The Impact of Kindness Curriculum Training on Young Children's Social-Emotional, Academic, & Developmental Skills: Year Three Findings

The Kindness Project Team

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Introduction to the Kindness Project

- The Kindness Project brings **mindfulness training to preschoolers, their families, & teachers**. In year 3, the Project focused on:
  - Sustaining mindfulness programming for children through implementation of the Kindness Curriculum (KC) as classrooms tried to return to in-person classes during the COVID-19 pandemic.
  - Expanding KC training to include new agencies & to provide modified KC options for toddlers.
  - Supporting teachers & agencies with mindfulness coaching as they dealt with the many pandemic-related stressors.
  - **Assessing the impact of the Kindness Curriculum (KC)** on children's social-emotional & cognitive skills.
- Many children, their families, & their teachers faced a variety of **additional stressors in 2020-21 as the pandemic lingered,** causing interuptions in programming & contributing to staffing shortages. We hoped that mindfulness-based training and support would help all to cope.
- This report examines the **impact of the Kindness Curriculum (KC) on preschooler's social skills & emotional regulation**, as reported by the parents & teachers of the children.

Earlier Work Using the Kindness Curriculum with Young Children

- Our Kindness Project (2018-2022) was based on a study done by **Flook, Goldberg, Pinger, & Davidson (2015).**
- **In the first year of our Project, we replicated many aspects of the Flook et al. (2015) study, but with a larger, more diverse sample, that also included 3-year-olds.**
  - They included **68 preschool children** (4-5 years old); **we had about 260 in our first year.**
  - **Both studies randomly assigned children** by classroom to Kindness Curriculum (KC) group or Curriculum-as-usual (CAU) group.
  - The KC group participated in the **12-week mindfulness-based Kindness Curriculum training:**
    - **They had experienced mindfulness instructors** come in & teach.
    - **We trained classroom teachers (train-the-teacher model) to teach the KC.**
  - Both projects looked at the impact of Kindness Curriculum training on:
    - **Executive function (e.g., cognitive flexibility, memory, inhibiting weak responses),**
    - **Self-regulation of emotions & behavior,**
    - **Social Skills & Prosocial behavior (e.g., sharing, helping).**

Findings of Flook & Colleagues' 2015 Study compared to Our Kindness Project Study in 2019: Impact on Social Skills

- **Flook & colleagues (2015) found greater improvement** by the Kindness Curriculum (KC) group on the **teacher reported social competence** (TRSC) measure in **prosocial behavior & emotional regulation**, compared to the Control Group.
- Similarly, in our Kindness Project study, we found significantly greater improvement by the Kindness Curriculum (KC) group on the teacher reported social competence (TRSC) measure in **prosocial behavior, emotional regulation, as well as in empathetic regulation.**

- On the **Sharing task**, they found that **the KC group shared more** than the control group **w**ho showed more selfish behavior, keeping more stickers for themselves over time.
- **Similarly, we found that the KC group shared more overall, & with a sick child** compared to the control group.

- They found the **Kindness Curriculum** to be **particularly beneficial** for **children with lower baseline functioning** (i.e., started out with lower social competence & lower executive functioning) as they showed **greater improvement in social competence over time** compared to those in the control group.
- **We found that KC training benefitted the younger children as well as the 4 to 5-year-olds, & children of all socioeconomic backgrounds.**

More Year 1 Findings: Supports & Extends Previous Work

- We added a new measure of **children's empathy skills & found that the KC group showed greater improvement in empathy skills,** than the control group. 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 led to improved **Executive Function** – e.g., KC children displayed better scores on Inhibiting weak responses, Mental Flexibility, Planning, & overall Executive Functioning.
  - **TS Gold** – e.g., KC children had better language, cognitive, literacy, and 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 and 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!

Other Research on Mindfulness with Young Children

- Previous research also shows that young children (ages 4-6) in mindfulness-based programs were **more prosocial**, **less hyperactive, & showed greater improvement in self-regulation** (**Viglas & Perlman, 2018**). Their mindfulness program consisted of 20-minute lessons delivered 3 times a week for 6 weeks by an *external* mindfulness teacher (& the primary researcher in the study).
- Children (6-7 years) in mindfulness-based programs have also shown **improvement in executive functions (**Flanker inhibitory control, working memory, cognitive flexibility**) & behavior (**attention, peer relationship problems, & prosocial behavior) (**Janz et al., 2019**). The mindfulness program, CalmSpace, was taught by trained classroom teachers (1/2 day training & coaching support from lead researcher) for 2 school terms.
- However, there is **not as much research** that systematically assesses the impact of mindfulness training:
  - Implement by ***trained classroom teachers*** **for young children (3-5 years).**
  - With **large, more ethnically & socioeconomically diverse groups.**

Our Kindness Project Over Time: 2018 to 2021

- **In year 1(2018-19), we compared a group receiving the KC to a control group.** In Years 1 & 2 (2019-20) we used many of the same outcome measures as Flook et al. (2015): Sharing, Social Competence, Executive Function measures (Card Sort & Flanker Task), & Report Card Grades. **In year 1 (2018-19), we added measures of: Social Self-Efficacy, Physical Self-Regulation, Empathy Skills, Social-Emotional Competency (ASQ-SE), School Success Skills (TS-Gold), & Mindfulness Skills.**
- **In year 2 (2019-20), all children (including those classrooms previously in the control group) received the KC.** We measured sharing, Executive function (BRIEF-P), School Success Skills (TS-Gold & Report Cards), Empathy Skills, Social Emotional Competency (reported by teachers & parents), & added a measure of behavioral strengths & problems (SDQ), Teachers and Parents also reported on KC impact in the classroom & at home. ***The pandemic limited our ability to individually test children in spring.*** *Thankfully, teachers & parents did complete measures on each child.*
- **In Year 3 (2020-2021**), we focused on supporting all continuing classrooms (16) & added 4 new classrooms. We measured School Success Skills (TS-Gold & Report Cards), Empathy Skills, Social Emotional Competency (TRSC), Behavioral Problems & Strengths (SDQ), & Teacher and Parent-reported Impact.

Our Year 2 Findings: All Classrooms Used the Kindness Curriculum

After learning the Kindness Curriculum, children of both lower & higher socioeconomic status as well as children in both preschool (3-4 years) & 4K (4-5 years) classrooms showed **improvement** in:

- **Prosocial Behavior, Emotional Regulation, & Empathetic Behavior**
- **Planning & Organizing Skills**: Improved ability to anticipate future events and use goals to guide behavior
- **Working Memory**: Improved ability to remember information for the purpose of completing tasks
- **Social-Emotional Skills**: Improved ability to experience, express, & manage emotions
- **Behavioral Skills**: fewer peer problems, less impulsivity, better attention & ability to self-calm.

These results suggest that children as young as 3-year-olds can positively benefit from the mindfulness-based Kindness Curriculum.

Overview: Expansion of Earlier Work

In Years 1 & 2, We expanded earlier work with the Kindness Curriculum in three important ways:

1. **In both years 1 & 2, a larger, more diverse sample of over 240 children, more than 50% from lower income & non-White families, participated.**
2. **Younger children, preschoolers (3-4 years) were included in addition to 4K (4-5 years) children.**
3. **We trained teachers to implement the Kindness Curriculum (KC) → a "train the teacher model"** rather than mindfulness coaches. In year 1, teachers engaged in ***26 hours of training led by coaches from*** **Healthy Minds Innovation. In year 2, our mindfulness coaches took over the 26-hour training classes.**
   - The goals of the "train the teacher model" are to make the Kindness Curriculum available more broadly & support the teachers through their development of personal mindfulness practices & mindful teaching skills.
   - The Mindfulness Coaches offer ***ongoing support to teachers*** in their implementation of the KC & in their personal mindfulness practices.

