & Empathetic Behavior Varied with Gender

TRSC: Prosocial & Empathetic Behavior varied with Gender



Girls *displayed significantly higher prosocial & empathetic behavior overall*, but both boys & girls *improved significantly over time*.

Prosocial Behavior:

ME Time: $F(1, 209) = 49.71, p < .001, *ES = .192$

ME Gender: $F(1, 209) = 11.037, p = .001, *ES = .050$

Empathetic Behavior:

ME Time: $F(1, 209) = 60.83, p < .001, *ES = .225$

ME Gender: $F(1, 209) = 6.88, p = .009, *ES = .032$

*ES = Effect size, eta squared



Parent-Rated Social Competence (PRSC)

- This 12-item measure assesses children's prosocial behaviors, communication skills, & self control. The Parent-reported version is similar to the Teacher Version (TRSC) above, but with fewer items.
- Each item on the scale states a behavior that a child may display in a social setting

Prosocial/Communication Skills

Emotional Regulation Skills

Social Competence (Parent Version)

Please tell me how well each of the statements actually does describe your child.

| | Not At All | A Little | Moderately Well | Well | Very Well |
|--|------------|----------|-----------------|------|-----------|
| 1. Your child can accept things not going his/her way. | 0 | 1 | 2 | 3 | 4 |
| 2. Your child copes well with failure. | 0 | 1 | 2 | 3 | 4 |
| 3. Your child thinks before acting. | 0 | 1 | 2 | 3 | 4 |
| 4. Your child resolves problems with friends or brothers and sisters on his/her own. | 0 | 1 | 2 | 3 | 4 |
| 5. Your child can calm down when excited or all wound up. | 0 | 1 | 2 | 3 | 4 |
| 6. Your child does what he or she is told to do. | 0 | 1 | 2 | 3 | 4 |
| 7. Your child is very good at understanding other people's feelings. | 0 | 1 | 2 | 3 | 4 |
| 8. Your child controls his/her temper when there is a disagreement. | 0 | 1 | 2 | 3 | 4 |
| 9. Your child shares things with others. | 0 | 1 | 2 | 3 | 4 |
| 10. Your child is helpful to others. | 0 | 1 | 2 | 3 | 4 |
| 11. Your child listens to others' points of view. | 0 | 1 | 2 | 3 | 4 |
| 12. Your child can give suggestions and opinions without being bossy. | 0 | 1 | 2 | 3 | 4 |



0-----1-----2-----3-----4

From (0 = Not at all) to (4 = Very well)



Overview of Findings on Parent-Rated Social Competency

In fall, how did children *continuing vs. new* to the programs compare?

- Children continuing in the programs had better **Prosocial Skills, Emotional Regulation Skills, & Overall Means** than children new to the programs.

Was there improvement *over time*?

- There was no reported significant improvement over time in the two key areas above, however only 43 parents completed the measure at both time periods. Note that the pandemic hit in March 2020, no doubt accounting for the **low return rate** from parents on this measure.

Was improvement over time comparable across socioeconomic status (SES)?

- **Higher SES** children gained *significantly more Prosocial Skills & Total Means over time* whereas **lower SES** children did not improve in this smaller sample.



Overview of Findings for Parent-Rated Social Competency

- **Was improvement over time comparable for preschool & 4K children?**
- There was no significant differences between Preschool & 4K children on **Prosocial Skills, Emotional Regulation Skills, or Total Means.**
- **Was improvement over time comparable for girls & boys?**
- There was no significant differences between boys & girls on **Prosocial Skills, Emotional Regulation Skills, or Total Means.**

*Percentages of children improving over time are listed below.
Detailed graphs & results on selected significant findings follow!*



Improvement-Parent Rated Social Competence

The Social Competence Scale – Parent Version is a 12-item measure where parents report on children's prosocial behaviors, communication skills, and self control. Examples of statements include: "Your child can give suggestions and opinions without being bossy" and "Your child can calm down when excited or all wound up."

| Measure | Percentage of Children who Maintained or Improved their skills over 2019-20 |
|------------------------------------|--|
| Prosocial Skills | 61.3% maintained or improved |
| Emotional Regulation Skills | 61.3% maintained or improved |

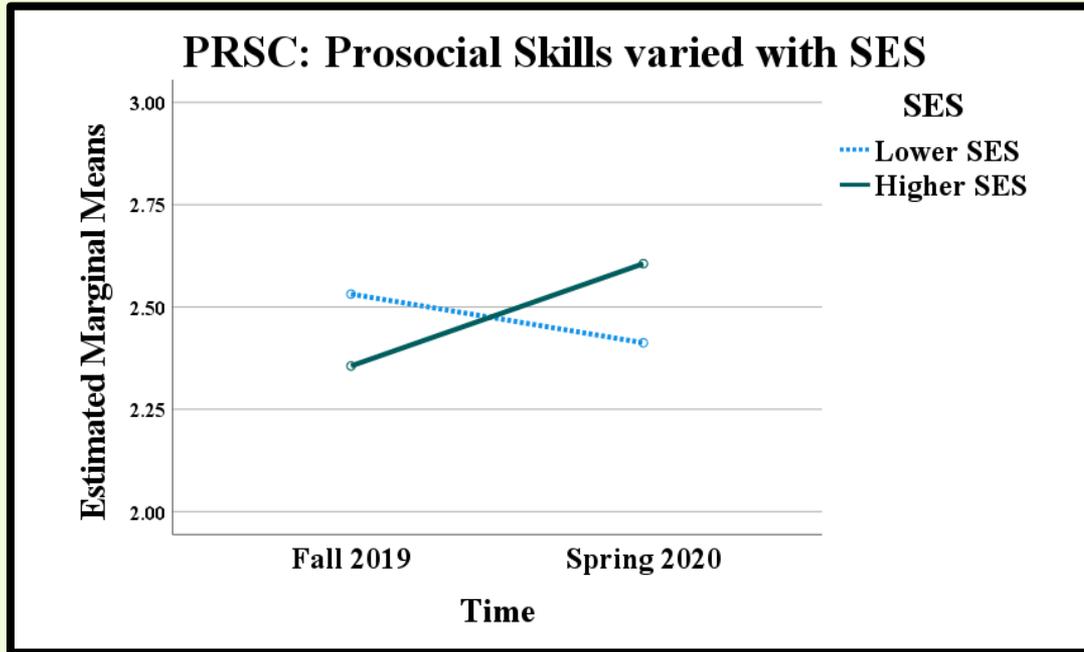


Improvement by Socioeconomic Groups (SES) Parent Rated Social Competence

| Measure | Group (note small sample size) | Percentage Improved over 2019 – 2020 | Chi-Square |
|-------------------------|--------------------------------|--------------------------------------|---|
| Prosocial Skills | Lower SES (n= 21) | 47.6% (10) | Chi Square = .57, $p = .451$; similar rates-no significant differences |
| | Higher SES (n= 22) | 59.1% (13) | |
| Overall Mean | Lower SES (n= 19) | 36.8% (7) | Chi Square = 3.29, $p = .070$; somewhat more higher SES children improved—marginally significant differences |
| | Higher SES (n= 18) | 66.7% (12) | |



Results: PRSC Prosocial Skills Varied with Socioeconomic Status



Higher SES children showed *improved prosocial skills over time* whereas *lower SES* children did not show improvement according to parents.

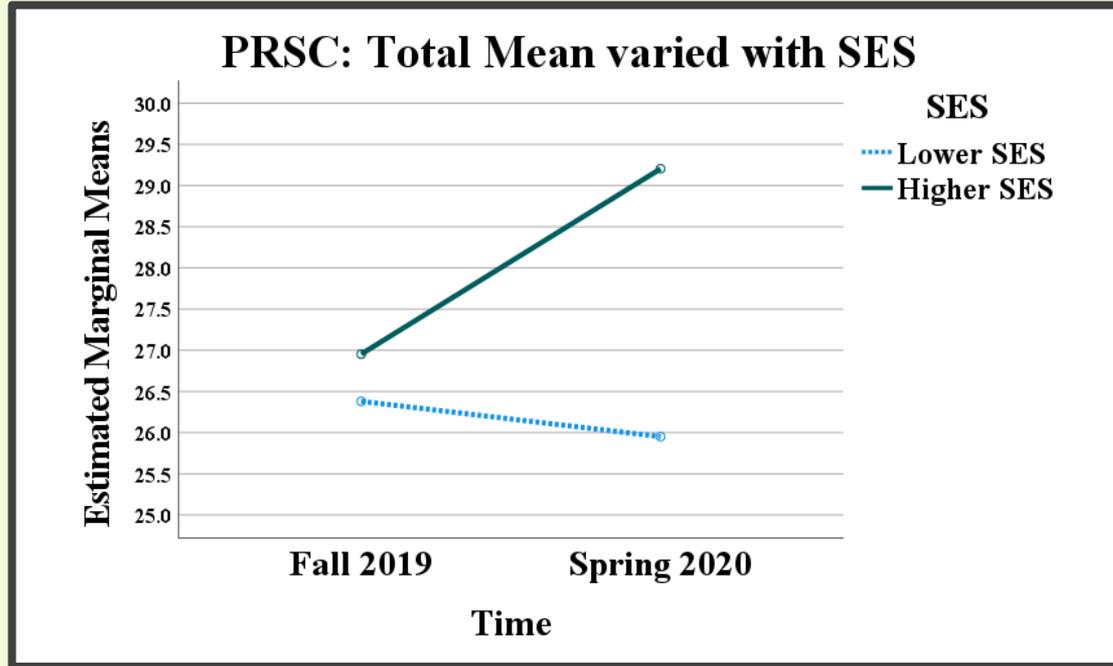
Prosocial Skills

Time x SES: $F(1, 42) = 4.52, p = .040, *ES = .099$

*ES = Effect size, eta squared



Results: PRSC Overall Mean varied with Socioeconomic Status



Although the groups were *comparable in Fall*, higher SES children had *higher scores over time* whereas lower SES children did not improve.

- Note that the sample size is small here; only about 20/group.

Total Mean

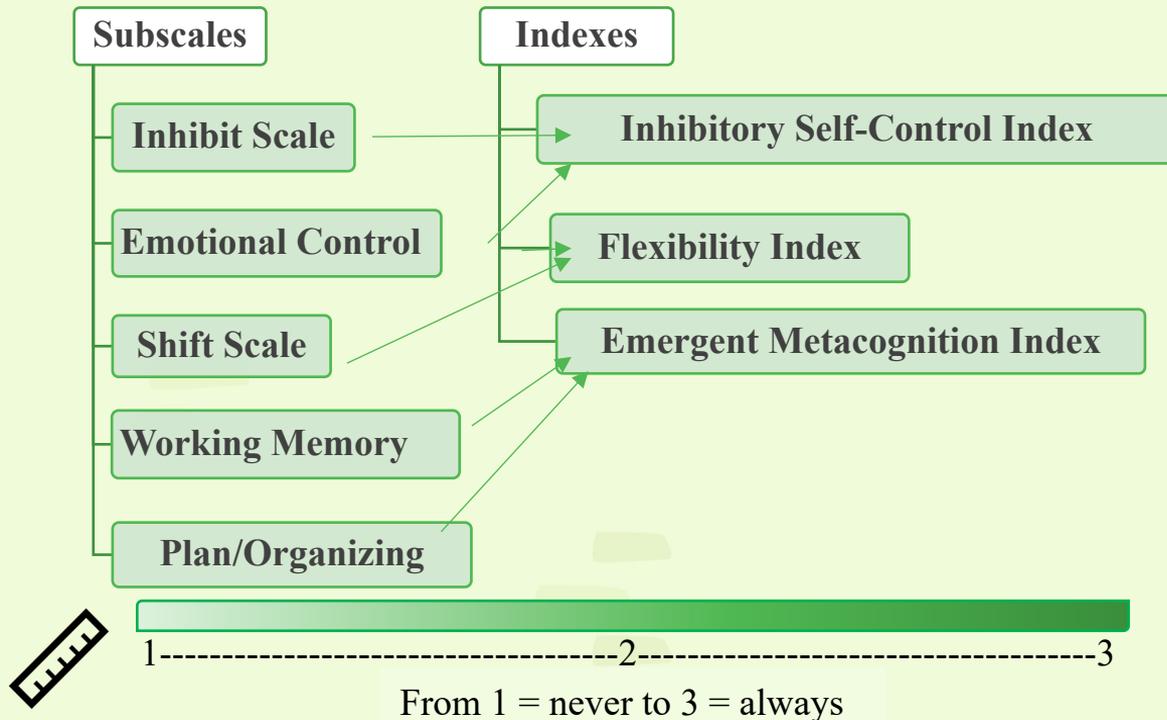
Time x SES: $F(1, 41) = 4.57, p = .039, *ES = .100$

*ES = Effect size, eta squared



Behavior Rating Inventory of Executive Function—Preschool Version (BRIEF-P)

BRIEF-P is used to assess multiple areas of children's executive functioning. Teachers are asked to report how often particular behaviors have been a *problem in the past 6 months* (from 1 = never to 3 = always).



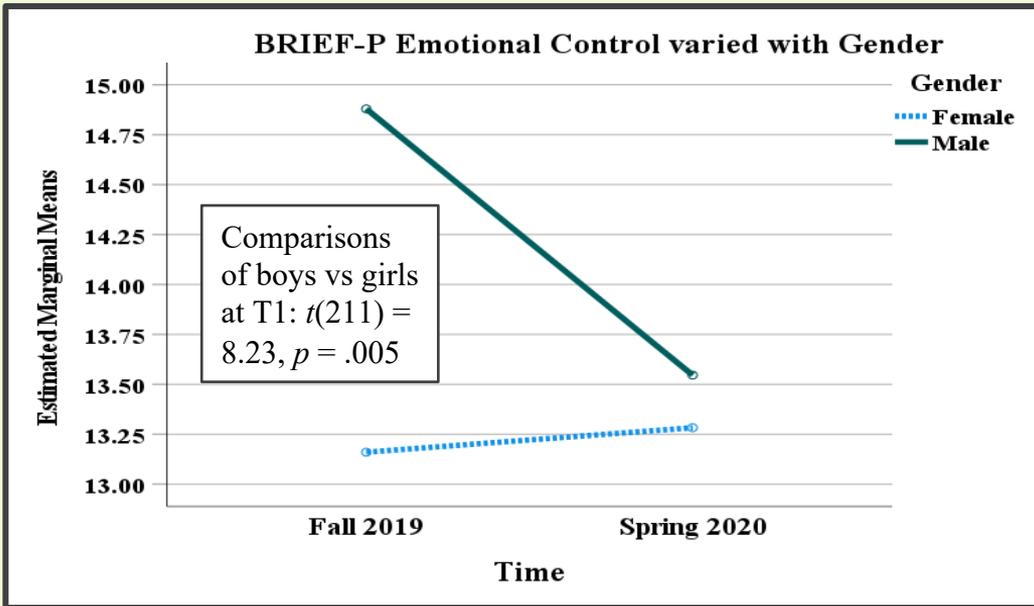
Higher scores indicate a difficulty for the child in one or more areas

Overview of Findings on the BRIEF – Only the Inhibitory Self Control & Emotional Control Subscales

- The Cognitive Report contains most of the results on the BRIEF, as this measure is focused primarily on cognitive, memory, and thinking skills.
- Here we comment on two BRIEF subscales: Inhibiting negative responses and emotional control.
- **In general, children improved over time in both Inhibition and Emotional Control, but there were not substantial differences between age or SES groups, or children continuing or new to the agencies.**
- **Teachers did report a gender difference in Emotional Control, where boys started the year with weaker skills, but caught up to the girls over time (see graph below).**
- There were many improvements in *cognitive and other executive function skills* as detailed in the cognitive report.