In year 3, we expanded our previous work in important ways:

1. **Community outreach**
   - Two virtual Leadership Training Sessions (5 – hours each) for agency & program leaders in the early childhood community. A total of 22 leaders attended the sessions.
   - Expansion to more agencies- 1 new agency joined in Year 3 & 4 new agencies joined for Year 4 upon receiving leadership training, or from outreach efforts of Kindness Project leaders.
2. **Sharing findings from Years 1 and 2**
   - Many local & professional presentations (e.g., at the Society for Research on Child Development) have taken place virtually & in person to spread information from The Kindness Project.
3. **Mitigate the stress of the COVID-19 pandemic on children, families, & teachers.**

Study Goals –Year 3: 2020 - 2021

Goals:

1. Bring the Kindness Curriculum (KC) to all children & measure impact. In year 3, children in all participating classrooms received the KC beginning in Fall 2020 or whenever the pandemic restrictions allowed.
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).
3. Mitigate the effects of the COVID-19 pandemic.
   - Support agencies & teachers by encouraging mindful self-care & mindfulness practice.
   - Support children through implementation of the Kindness Curriculum & mindfulness support from teachers.

Summer 2020
Teacher Training class 26 hours, or booster Teachers Supported by Mindfulness Coaches

Fall 2020
Teachers' & Parents' Report on Children's Social Skills & Cognitive Skills

Kindness Curriculum implemented for 12-14 weeks

Spring 2021
Teachers' & Parents' Report on Children's: Social Skills Cognitive Skills

4 Phases of the Project

Study Design Year 3: Phase Descriptions

- **Teacher Training – Over two weeks in June**
  - Teachers who were not previously trained, participated in 26 hours of mindfulness & 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 & supported all teachers in developing their personal and teaching mindfulness practices.
  - Teachers in 20 classrooms implemented the KC in the 2020-2021 school year. Some did partial implementation or adapted implementation due to pandemic-related challenges.

- **Pre-Testing: Fall 2020**
  - All children were assessed by teachers & parents on social, behavioral, & cognitive skills during Fall.

- **Teachers Implement the Kindness Curriculum (KC) in classroom: About 12 weeks**
  - For classrooms teaching in-person, the KC began in Fall 2020 going through 24 lessons total over 12-14 weeks. Each lesson is about 20-30 minutes. Teachers encouraged to break-up lessons as needed to meet the needs in their classrooms.
  - For classrooms meeting virtually, the KC either:
    1. Began in January when classrooms returned to in-person (e.g., Bridges 4K)
    2. Was adapted & implemented virtually **(See COVID experiences by agency below)**
  - Teachers were encouraged to reinforce mindfulness practices regularly with children & practice self-care.

- **Post-Testing of Children: Spring 2021**
  - In Spring 2021, teachers & parents reported on children's social, behavioral, & cognitive skills, using the same measures from the fall to assess the changes in their skills.

COVID-19 Story from Agencies for the 2020-21 School Year

Bridges Child Enrichment Center

- Preschool in-person; 4K started virtually in Fall 2020 & returned to hybrid in January 2021.
- All staff members were quarantined in the beginning of April 2021.
- Teachers reported modifications of KC due to COVID restrictions. For example, 1 preschool teacher reported that she did not use the bean bag animals due to COVID concerns.
- Teachers reported that practicing mindfulness alleviated their personal stresses. For example, a preschool teacher said that using some mindfulness practices helped them through this difficult year.
- Teachers found a closer relationship with their colleagues. For example, one toddler teacher commented that they felt the team had more "family feeling" during this year.
- Mindfulness Coaches met with toddler teachers to brainstorm how to implement KC to younger children since October 2020.

Even Start CELC

- All virtual during Fall 2020 & transitioned to hybrid in Spring 2021. Experienced some staff leaves & staffing replacement challenges.
- Agency reported that children who were learning in-person showed growth & children learning virtually were maintaining skills.
- Mindfulness Coaches met with their toddler teachers to discuss how to implement KC to younger children since October 2020.
- Toddler teachers across agencies came up with idea of "Kindness Nuggets" for these younger children.

COVID-19 Story from Agencies for the 2020-21 School Year

University Children's Center

- School was in person most of the year, with some temporary closures.
- Temporarily closed for two weeks due to COVID Infection on August 20th, 2020.
- Mindfulness Coaches did an introductory lesson to KC with children in October 2020.
- Implemented COVID safety regulations including masking, social distancing, using hand sanitizer, & prohibiting visitors in the building.
- When closed, teachers adapted KC virtually. For example, one teacher taught a breathing exercise via Facebook Zoom.
- Mindfulness Coaches met with toddler teachers to work on implementing KC with younger children since October 2020.

Head Start CELC

- Started in-person on September 1st 2020 with smaller class sizes. One classroom was closed due to lack of staff & enrollment. They experienced some changes in staffing.
- Teachers taught in-person in the morning & 4K virtually in the afternoon during Fall 2020.
- Transitioned to hybrid instruction in Spring 2021, but attendance was not consistent due to frequent quarantine.
- One classroom was quarantined in February 2021.
- Teachers adapted KC in virtual instruction. For example, one 4K teacher reported her virtual KC lessons were effective & engaging.
- Teachers modified the KC due to COVID restrictions. For example, one 4K teacher reported that they did not use the "blow the pinwheel" activity due to COVID concerns.

Kindness Project Participating Agencies

Bridge's Child Enrichment Center
Two Preschool Classrooms
Four 4K Classrooms (am & pm)
Note: Same teachers teach am & pm

Some New & Some Continuing Children

One Toddler Classroom added

UW-Oshkosh Head Start, CELC
Two Preschool Classrooms-1 cancelled part of year due to pandemic

Four 4K Classrooms (full day)

Some New & Some Continuing Children

Appleton Even-Start Family Literacy

Morning Preschool Classroom
Afternoon Preschool Classroom
Toddler am & pm classrooms added

Note: Same teachers teach am & pm

Children's Center, UWO Fox Cities

Two Preschool Classrooms
One Toddler Classroom added

Some New & Some Continuing 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.

Methodology Year 3: Collection of Parent-reported & Teacher-reported Measures

In both Fall (before the Kindness Curriculum) & Spring (after the KC), teachers completed:

a. **Teacher Rated Social Competence (TRSC)** forms for each child.
b. **Strengths & Difficulties Questionnaire,** rating each child's emotional skills & behavioral problems– new measure in 2019-20.
c. **TS-Gold (Teaching Strategies Gold),** measuring knowledge, skills, and behaviors most predictive of school success.

Teachers completed report cards at the end of 1st semester only if they were teaching in person (Head Start). All 4K classrooms did report cards at the end of 2nd semester. All agencies gave parents progress reports of some type.

In both Fall & Spring, parents completed:

a. **The Griffith Empathy Measure (GEM)** of both cognitive & emotional empathy.