Results: BRIEF-P Emotional Control varied with Gender



Boys started the year with significantly poorer scores than girls on Emotional Control but showed significant improvement over time, while girls remained the same. Girls, however, displayed better scores overall than boys.

Time x Gender: $F(1,212) = 5.36, p = .022, ES = .025$
*ES=Effect size, eta squared

Remember: Lower scores are better.



Griffith Empathy

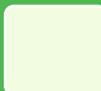
The Griffith Empathy measure asks parents to rate their children's empathy skills.

Cognitive Empathy subscale



- Measures children's ability to recognize & understand another's emotional state
- "My child can't understand why other people get upset."

Affective empathy subscale



- Measures children's ability to respond to another's emotions
- "My child seems to react to the moods of people around them."

Below are a collection of statements, think of each item in terms of your child(ren)'s behavior. Please indicate the degree to which you agree or disagree with the following items by placing the appropriate number in the space provided.

1 2 3 4 5 6 7 8 9
I-----I-----I-----I-----I-----I-----I-----I-----I-----I
Strongly Disagree Neither Agree Strongly
Disagree Disagree or Agree

| | |
|---|--|
| 1. My child becomes sad when other children are sad. | |
| 2. My child gets upset seeing another child being punished for being naughty. | |
| 3. My child seems to react to the moods of people around them. | |
| 4. My child gets upset when another person is acting upset. | |
| 5. My child cries or gets upset when seeing another child cry. | |
| 6. My child gets sad when watching sad movies or TV. | |
| 7. My child becomes nervous when other children around them are nervous. | |
| 8. My child acts happy when another person is acting happy. | |
| 9. My child can continue to feel OK even if people around are upset. | |
| 10. My child can't understand why other people get upset. | |



1-----2-----3-----4-----5-----6-----7-----8-----9

From 1 = strongly disagree to 9 = strongly agree



Overview of Findings for Griffith Empathy

In fall, how did children *continuing* vs. *new* to the programs compare?

- Children continuing in the programs had significantly better **Affective Empathy & Cognitive Empathy** scores when compared to the new children, as well as higher **Overall Scores**.

Was there improvement over time?

- There was **significant overall improvement** over time in two of three areas: **Affective Empathy & Overall Score**. There was **no significant change** for **Cognitive Empathy** over time.

Was improvement over time comparable for continuing & new children?

- Both continuing & new students improved comparably over time.

Was improvement over time comparable across socioeconomic status (SES)?

- Both lower & higher SES children improved comparably over time.



Overview of Findings for Griffith Empathy

Was improvement over time comparable for preschool & 4K children?

- Both preschool & 4k students improved comparably over time.

Was improvement over time comparable for girls & boys?

- Both boys & girls improved comparably over time.

*Percentages of children improving over time are listed below.
Detailed graphs & results on selected significant findings follow!*



Results: Improvement in Empathy (Griffith)

The Griffith Empathy measure is designed for parents to rate their children's empathy skills.

| Measure | Percentage of Children who Maintained or Improved their skills over 2019-20 |
|---|---|
| <u>Affective Empathy</u> (measures children's ability to recognize & understand another's emotional state) | 63% maintained or improved |
| <u>Cognitive Empathy</u> (measures children's ability to respond appropriately to another's emotions) | 58.7% maintained or improved |
| <u>Overall Empathy</u> (measures children's ability to recognize, understand, & respond to another's emotions) | 63% maintained or improved |



Results: Improvement in Empathy (Griffith) by Socioeconomic Groups (SES)

| Measure | Group Note: smaller sample size | Percentage Improved over 2019 – 2020 | Chi-Square |
|----------------------|---------------------------------------|--|--|
| Affective Empathy | Lower SES (n = 22) | 63.6% (14) | Chi Square = .869, $p = .351$; similar rates without significant differences |
| | Higher SES (n = 24) | 50.0% (12) | |
| Cognitive Empathy | Lower SES (n = 22) | 50.0% (11) | Chi Square = .000, $p = 1.000$; similar rates without significant differences |
| | Higher SES (n = 24) | 50.0% (12) | |
| Overall Empathy | Lower SES (n = 22) | 68.2% (15) | Chi Square = .478, $p = .489$; similar rates without significant differences |
| | Higher SES (n = 24) | 58.3% (14) | |

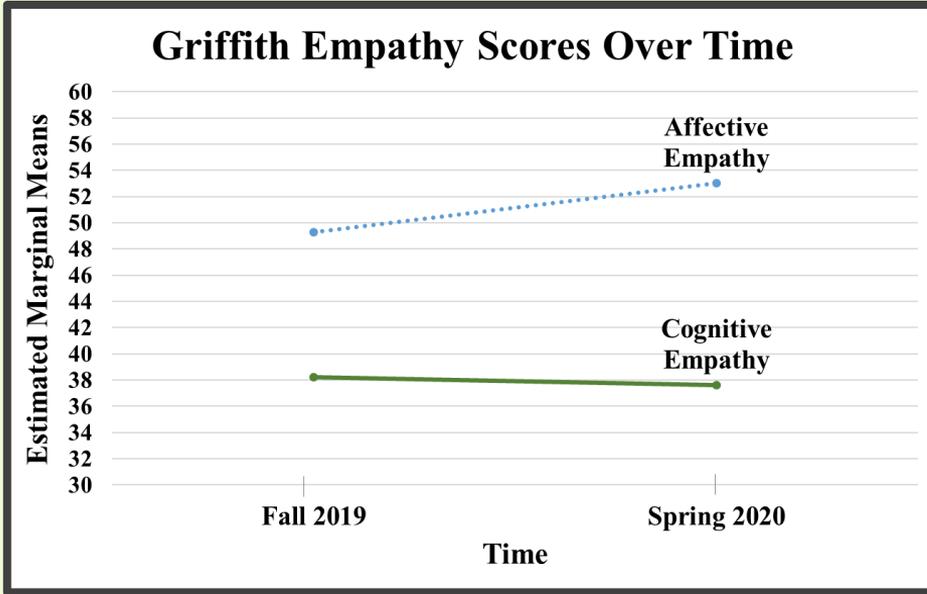


Results: Improvement in Empathy (Griffith) by Age (Preschool or 4K)

| Measure | Group | Percentage Improved over 2019 – 2020 | Chi-Square |
|-------------------|----------------------------------|--------------------------------------|--|
| Affective Empathy | Preschool (3-year-olds) (n = 19) | 52.6% (10) | Chi Square = 2.178, $p = .140$; similar rates without significant differences |
| | 4K Children (n = 27) | 59.3% (16) | |
| Cognitive Empathy | Preschool (3-year-olds) (n = 19) | 63.2% (12) | Chi Square = .042, $p = .838$; similar rates without significant differences |
| | 4K Children (n = 27) | 40.7% (11) | |
| Overall Empathy | Preschool (3-year-olds) (n = 19) | 68.4% (13) | Chi Square = .402, $p = .526$; similar rates without significant differences |
| | 4K Children (n = 27) | 59.3% (16) | |



Results: Griffith Empathy Affective & Cognitive Empathy Scores



There *was significant overall improvement* over time for **Affective Empathy**, while there was *not improvement* for **Cognitive Empathy** over time.

Affective Empathy
ME Time: $F(1, 44) = 4.60, p = .038, *ES = .095$

Cognitive Empathy
ME Time: $F(1, 44) = .20, p = .659, *ES = .004$

*ES = Effect size, eta squared



Ages & Stages Questionnaire: Social-Emotional (ASQ:SE)

The ASQ:SE is designed to evaluate a child's **social-emotional competency** in seven areas: **adaptive functioning, self-regulation, communication, autonomy, affect, compliance, and interaction with people.** *This measure was done only in fall due to the pandemic.*

A parent or teacher completes the questionnaire appropriate to the child's age (forms range from 6 to 60-months). Some agencies did not use this measure. **Lower scores are better on this measure.**

The ASQ-SE includes items such as:

“Does your child explore new places, such as a park or a friend’s home?”

“Does your child destroy or damage things on purpose?”

Open-ended questions like “What things do you enjoy most about your child?”