MEASURE	REPORTER	WHAT IT MEASURES	SUBSCALE/ No. of items
Teacher Rated Social Competence (TRSC)	**Teacher**	Prosocial behavior, emotional regulation, & we identified three items that measure empathy skills.	1. Prosocial (5 items) 2. Emotional (7 items) 3. Empathy (3 items)
Griffith Empathy	**Parent**	Child's ability to recognize & understand another's emotional state & to respond appropriately to another's emotions.	1. Cognitive empathy (6 items) 2. Affective empathy (9 items)
TS-Gold (Teaching Strategies - Gold)	**Teacher**	Measures the knowledge, skills, & behaviors considered most predictive of school success, including social-emotional development, physical, language, cognitive development & in the content areas of literacy, mathematics, and English-language acquisition.	1. Social Emotional (9 items) 2. Physical (5 items) 3. Language (8 items) 4. Cognitive (10 items) 5. Literacy (16 items) 6. Mathematics (12 items)

SOCIAL-EMOTIONAL MEASURE	REPORTER	WHAT IT MEASURES	SUBSCALE/ No. of items
Strengths & Difficulties Questionnaire (SDQ)	**Teacher/ Parent**	Children's social-emotional skills & behavioral problems (e.g., conduct problems, difficulty paying attention).	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)
Report Cards	**Teacher**	The child's **academic achievement** (e.g., English-language arts, mathematics skills) **& school progress (e.g.,** social-emotional skills, health/physical skills).	1. Social-Emotional Skills 2. English/Language Arts Skills 3. Mathematics Skills 4. Health/Physical Development
Impact on Classroom	**Teacher**	Teachers' perceptions of the usefulness of the Kindness Curriculum & training, whether the children remembered it, & whether it had a positive impact on the classroom.	8 rating scale & open-ended questions on Curricular impact & coaching support
Impact on Child at Home	**Parent**	Parents' perceptions of the impact of the Kindness Curriculum on their child(ren) at home.	Four rating scale questions & open-ended follow ups

Group Breakdown		Fall 2020	Spring 2021	Overall 2020-2021
Gender	Female	97	93	104
	Male	123	124	136
	Overall	220	217	240
Age	<48 months	97	103	112
	4-5 years	122	113	127
	Overall:	219	216	239
SES (Missing 24)	Lower income	117	111	128
	Higher income	76	88	88
	Overall	192	198	216
Ethnicity (Missing 20)	NON-WHITE	95	95	103
	• Black	22	26	27
	• Latinx	38	36	38
	• Asian	17	16	17
	• Other/Mixed	18	17	21
	WHITE	105	117	117

Teacher Rated Social Competence (TRSC)

TRSC is a measure reported by teachers which focuses on prosocial behavior, emotion regulation, & empathy skills for each child.

"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?"

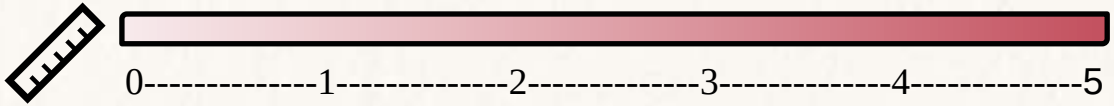
Empathy

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



From 0=almost never to 5=almost always

Overview of Findings for Teacher Rated Social Competence (TRSC)

Please See Appendix 1 for a Summary of the Statistical Findings

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

- In fall, continuing children had significantly higher emotional regulation scores than children new to the programs. Continuing children also had somewhat higher prosocial behavior & empathy scores than children new to the agencies. These results suggest that previous experience with the Kindness Curriculum (KC) & the programs was beneficial.

Was there improvement *over time*?

- There was significant improvement over time across on all measures: prosocial behavior, emotion regulation, & empathy skills.

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

- Children from both lower & higher SES families improved significantly from fall to spring on all measures. There were no statistically significant differences between lower & higher SES groups, nor in *amount* of improvement over time.

Was improvement overtime comparable for continuing & new children?

- Continuing children scored higher than new children overall on all three areas: prosocial behavior, emotional regulation, & empathy. However, both continuing & new children significantly & comparably improved over time in prosocial & empathy skills.

Overview of Findings for Teacher Rated Social Competence (TRSC)

Was improvement overtime comparable for preschool and 4K children?

- Overall, older children (over 48 months) had significantly higher scores in all 3 areas: prosocial behavior, emotional regulation, & empathy. Younger children started with lower skills in all areas, but they showed significant improvement over time in all areas. Older children improved in all areas, but only empathy skills significantly improved.

Was improvement overtime comparable for girls and boys?

- Overall, girls had higher scores in all 3 areas: prosocial behavior, emotional regulation, & empathy. Both girls & boys improved significantly over time in prosocial & empathy skills, but only girls improved significantly in emotional regulation.

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

Social Competence (TRSC) Improvement Over Time

In this pandemic stressed year, we looked at both percentage of children who improved, & the percentage who at least maintained skills

Subscale	% Improved	% Improved or Maintained
Prosocial Behavior (n = 143)	**54.5% (n = 78)**	**67.1% (n = 96)**
Emotional Regulation (n = 142)	**53.5% (n = 76)**	**64.8% (n = 92)**
Empathy (n = 144)	**57.6% (n = 83)**	**72.2% (n = 104)**

TRSC Improvement: Comparisons of Continuing & New Students

Subscale	Group	Percent Improved	Chi-square X^2	% Improved or Maintained	Chi-square X^2
Prosocial Behavior	Continuing Students (n = 48)	55.3% (n = 26)	X^2 = .02, *ns;* *No significant differences in rates*	66.7% (n = 32)	X^2 = .007, *ns* *No significant differences in rates*
	New Students (n = 95)	54.2% (n = 52)		67.4% (n = 64)	
Emotional Regulation	Continuing Students (n = 48)	53.2% (n = 25)	X^2 = .003, *ns;* *No significant differences in rates*	64.6% (n = 31)	X^2 = .001, *ns* *No significant differences in rates*
	New Students (n = 94)	53.7% (n = 51)		64.9% (n = 61)	
Empathy	Continuing Students (n = 48)	60.4% (n = 29)	X^2 = .23, *ns* *No significant differences in rates*	75.0% (n = 36)	X^2 = .28, *ns* *No significant differences in rates*
	New Students (n = 96)	56.3% (n = 54)		70.8% (n = 68)	

TRSC Percent Improvement: Age Group Comparisons

(If $p < .05$, then the difference in improvement is significant)

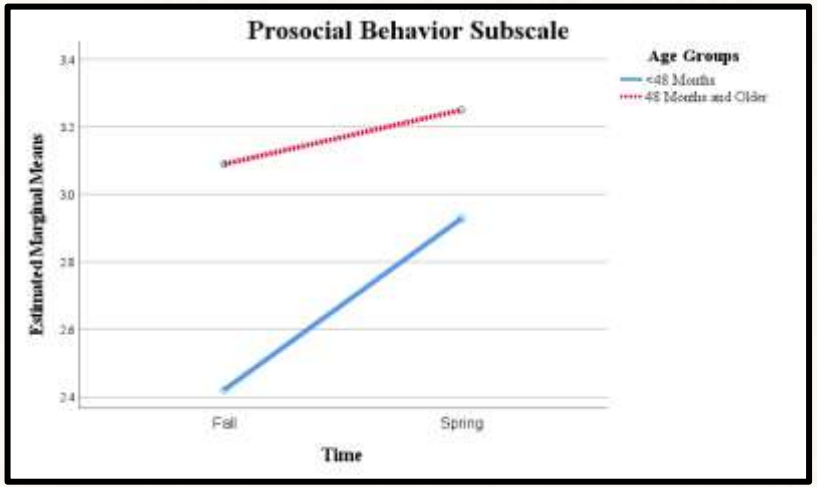
Subscale	Group	Percent Improved	Chi-square X^2	% Improved or Maintained	Chi-square X^2
Prosocial Behavior	**<48 months (n =58)**	**65.5% (n = 38)**	$X^2 = 4.74$, $p = .030$; *younger is higher*	**74.1% (n = 43)**	$X^2 = 2.17$, $p = .141$, *ns, no significant differences*
	48 months or older (n = 85)	**47.1% (n = 40)**		**62.4% (n = 53)**	
Emotional Regulation	**<48 months (n = 57)**	**57.9% (n = 33)**	$X^2 = .73$, *ns, no significant differences*	**68.4% (n = 39)**	$X^2 = .55$, *ns, no significant differences*
	48 months or older (n = 85)	**50.6% (n = 43)**		**62.4% (n = 53)**	
Empathy	**<48 months (n = 58)**	**60.3% (n = 35)**	$X^2 = .29$, *ns, no significant differences*	**72.4% (n = 42)**	$X^2 = .002$, *ns, no significant differences*
	48 months or older (n = 86)	**55.8% (n = 48)**		**72.1% (n = 62)**	

TRSC Improvement: SES Comparisons

(If $p < .05$, then the difference in improvement is significant)

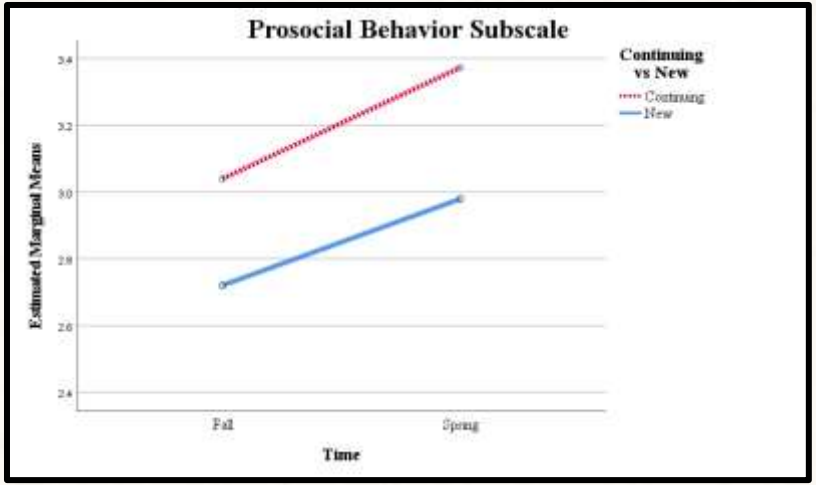
Subscale	Group	Percent Improved	Chi-square X^2	% Improved or Maintained	Chi-square X^2
Prosocial Behavior	**Low SES (n = 78)**	**52.6% (n = 41)**	$X^2 = 6.02$, $p = .049$	**67.5% (n = 52)**	$X^2 = 9.75$, $p = .008$
	High SES (n = 58)	**62.1% (n = 36)**		**72.9% (n = 43)**	
Emotional Regulation	**Low SES (n = 76)**	**52.6% (n = 40)**	$X^2 = 2.18$, $p = .337$, *no significant differences in rates*	**64.5% (n = 49)**	$X^2 = 4.60$, $p = .100$, *Marginally significant differences*
	High SES (n = 59)	**57.6% (n = 34)**		**69.5% (n = 41)**	
Empathy	**Low SES (n = 78)**	**59.0% (n = 46)**	$X^2 = 2.55$, $p = .280$, *no significant differences in rates*	**73.1% (n = 57)**	$X^2 = 3.20$, $p = .202$, *no significant differences in rates*
	High SES (n = 59)	**59.3% (n = 35)**		**74.6% (n = 44)**	

TRSC Prosocial Behavior varied by Age & Continuing vs. New



- Overall, children over 48 months had **higher Prosocial behavior scores**.
- While children under 48 months started with lower scores, they showed **more improvement** over time.

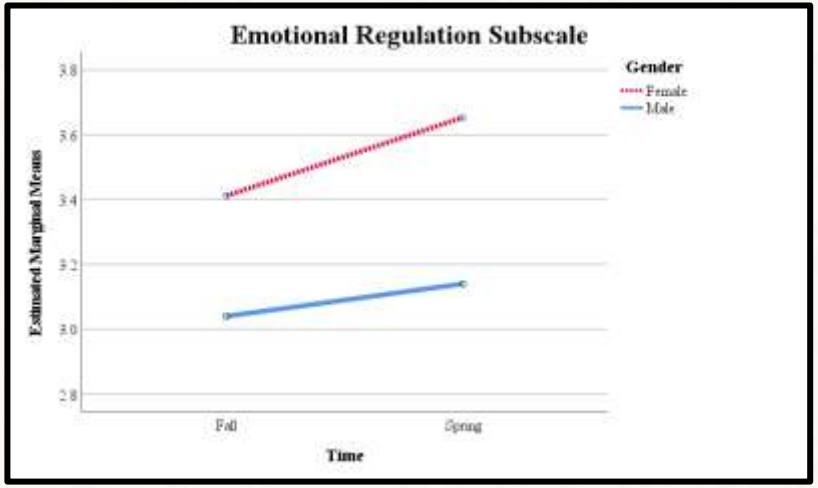
Main effect Time: *F*(1, 143) = 19.79, *p* = <.001
Time x Age: *F*(1, 143) = 5.35, *p* = .022
ME Age: *F*(1, 143) = 10.22, *p* = .002



- **New Students** started with **lower levels of prosocial behavior** & **improved** over time.
- **Continuing students** started at **higher levels** of prosocial behavior & also **improved** over time.

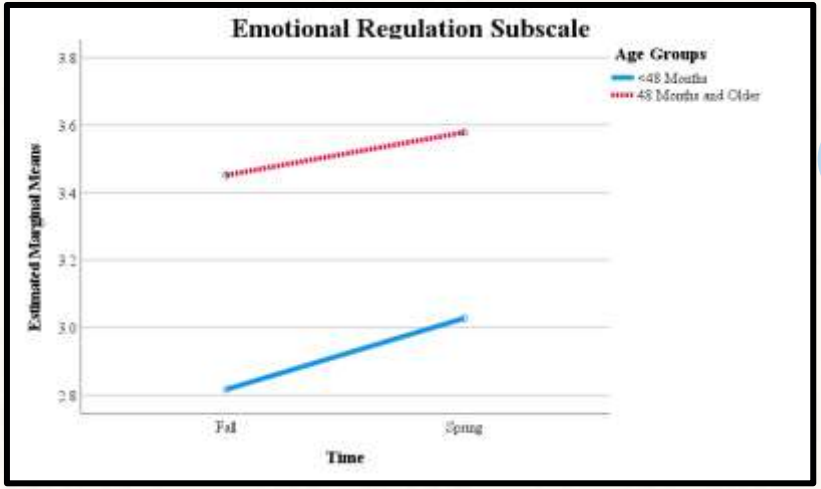
Main effect Time: *F*(1, 144) = 13.71, *p* = <.001
Time x Continuing vs New: *F*(1, 144) = .217, *p* = .642
ME Continuing vs New: *F*(1, 144) = 4.81, *p* = .030

TRSC Emotional Regulation Subscale varied by Gender & Age



- Female children had **higher emotional regulation scores overall & improved** over time.
- Male children started with **lower scores & improved only slightly** over time.