From never to rarely to sometimes to most of the time



Overview of Findings for Ages & Stages Questionnaire – Social Emotional (ASQ-SE)

In fall, how did children *continuing vs. new* to the programs compare?

- Children continuing from the programs did significantly better on the ASQ-SE Total Score than children new to the programs.

In fall, was performance comparable across socioeconomic status (SES)?

- There were **no significant differences** between Higher SES and Lower SES children on the Total Score.

In fall, was performance comparable for preschool & 4K children?

- There were **no significant differences** between Preschool & 4K children on the Total Score.

In fall, was performance comparable for girls & boys?

- Girls did significantly better than boys on the ASQ-SE Total Score.

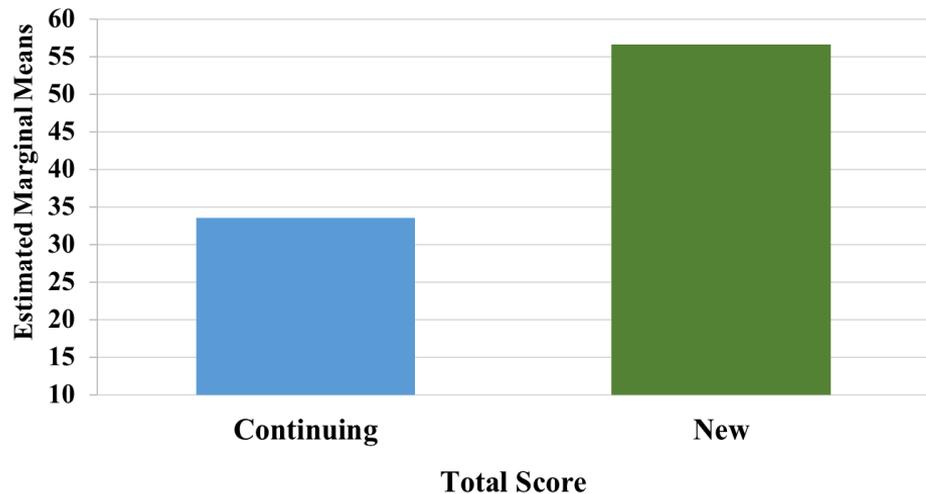


Detailed graphs & results on selected significant findings follow!



Results: Ages & Stages Questionnaire – Social Emotional Total Score Varied with Continuing or New Students

ASQ-SE: Total Score Varied by Continuing or New Students



Children continuing in the programs had better **Total Scores** compared to children who were new to the programs.

Total Score

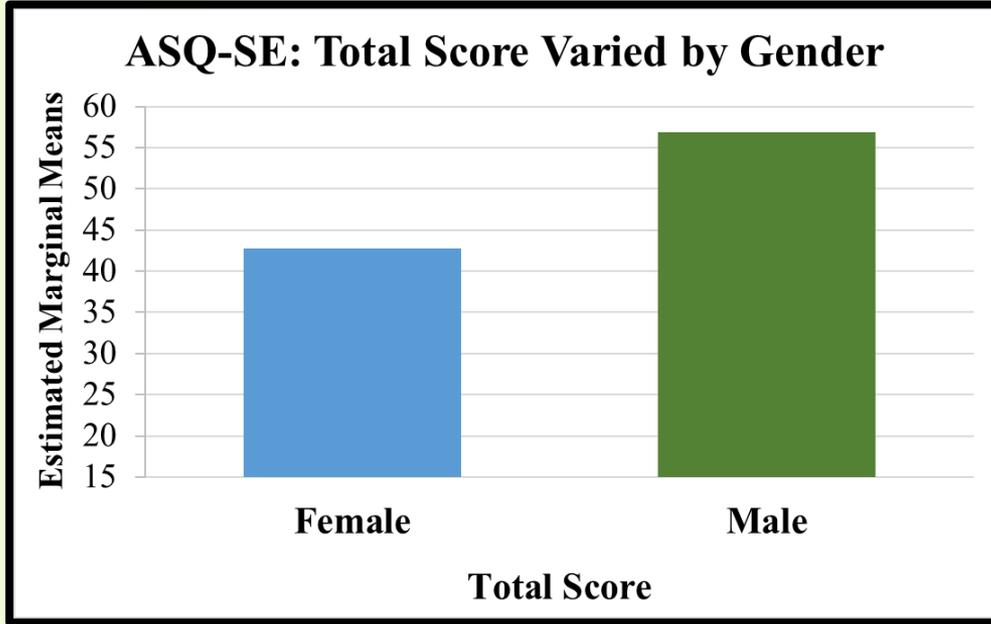
ME Gender: $t(1, 186) = -3.43, p < .001, *ES = -0.560$

*ES = Effect size, eta squared

Remember: Lower scores are better.



Results: Ages & Stages Questionnaire – Social Emotional Total Score Varied with Gender



Girls had better **Total Scores** than Boys.

Total Score

ME Gender: $t(1, 184) = -2.27, p = .025, *ES = -0.271$

*ES = Effect size, eta squared

Remember: Lower scores are better.



Teaching Strategies-GOLD (TS-GOLD)

- Measures the **knowledge, skills, and behaviors** most predictive of school success. Teachers at the CELC agencies use the TS-Gold regularly to track children's developmental progress.
- Provides **developmental progressions and learning objectives** in the areas of social-emotional, physical, language, and cognitive development, and in the content areas of literacy, mathematics, and English-language acquisition.
- Indicators and examples enable teachers to rate children's knowledge, skills, and behaviors on a 10-point scale from "Not Yet" (0) to level 9 (10)
- The progressions use colored bands to show widely held expectations for various ages. At a glance, these colored bands show educators and families which **skills and behaviors are typical for children of a particular age or class/grade**. For this project, we compare TS-Gold scores by group.



Objective 1 Regulates own emotions and behaviors

a. Manages feelings

| Not Yet | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
|---------|----------|--|-------------|--|-------------|--|---|---|---|-------------|
| | | Uses adult support to calm self <ul style="list-style-type: none"> Calms self when touched gently, patted, massaged, rocked, or hears a soothing voice Turns away from source of overstimulation and cries, but is soothed by being picked up | | Comforts self by seeking out special object or person <ul style="list-style-type: none"> Gets teddy bear from cubby when upset Sits next to favorite adult when sad | | Is able to look at a situation differently or delay gratification <ul style="list-style-type: none"> When the block area is full, looks to see what other areas are available Scowls, "I didn't get to paint this morning." Pauses and adds, "I have an idea. I can paint after snack." | | Controls strong emotions in an appropriate manner most of the time <ul style="list-style-type: none"> Asserts, "I'm mad. You're not sharing the blocks! I'm going to play with the ramps." Says, "I'm so excited! We're going to the zoo today!" while jumping up and down | | |
| | Red band | | Orange band | | Yellow band | Green band | | Blue band | | Purple band |

- ← Rating scale
- ← Indicators (in bold)
- ← Examples (bulleted)
- ← Expectations for ages and for classes/grades

- Birth to 1 year 
- 1 to 2 years 
- 2 to 3 years 
- Preschool 3 class 
- Pre-K 4 class 
- Kindergarten 

Sample from TS-GOLD: Shows objective, item, & color bands

Overview of Findings for Teaching Strategies – Gold (TS-Gold)

In this report we focus on social skill outcomes of Social Emotional Skills & Language/Communication skills.

In fall, how did children *continuing* vs. *new* to the programs compare?

- Children **continuing** in the programs had better **Social Emotional & Language** scores than new children.

Was there improvement *over time*?

- There was **significant overall improvement over time** in both key areas. **Social Emotional & Language** skills both improved from Fall 2019 to Winter 2020.

Was improvement over time comparable for *continuing & new children*?

- **Continuing children** did better in both **Social Emotional** skills & **Language** skills, but both continuing & new children improved comparably over time.

Was improvement over time comparable across *socioeconomic status (SES)*?

- **Higher SES children** had better **Social Emotional & Language** scores than Lower SES children, but both groups improved over time.



See Cognitive Outcomes Report for TS Gold Cognitive Outcomes & Content Area Outcomes!



Overview of Findings for Teaching Strategies – Gold (TS-Gold)

Was improvement over time comparable for preschool & 4K children?

- As expected, **4K children** did better on both **Social Emotional and Language skills**, compared to Preschool children.
- Both groups improved significantly over time.

Was improvement over time comparable for girls & boys?

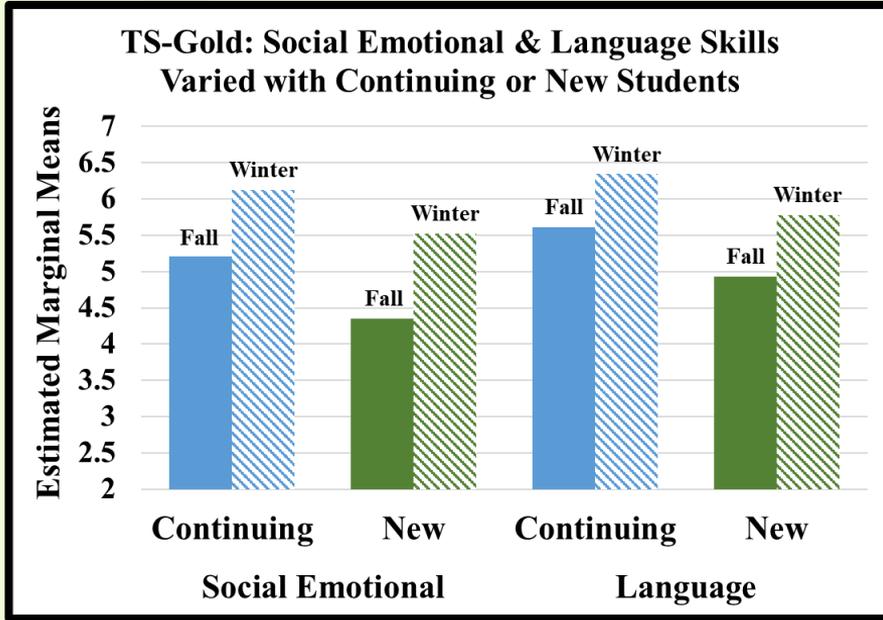
- There were **no significant differences** between boys & girls on **Social Emotional & Language skills**, & both groups improved over time.



Improvement by Socioeconomic Status (SES) & Age (Preschool or 4K)

| Measure | Group | Percentage Improved over 2019-2020 | Chi-Squared |
|-------------------------|---------------------|------------------------------------|--|
| Social Emotional Skills | Lower SES (n=137) | 92.7% (127) | Chi Square = .369, $p = .544$; similar rates – no significant differences |
| | Higher SES (n = 43) | 95.3% (41) | |
| Language Skills | Lower SES (n=137) | 92.0% (126) | Chi Square = 2.475, $p = .116$; similar rates – no significant differences |
| | Higher SES (n = 43) | 83.7% (36) | |
| Overall Average | Lower SES (n=137) | 46.3% (38) | Chi Square = 3.544, $p = .060$; slightly higher for Higher SES rates – marginally significant differences |
| | Higher SES (n = 43) | 62.8% (27) | |
| Social Emotional Skills | Preschool (n = 41) | 92.7% (38) | Chi Square = .036, $p = .849$; similar rates – no significant differences |
| | 4K (n = 139) | 93.5% (130) | |
| Language Skills | Preschool (n = 41) | 95.1% (39) | Chi Square = 1.548, $p = .213$; similar rates – no significant differences |
| | 4K (n = 139) | 88.5% (123) | |
| Overall Average | Preschool (n = 41) | 46.3% (19) | Chi Square = .330, $p = .566$; similar rates – no significant differences |
| | 4K (n = 139) | 51.4% (71) | |

Results: TS-Gold Social Emotional & Language Skills Varied with Continuing or New Students



Continuing children did better in both **Social Emotional** skills & **Language** skills, but both continuing & new children improved comparably over time.

Social Emotional Skills

ME Time: $F(1, 178) = 233.35, p = < .001, *ES = .567$

ME Cont./New: $F(1, 178) = 3.74, p = .055, *ES = .021$

*ES = Effect size, eta squared

Language Skills

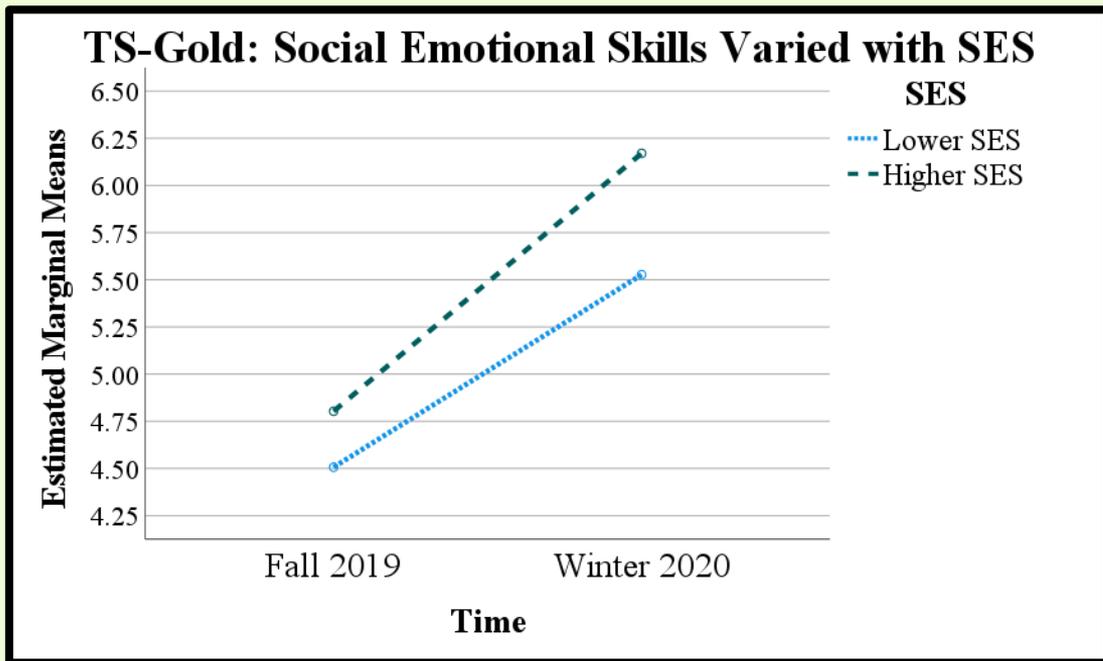
ME Time: $F(1, 178) = 153.49, p = < .001, *ES = .463$

ME Cont./New: $F(1, 178) = 19.93, p = < .001, *ES = .101$

*ES = Effect size, eta squared



Results: TS-Gold Social Emotional Scores Varied with Socioeconomic Status



For Social Emotional scores, the **lower & higher SES children** were *comparable in fall* & both *improved significantly over time*. Higher SES children did perform better than Lower SES children overall.