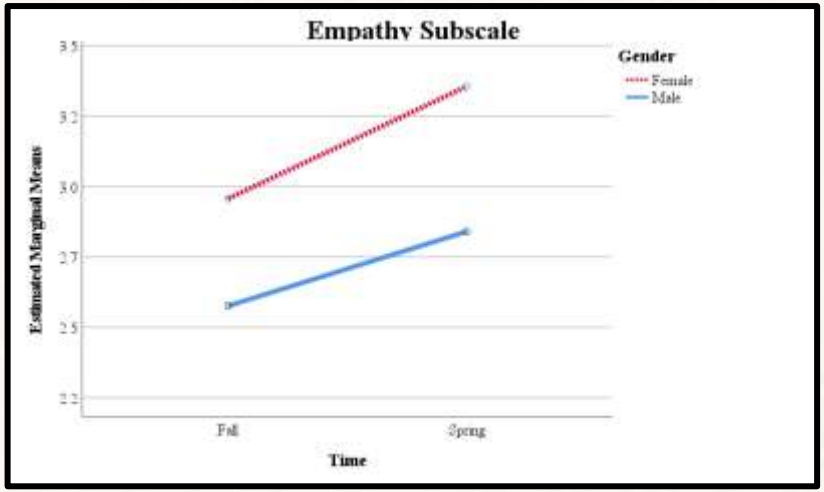
Main effect Time: *F*(1, 143) = 7.27, *p* = .008
Time x Gender: *F*(1, 143) = 1.25, *p* = .266
ME Gender: *F*(1, 143) = 10.94, *p* = .001



- Younger children began with **lower emotional regulation scores** but showed **improvement** over time.
- Older children had **higher emotional regulation scores** overall & maintained or improved them over time.

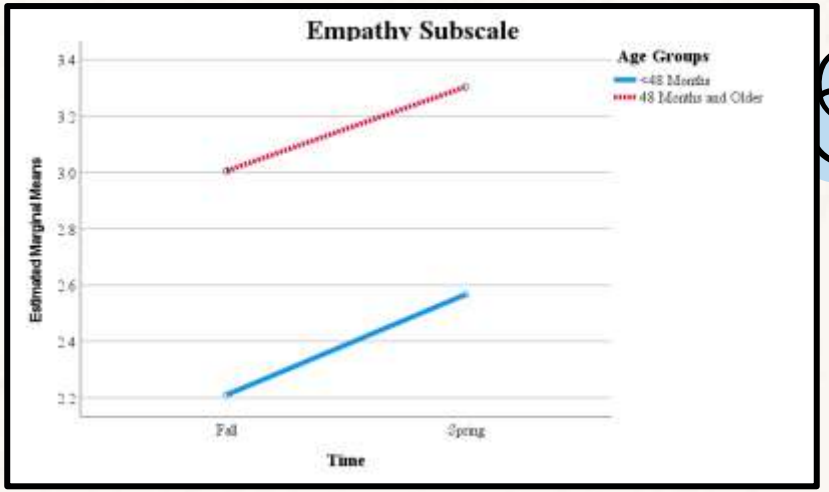
Main effect Time: F(1, 143) = 6.93, p = .009
Time x Age: F(1, 143) = .43, p = .515
ME Age: F(1, 143) = 20.5, p = <.001

TRSC Empathy Skills varied by Gender & Age



- Girls showed **better empathy skills overall & improved** over time.
- Boys showed **lower empathy skills but improved** over time.

Main effect Time: *F*(1, 143) = 21.25, *p* = <.001
Time x Gender: *F*(1, 143) = .88, *p* = .351
ME Gender: *F*(1, 143) = 7.49, *p* = .007

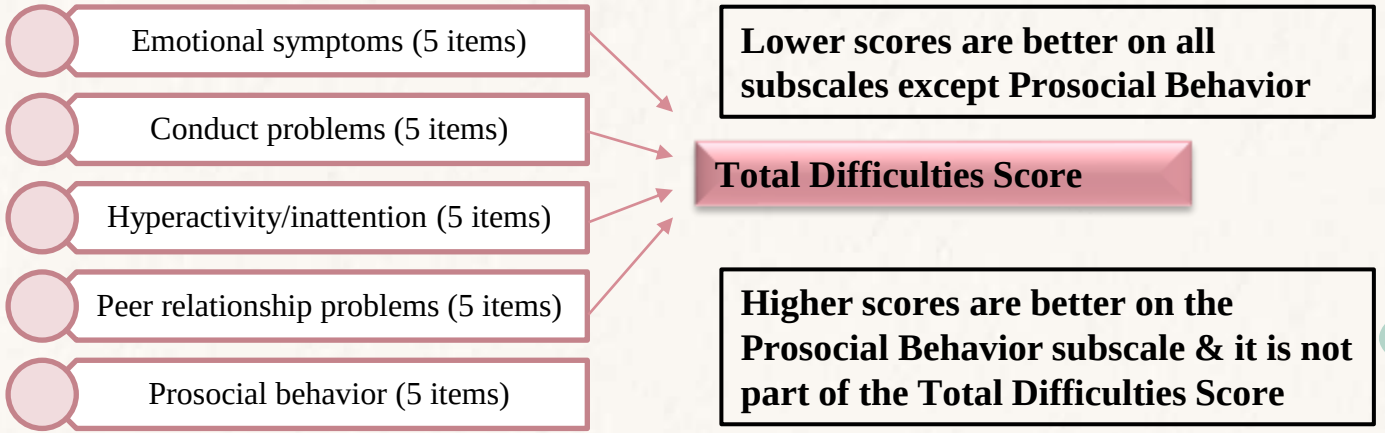


- Younger children began with **lower empathy skills** but **improved** over time.
- Older children began had **better empathy skills over all & improved** over time.

Main effect Time: *F*(1, 143) = 20.23 , *p* = <.001
Time x Gender: *F*(1, 143) = .16, *p* = .690
ME Gender: *F*(1, 143) = 23.84, *p* = <.001

Strengths and Difficulties (SDQ)

- This measure is a brief behavioral screening questionnaire for a wide range of ages that can be completed by teachers or parents. We used the teacher version for 2 to 4-year-olds, adapting it slightly.
- In year 3, the SDQ was completed by teachers in fall & spring.
- The questionnaire for 2 to 4-year-olds, has 25 items (about both positive & negative behaviors). 22 items were used as is, however, the item on reflectiveness was softened, & 2 items on antisocial behavior were replaced to focus on oppositionality.

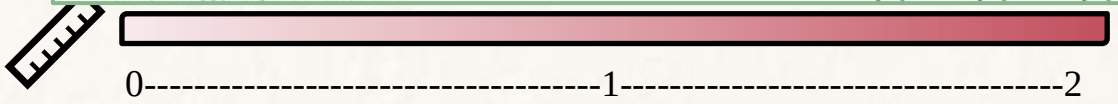


Strengths and Difficulties (SDQ)

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	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other children, for example toys, treats, pencils	☐	☐	☐
Often loses temper	☐	☐	☐
Rather solitary, prefers to play alone	☐	☐	☐
Generally well behaved, usually does what adults request	☐	☐	☐
Many worries or often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, depressed or tearful	☐	☐	☐



Teachers rate each item on a 3-point scale: not true, somewhat true, certainly true

Overview of Findings for Strength & Difficulties (SDQ)

In Fall, how did *continuing* children *vs those new* to the programs compare?