Social Emotional Skills

Time x SES: $F(1, 178) = 6.09, p = .015, *ES = .033$

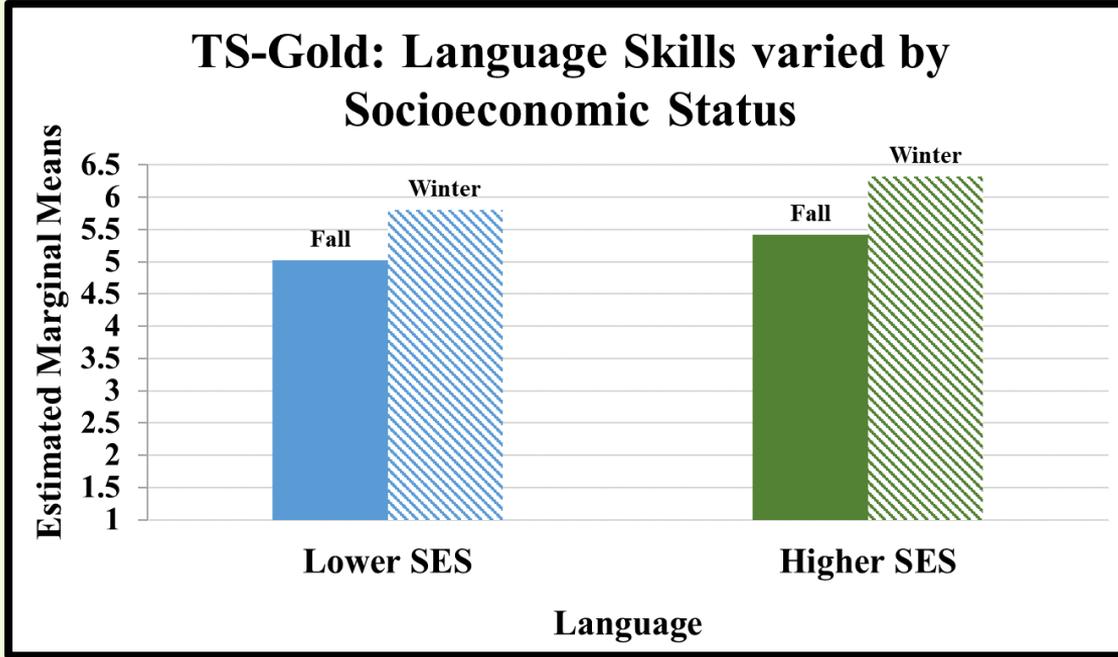
ME Time: $F(1, 178) = 288.60, p < .001, *ES = .619$

ME SES: $F(1, 178) = 7.84, p = .006, *ES = .042$

*ES = Effect size, eta squared



Results: TS-Gold Language Skills Varied with Socioeconomic Status



Higher SES children had better **Language** scores than Lower SES children overall. Both groups improved over time.

Language Skills

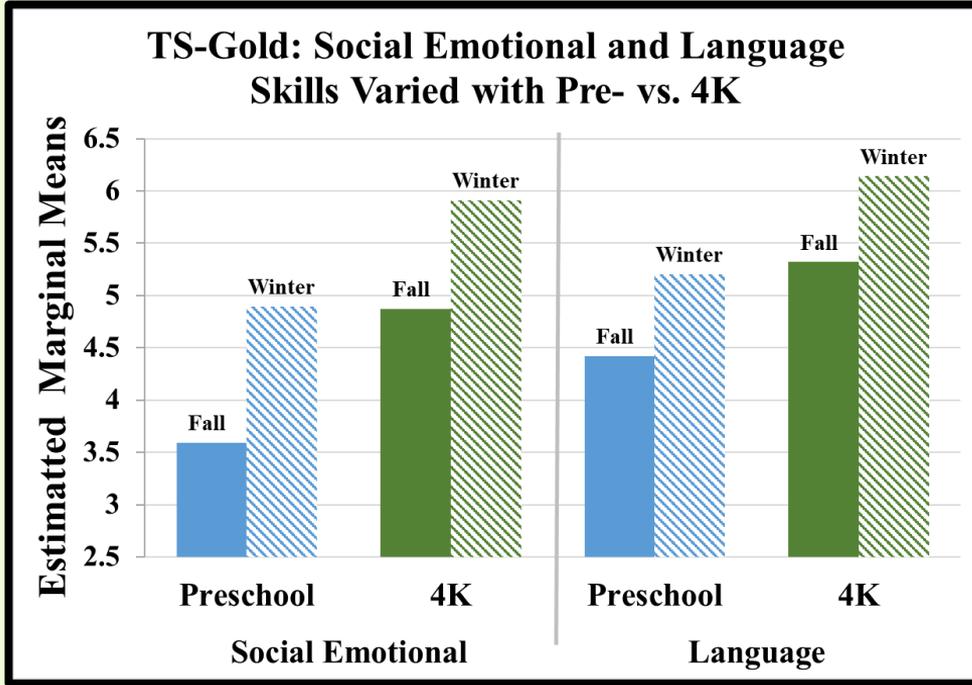
ME Time: $F(1, 178) = 164.65, p < .001, *ES = .481$

ME SES: $F(1, 178) = 9.57, p = .002, *ES = .051$

*ES = Effect size, eta squared



Results: TS-Gold Social Emotional & Language Skills Varied with Age



As expected, **4K children** did better on both **Social Emotional & Language skills**, compared to Preschool children. Both groups improved significantly over time.

Social Emotional Skills

ME Time: $F(1, 178) = 265.83, p < .001, *ES = .599$

ME Pre-vs-4K: $F(1, 178) = 57.31, p < .001, *ES = .244$

*ES = Effect size, eta squared

Language Skills

ME Time: $F(1, 210) = 142.74, p < .001, *ES = .455$

ME Pre-vs-4K: $F(1, 210) = 44.25, p < .001, *ES = .199$

*ES = Effect size, eta squared



Report Cards

Report Cards were completed by teachers following the fall semester of school in January. Spring report cards were not completed due to the onset of the COVID 19 pandemic. Social emotional & health/physical results are reported here—other areas are in the Cognitive Report.

Bridges Enrichment Center, Head Start & Even Start use the same Report Card system.

Children’s Center uses a qualitative progress report, noting areas in which children are excelling and areas where they could improve. However, all agencies have similar underlying themes and expectations.

| Agency: | Head Start | Bridges CEC | Even Start | Children’s Center |
|-------------------|--|--|--|--|
| Report Cards for: | 4K | 4K | Preschool | 4K & Preschool |
| Questions: | 6 social emotional 9 language 5 mathematics 4 health & physical | 6 social emotional 9 language 5 mathematics 4 health & physical | 6 social emotional 9 language 5 mathematics 4 health & physical | 1 social emotional 1 language 1 mathematics 1 health & physical |

Overview of Findings for Report Cards: Social Outcomes

How did children *continuing* vs. *new* to the programs compare after the first semester?

- Compared to students new to the programs, **children who were continuing** in the Kindness Curriculum scored significantly higher **Social Emotional & Health/Physical Development** scores after their first semester.

Were scores comparable across socioeconomic status (SES)?

- **Higher SES children** scored significantly higher on **Social Emotional & Health/Physical Development** scores after their first semester.

Were scores comparable for girls & boys?

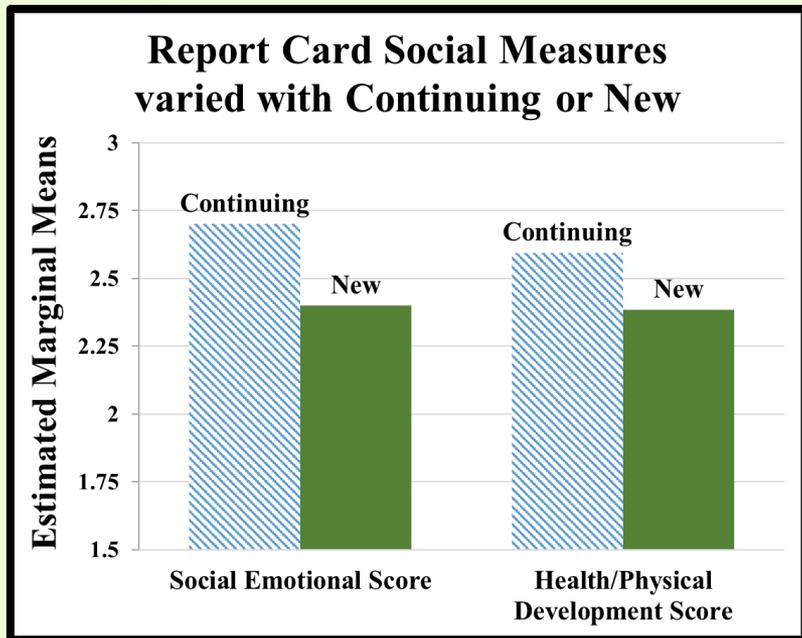
- There were **no significant differences** between boys & girls on **Social Emotional** Scores. However, girls scored significantly higher than boys on **Health/Physical Development** scores after their first semester.



See Cognitive Outcomes Report for the Report Card Outcomes on other Content Area Outcomes



Results: Report Card Social Emotional & Health/Physical Development Scores Varied with Continuing or New Students



Compared to students new to the agencies, children who were continuing in the Curriculum scored *significantly higher on social emotional & health/physical development scores* after their first semester.

Social Emotional Scores

ME Continuing or New: $t(141) = 2.96, p = .004, *ES = .533$

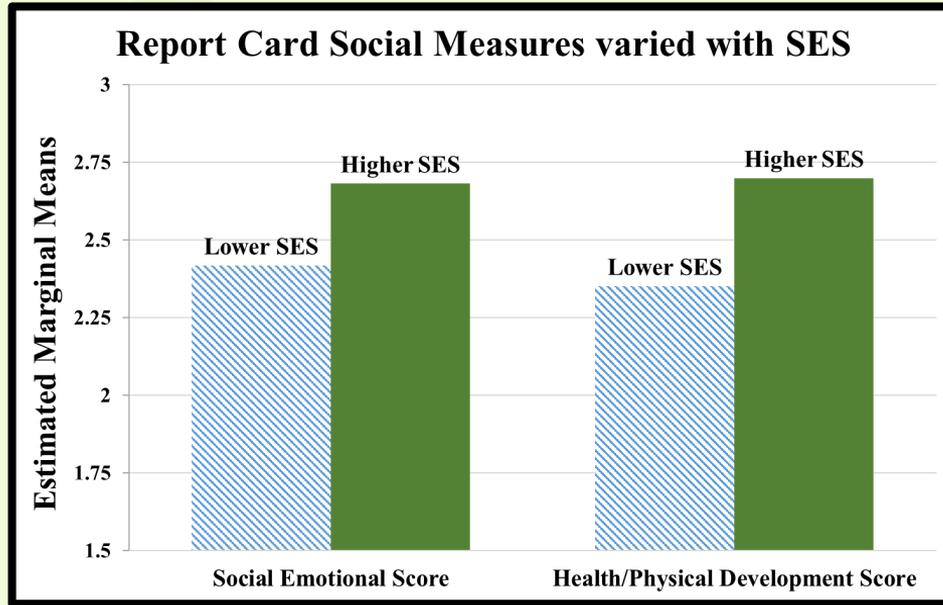
Health/Physical Development Scores

ME Continuing or New: $t(142) = 2.28, p = .024, *ES = .409$

*ES = Effect size, eta squared



Results: Report Card Social Emotional & Health/Physical Development Scores varied with Socioeconomic Status



Higher SES children scored *significantly higher on social emotional & health/physical development scores* after their first semester compared to lower SES children.

Social Emotional Scores

ME SES: $t(140) = -2.46, p = .015, *ES = -.462$

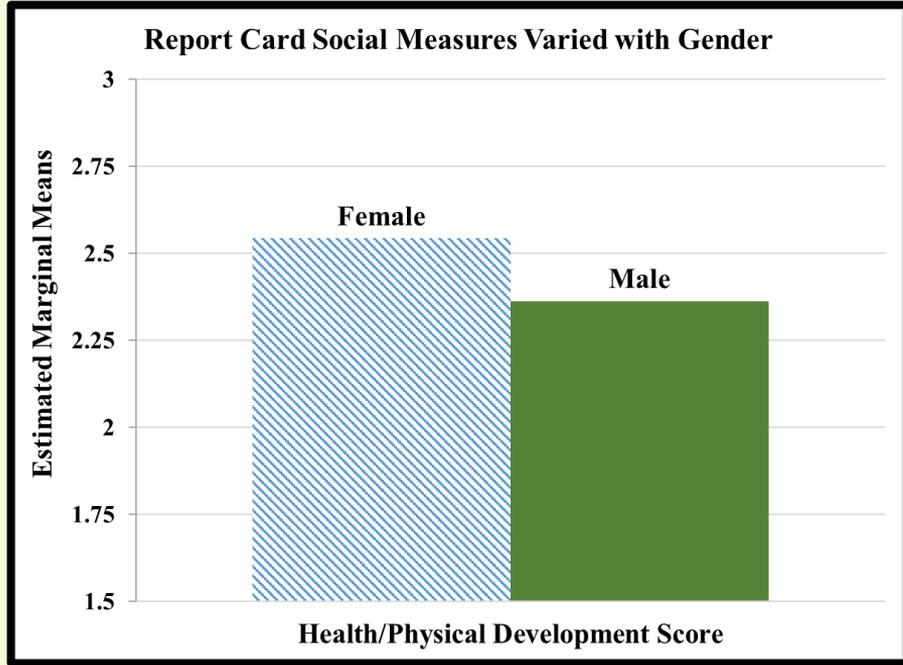
Health/Physical Development Scores

ME SES: $t(82.54) = -4.05, p < .001, *ES = .578$

*ES = Effect size, eta squared



Results: Report Card Health/Physical Development Scores Varied with Gender



Girls scored *significantly higher on health/physical development scores* after their first semester compared to boys. There were no *differences between boys and girls on social emotional scores*.

Health/Physical Development Scores
ME Gender: $t(141) = 2.08, p = .039, *ES = .348$

*ES = Effect size, eta squared



Impact on Classroom (Teacher-Reported)

This measure used 8 questions (ratings & comments) to assess teachers' impressions of:

- If the teachers found the curriculum **useful**
- If the children **remembered** the lessons
- If the Kindness Curriculum (KC) had a **positive impact** on the classroom
- If KC training **prepared** the teachers for implementation of the curriculum and in developing personal mindfulness practices
- The **support** of the mindfulness coaches
- If the teachers were **anticipating** utilizing the Kindness Curriculum in the following year

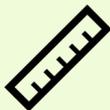
Teacher's Name: _____ Date: _____

We value your feedback and appreciate any examples you can share regarding the impact of the Kindness Curriculum on your teaching and classroom. We also would like to know your impressions of having the mindfulness coaches available for support.

Please indicate your agreement with each of the statements below, using the following scale:

| | | | | |
|----------------------|----------|---------|-------|-------------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

1. I found the Kindness Curriculum to be useful in my classroom. _____
Please comment:
2. The children seemed to remember key concepts (e.g., kindness to others) from the Curriculum. _____
Comments or examples:
3. The training helped prepare me to use the Curriculum. _____
Any areas where more training would be useful:
4. The mindfulness training helped me to develop my own personal mindfulness practice. _____
Comments or examples:



1-----2-----3-----4-----5

From 1=strongly disagree to 5=strongly agree



Results: Teacher Impact on Classroom - Rating

| Item (number of teachers = 17) | Mean | Std. Dev. |
|--|------|-----------|
| Usefulness of KC | 4.35 | 0.61 |
| Children remembered the Key Concepts | 4.03 | 0.62 |
| Training - teach KC | 4.44 | 0.63 |
| Training - develop Personal Mindfulness | 4.31 | 0.79 |
| KC - Positive Impact | 4.18 | 0.73 |
| Coaches - support in the Class | 4.59 | 0.51 |
| Coaches – support for the Self | 4.68 | 0.73 |
| Using the KC Next Year | 4.50 | 0.73 |



Results: Teacher Impact on Classroom - Comments

Most teacher comments were positive or offered feedback on implementing the curriculum in the future. Here are a couple of the comments that teachers provided:

I found the Kindness Curriculum to be useful in my classroom:

- “I truly see a change in the classroom using the curriculum”
- “The kindness curriculum has been a great addition in teaching the kids mindfulness, kindness, and about their feelings and others' feelings.”

The children seemed to remember key concepts from the curriculum:

- “The children have been even pointing out when they see others being kind. They will tell us to get a sticker for them for the garden.”
- “Some students retain information more than others.”

The training helped prepare me to use the Curriculum:

- “Great, detailed training.”
- “This is my second time implementing. I feel more confident this year.”