- In fall, continuing children generally had fewer problems (e.g., marginally lower conduct problems) and better prosocial skills than children who were new to the Kindness Curriculum. However, there were no significant differences between continuing & new children on any SDQ subscales in fall.

Was there improvement *over time*?

- About 49% of children showed better prosocial behavior & fewer difficulties over time. During this difficult pandemic year, we also measured how many at least maintained their skills—almost 70% improved or maintained their prosocial skills, & about 66% maintained or decreased in problem behaviors.

Was improvement overtime comparable for continuing & new children?

- About 53% (continuing) & 50% (new children) showed fewer total difficulties over time, & about 47% (continuing) & 50% (new children) showed better prosocial behavior over time. In terms of significant level of improvement, continuing children showed fewer hyperactivity problems & somewhat better prosocial behavior. New students improved significantly in prosocial behavior & in reduced peer problems, & somewhat fewer emotional problems.

Overview of Findings for Strength and Difficulties (SDQ)

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

- About 50% of lower SES children & 53% of higher SES children improved over time in prosocial skills. For total difficulties, 46% of lower & 61% of higher SES children showed fewer difficulties. Children from lower SES families improved significantly in level of prosocial skills. Higher SES children improved significantly in level of prosocial skills & showed fewer total difficulties over time.

Was improvement over time comparable for younger & older children?

- About 59% of younger children & 43% of older children improved over time in prosocial skills. For total difficulties, 57% of younger & 47% of older children showed fewer difficulties. In terms of level of improvement, younger children showed significant decreases in most problem behaviors & overall difficulties, whereas older children did not show significant gains. Similarly, only younger children significantly improved in prosocial skills.

Was improvement over time comparable for girls & boys?

- In terms of significant level of improvement, girls showed fewer total difficulties over time & significantly improved prosocial behavior over time. Boys did not improve significantly in total difficulties or prosocial behavior but did show fewer peer problems over time. However, boys significantly increased in conduct problems over time.

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

SDQ Results- Percent of Children Who Improved over Time

In this pandemic stressed year, we looked at both percentage of children who improved, & the percentage who at least maintained skills

Subscales	% Improved (i.e., had fewer problems)	% Improved or Maintained (i.e., had fewer problems)
Emotional Problems (n =145)	36.6 % (n = 53)	76.6% (n = 111)
Conduct Problems (n = 145)	29.0% (n = 42)	64.1% (n = 93)
Hyperactivity/Inattention (n = 145)	42.1% (n = 61)	68.3% (n = 99)
Peer Relationship Problems (n = 145)	44.8% (n = 65)	74.5% (n = 108)
Prosocial Behavior (n = 145)	49.0% (n = 71)	69.7% (n = 101)
Total Difficulties (n = 145)	49.0% (n = 71)	65.5% (n = 95)

SDQ Improvement over Time for Continuing *vs* New Students

In this pandemic stressed year, we looked at both percentage of children who improved, & the percentage who at least maintained skills

Subscale	Group	% Improved	Chi-square X^2	% Improved or Maintained	Chi-square X^2
Emotional Problems	Continuing Students (n = 51)	35.3% (n = 18)	Chi-square = .054, *ns, no significant differences*	78.4% (n = 40)	Chi-square = .16, *ns, no significant differences*
	New Students (n= 94)	37.2% (n = 35)		75.5% (n = 71)	
Conduct Problems	Continuing Students (n = 51)	23.5% (n = 12)	Chi-square = 1.13, *ns, no significant differences*	60.8% (n = 31)	Chi-square = .39, *ns, no significant differences*
	New Students (n = 94)	31.9% (n = 30)		66.0% (n = 62)	
Hyperactivity/ Inattention	Continuing Students (n = 51)	49.0% (n = 25)	Chi-square = 1.56, *ns, no significant differences*	74.5% (n = 38)	Chi-square = 1.41, *ns, no significant differences*
	New Students (n = 94)	38.3% (n = 36)		64.9% (n = 61)	
Peer Relationship Problems	Continuing Students (n = 51)	37.3% (n = 19)	Chi-square = 1.82, *ns, no significant differences*	76.5% (n = 39)	Chi-square = .16, *ns, no significant differences*
	New Students (n = 94)	48.9% (n = 46)		73.4% (n = 69)	
Prosocial Behavior	Continuing Students (n = 51)	47.1% (n = 24)	Chi-square = .11, *ns, no significant differences*	70.6% (n = 36)	Chi-square = .03, *ns, no significant differences*
	New Students (n = 94)	50.0% (n = 47)		69.1% (n = 65)	
Total Difficulties	Continuing Students (n = 51)	52.9% (n = 27)	Chi-square = .11, *ns, no significant differences*	70.6% (n = 36)	Chi-square = .90, *ns, no significant differences*
	New Students (n = 94)	50.0% (n = 47)		62.8% (n = 59)	

SDQ Improvement over Time varied by Age

In this pandemic stressed year, we looked at both percentage of children who improved, & the percentage who at least maintained skills

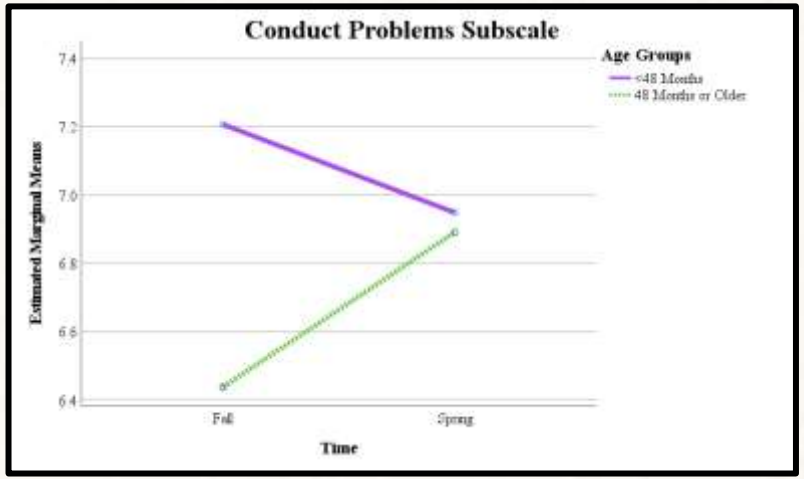
Subscale	Group	% Improved	Chi-square	% Improved or Maintained	Chi-square
Emotional Problems	<48 months (n = 58)	43.1% (n = 25)	Chi-square = 1.79, *p = .181, no significant differences*	77.6% (n = 45)	Chi-square = .06, *ns, no significant differences*
	48 months or older (n = 87)	32.2% (n = 28)		75.9% (n = 66)	
Conduct Problems	<48 months (n = 58)	39.7% (n = 23)	Chi-square = 5.37, *p = .021*	67.2% (n = 39)	Chi-square = .41, *ns, no significant differences*
	48 months or older (n = 87)	21.8% (n = 19)		62.1% (n = 54)	
Hyperactivity/Inattention	<48 months (n = 58)	48.3% (n = 28)	Chi-square = 1.53, *ns, no significant differences*	70.7% (n = 41)	Chi-square = .26, *ns, no significant differences*
	48 months or older (n = 87)	37.9% (n = 33)		66.7% (n = 58)	
Peer Problems	<48 months (n = 58)	53.4% (n = 31)	Chi-square = 2.91, *p = .088*	79.3% (n = 46)	Chi-square = 1.19, *ns, no significant differences*
	48 months or older (n = 87)	39.1% (n = 34)		71.3% (n = 62)	
Prosocial Behavior	<48 months (n = 58)	58.6% (n = 34)	Chi-square = 3.61, *p = .058*	74.1% (n = 43)	Chi-square = .92, *ns, no significant differences*
	48 months or older (n = 87)	42.5% (n = 37)		66.7% (n = 58)	
Total Difficulties	<48 months (n = 58)	56.9% (n = 33)	Chi-square = 1.31, *ns, no significant differences*	72.4% (n = 42)	Chi-square = 2.04, *p = .154, no significant differences*
	48 months or older (n = 87)	47.1% (n = 41)		60.9% (n = 53)	

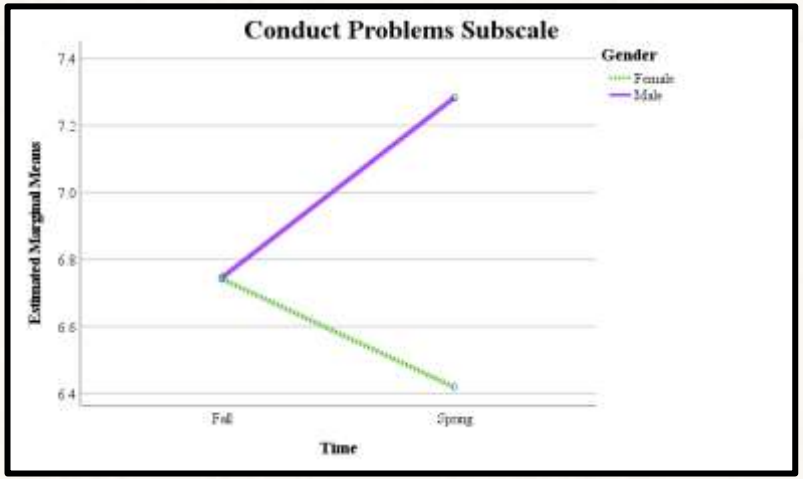
SDQ Improvement over Time by SES Groups

In this pandemic stressed year, we looked at both percentage of children who improved, & the percentage who at least maintained skills

Subscale	Group	% Improved	Chi-square x^2	% Improved or Maintained	Chi-square
Emotional Problems	Low SES (n = 79)	35.4% (n = 28)	Chi-square = .18, *ns, no significant differences*	73.4% (n = 58)	Chi-square = 1.29, *ns, no significant differences*
	High SES (n = 59)	37.3% (n = 22)		81.4% (n = 48)	
Conduct Problems	Low SES (n = 79)	29.1% (n = 23)	Chi-square = 3.16, *p = .206 , no significant differences*	63.3% (n = 50)	Chi-square = 1.75, *ns, no significant differences*
	High SES (n = 59)	32.2% (n = 19)		67.8% (n = 40)	
Hyperactivity/ Inattention	Low SES (n = 79)	40.5% (n = 32)	Chi-square = .93, *ns, no significant differences*	62.0% (n = 49)	Chi-square = 7.04, *p = .030*
	High SES (n = 59)	45.8% (n = 27)		79.7% (n = 47)	
Peer Problems	Low SES (n = 79)	45.6% (n = 36)	Chi-square = 2.82, *p = .244, no significant differences*	70.9% (n = 56)	Chi-square = 6.50, *p = .039*
	High SES (n = 59)	47.5% (n = 28)		83.1% (n = 49)	
Prosocial Behavior	Low SES (n = 79)	49.4% (n = 39)	Chi-square = 3.68, *p = .159, no significant differences*	67.1% (n = 53)	Chi-square = 7.76, *p = .021*
	High SES (n = 59)	52.5% (n = 31)		78.0% (n = 46)	
Total Difficulties	Low SES (n = 79)	45.6% (n = 36)	Chi-square = 4.71, *p = .095*	63.3% (n = 50)	Chi-square = 5.82, *p = .055*
	High SES (n = 59)	61.0% (n = 36)		72.9% (n = 43)	

SDQ Conduct Problems varied with Gender & Age





- Younger children began at a **higher level** of conduct problems but **decreased** over time.
- Older children began at a **lower level** of conduct problems but **increased** over time.

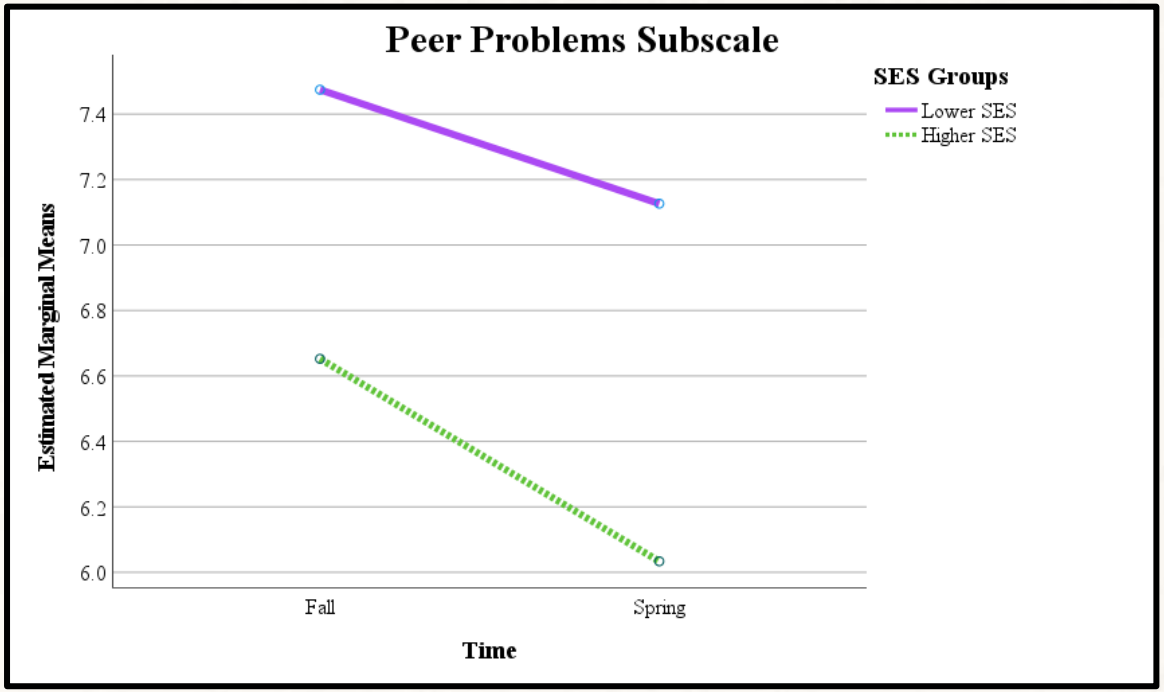
Main effect Time: $F(1, 145) = .25$, $p = .618$
Time x Age: $F(1, 145) = 3.33$, $p = .07$, marginal
ME Age: $F(1, 145) = 1.74$, $p = .189$

Remember: Lower scores are better.