The mindfulness training helped me to develop my own personal mindfulness practice:

- “We often forget about taking time for ourselves. The relaxation training was amazing and I feel I take time now because it was so beneficial.”

The Kindness Curriculum had a positive impact on my classroom environment:

- “The kids were more kind to each other. Enjoyed the meditation, yoga, and growing friendship wish.”

The mindfulness coaches provided me with helpful support in the classroom:

- “They are always available to answer questions.”

The mindfulness coaches provided me with helpful support with my own mindfulness practice:

- “They are both amazing and very encouraging and supportive.”

I'm looking forward to using the Curriculum in my classroom again next year:

- “I think the lesson concepts can be taught but I'd like to do my own twist on it.”

Parents' Impressions of Kindness Curriculum Impact on Their Children

Sample Items

Parents were asked to share their perceptions of the impact of the Kindness Curriculum on their children at home.

Four open-ended questions & four rating scale questions assessed parents' perceptions of the Kindness Curriculum & use of KC materials at home.

| | Never | | | | Often |
|--|-------|---|---|---|-------|
| 1. How often does your child talk about things they learned in the Kindness Curriculum at home (e.g., kindness to others, the earth, or to the self)? | 0 | 1 | 2 | 3 | 4 |
| • If your child talks about the Kindness Curriculum, can you think of any examples of what they have talked about? | | | | | |
| 2. How often do you see your child use mindfulness/kindness activities at home (e.g., pinwheel, "mind jar", the Caring Song)? | 0 | 1 | 2 | 3 | 4 |
| • If your child uses mindfulness/kindness activities at home, what kinds of things have you seen them do? Please describe in a few words: | | | | | |
| 3. Since beginning the Kindness Curriculum, how often do you see your child display kindness to others or kindness to you (e.g., hold doors for others, pick up trash from the floor)? | 0 | 1 | 2 | 3 | 4 |
| • If you have seen your child display kindness to others or kindness to you, please tell us about it: | | | | | |



0-----1-----2-----3-----4

From 0=never to 4=often



Results: Impact on Child – Parents' Ratings

| Item – Ratings from 53 Parents | Mean | Std. Dev. |
|--|------|-----------|
| Talk about things learned in KC | 2.79 | 1.32 |
| Use mindfulness/kindness activities | 2.89 | 1.37 |
| Display kindness | 4.19 | .86 |
| Change in behavior | 3.35 | 1.19 |

Measure was collected in Spring 2020 at the outset of the COVID pandemic. All means are above 2.5 on a 5-point rating scale, with strongest ratings for children **displaying acts of kindness** to others after participating in the Kindness Curriculum.

Parents noticed the impact of Kindness Curriculum even in these difficult times. We offered **online resources for families** to help parents to support their children during that difficult time & encourage them to practice their mindfulness skills at home.



Results: Parent Reports of KC Impact at Home

Most parents' comments were positive or offered feedback on implementing the Curriculum in the future. Here are some of the comments that parents provided:

How often does your child *talk about things* they learned in the KC at home? Can you think of any examples of what they have talked about?

- “That you have to listen to other peoples’ feelings and be kind.”

How often do you see your child *use mindfulness/kindness* activities at home? What kinds of things have you seen them do?

- “She has used the online videos to calm down by her own request. She can do breathing exercises.”

Since beginning the KC, how often do you see your child *display kindness* to others or kindness to you? If you have seen this behavior, please tell us about it:

- “...is thoughtful & wants to help - likes to clean, pick up garbage, hold door, help his brother- sometimes too much.”
- “He cleans up after spills, he comes to give me hugs or says, ‘I want a hug’ or ‘I love you Mommy’ and will show his sister affection as well.”

Have you noticed any *changes in your child’s behavior* since they have been participating in the Kindness curriculum? Tell us about the things you have noticed:

- “She is more aware of her feelings and has more language to describe those feelings as a result of the project. When she is upset, she asks for help, for instance, special music or to be tucked in on the couch. She is very self-aware.”
- “Less reactive to being told no or things not going his way, more outwardly affectionate, wants to help with everyday tasks, more aware of my moods, feelings, i.e. he will comment if he sees me upset ‘are you ok?’”
- “She calms down if upset or hurt much faster. Things that used to upset her don't have as big of impact on her now. More caring to her sister.”

Highlights & Major Findings

The 2019-2020 school year brought the significant & unexpected challenge of the COVID pandemic. Fortunately, the Kindness Curriculum was fully implemented prior to imposed school closures. However, individual child assessments were eliminated in spring due to closures, & most teacher-reported & parent-reported spring measures were completed during these difficult times. Nevertheless, there were many encouraging findings.

Impact on Children's Behavioral Strengths & Difficulties

- Teachers reported **reduced peer problems, impulsivity, & attention problems, & increases in prosocial behavior.** Gains were seen across age, socioeconomic, and gender groups. Some areas, like conduct problems, did not show improvement for all groups, suggesting that longer engagement in mindfulness practices & other support may be needed.
- Parents also reported **more displays of kindness** at home, & improved behavior such as **greater patience, sharing & greater ability to calm down** when dealing with difficult situations.

Impact on Children's Social Skills

- Teachers observed improvement in **prosocial & empathetic behavior,** and improved **emotional regulation,** especially for girls & the older (4K) students.
- Similarly, parents saw improved **empathy skills.** Parents commented on their children helping others more & asking them if they or others need help--"She is always ready ... to help me on everything at home & at grandma's house."



Highlights & Major Findings -- Continued

Impact on Children's School Performance (Report Cards on Social/Emotional & Health/Physical)

- Children with higher socioeconomic status & those who were continuing in the agencies had **higher scores on Social-Emotional & Health/Physical Development** after their first semester than lower SES children & those new to the agencies who were learning the Kindness Curriculum skills for the first time.

Impact on Children's Social Development (TS Gold Social Emotional & Language Skills)

- Teachers reported improvement in both Social Emotional & Language/Communication skills over time. Older & continuing children started the year with better scores in these areas, but gains were seen across age, socioeconomic, and gender groups.



Key Takeaways

Children of both lower and higher Socioeconomic Status as well as children in both preschool (3-4 years) & 4K (4-5 years) classrooms benefitted from receiving the Kindness Curriculum. Both teachers & parents reported gains in key areas including:

- **Social Behavior, Emotional Understanding, & Empathy Skills**
- **Helping Others & Emotional Skills: Improved ability to express and manage emotions, including self calming & caring for others**
- **Physical Skills: Improved physical health & development**

These results suggest that children as young as 3-years-old can positively benefit from learning mindfulness-skills through the Kindness Curriculum.



Further Conclusions, Considerations, & Gratitude

- The agencies that participated in the Kindness Project already had high-quality programming and many used the **Pyramid Model for Supporting Social Emotional Competence** (Fox et al., 2009), yet the **Kindness training** showed **added benefits**. Teachers reported benefitting from mindfulness training & coaching, and we are grateful for their commitment and engagement.
- Two of the agencies serve children exclusively from lower-income families, one serving families who were also just beginning to gain proficiency in English. All the agencies served children with special needs and children who are English Language Learners. **All children are included** in this report – some effects may be stronger if special learning needs are controlled statistically.
- **The COVID pandemic** impeded our ability to directly assess children's performance on a sharing task & on their solutions to mindfulness scenarios. Consequently, we are extremely grateful to all the teachers who completed their assessments at the onset of the pandemic, and to all the parents who found time to share their impressions of how the Kindness Curriculum impacted their children.



Future Implications

- Results showed that the **Kindness Curriculum (KC)** had a positive impact on children's social and emotional skills. The investment in the Kindness Curriculum showed academic & developmental benefits to children as well. See the Cognitive Outcomes report for more information.
- Even children **as young as 3 years-old** can benefit from mindfulness training & the Kindness Curriculum.
- Teachers report **positive impacts** not only in their classrooms, but on their own well-being personally and as educators. They appreciated the support of the mindfulness coaches.
- Given the many positive social benefits, **investing in mindfulness-based programs**, such as the Kindness Curriculum, is advantageous to young children and early childhood educators.



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