- Girls & boys started at a **similar level** of conduct problems.
- Girls' conduct problems **decreased** over time, whereas boys' conduct problems **increased** over time.

Main effect Time: $F(1, 145) = .31$, $p = .58$
Time x Gender: $F(1, 145) = 4.98$, $p = .027$
ME Gender: $F(1, 145) = 1.96$, $p = .163$

SDQ Peer Problems varied by Socioeconomic Status

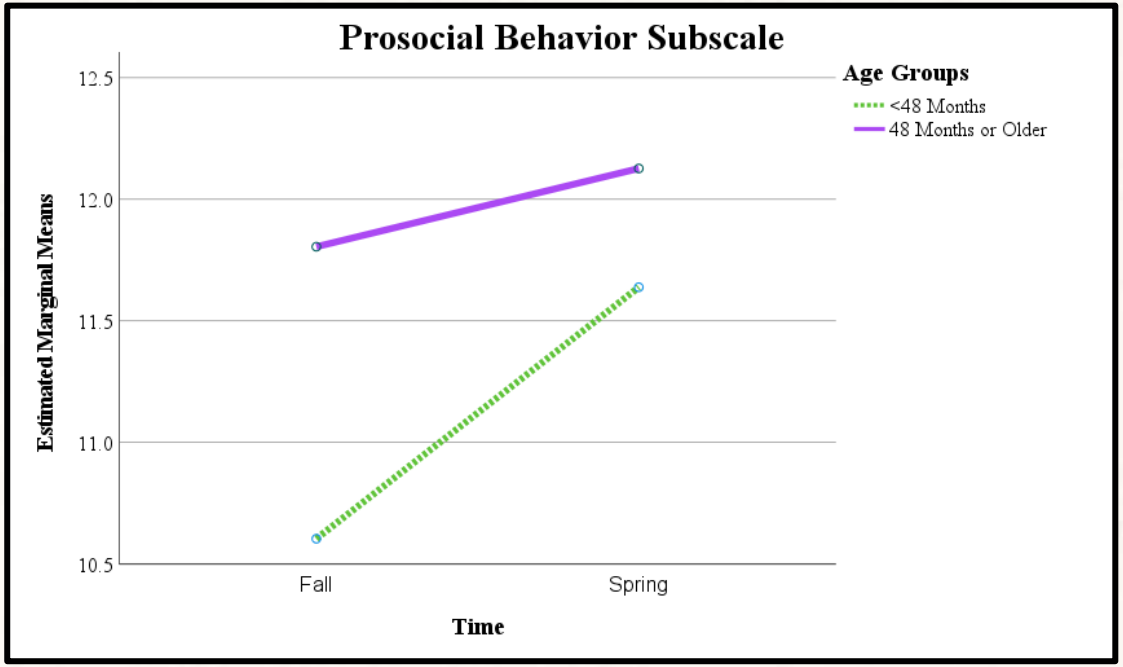


- Lower SES students started with a **higher level** of peer problems & **decreased** over time.
- Higher SES students had fewer peer problems overall & **decreased** over time.

Main effect Time: $F(1, 138) = 9.35$, $p = .003$
Time x SES: $F(1, 138) = .73$, $p = .394$
ME SES: $F(1, 138) = 14.21$, $p = <.001$

Remember: Lower scores are better.

SDQ Prosocial Behavior varied with Age

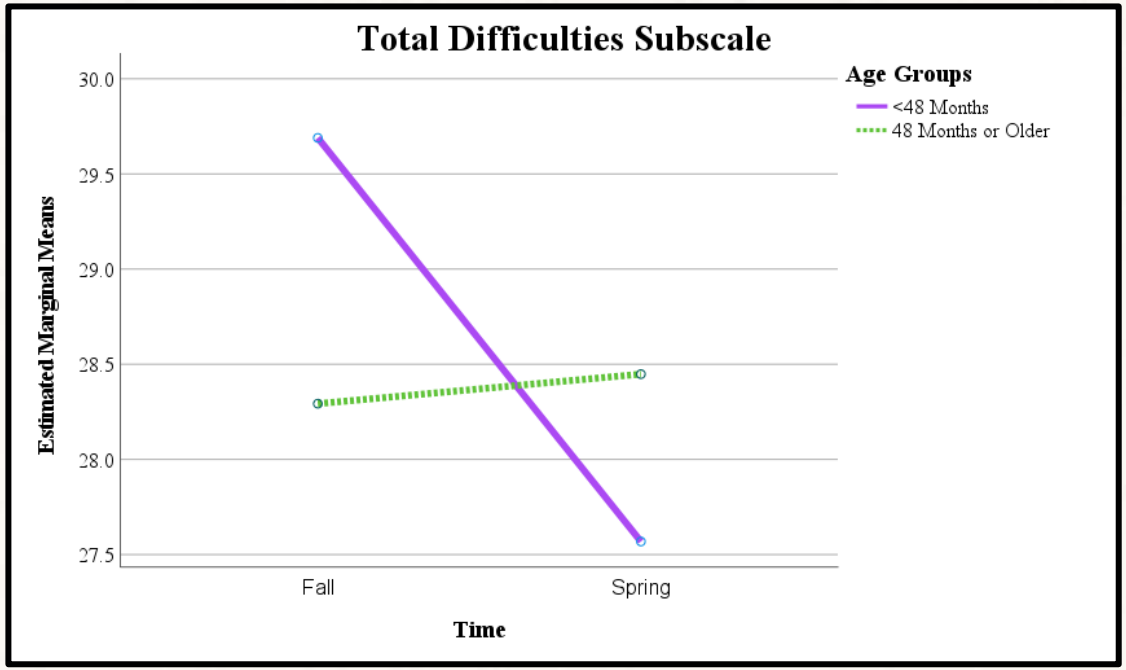


- Younger children started with **much lower scores** on prosocial behavior but **increased greatly** over time.
- Older children had better prosocial skills overall, but only **increased slightly** over time.

Main effect Time: $F(1, 145) = 10.12$, $p = .002$
Time x Age: $F(1, 145) = 2.79$, $p = .097$
ME Age: $F(1, 145) = 4.91$, $p = .028$

Higher scores are better on this scale.

SDQ Total Difficulties varied by Age



- Younger children started with a **higher level** of total difficulties, but **improved greatly** over time.
- Older children started with fewer total difficulties & did not change much over time.

Main effect Time: $F(1, 145) = 4.43$, $p = .037$
Time x Age: $F(1, 145) = 5.94$, $p = .016$
ME Age: $F(1, 145) = .85$, $p = .770$

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
- For example, "My child can't understand why other people get upset."

Affective Empathy subscale
- Measures children's ability to respond to another's emotions
- For example, "My child seems to react to the moods of people around them."

Empathic Concern subscale
- Measures children's concern for others
- For example, "My child gets upset when seeing another child being hurt."

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

Strongly Disagree — Disagree — Neither Disagree or Agree — Agree — Strongly 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 *continuing* children *vs those new* to the programs compare?

- In fall, continuing children had significantly higher scores on empathic concern and marginally higher scores on cognitive empathy and overall empathy compared to new students. Continuing and new children did not differ significantly in affective empathy at the beginning of the year.

Was there improvement *over time*?

- About 64% of children showed improvement over time in overall empathy & cognitive empathy, while 52% improved in affective empathy (responding to others' emotions) and 50% improved in empathic concern. Given the challenges of this pandemic year, we also measured the percentage of children who at least maintained their skills—68% improved or maintained their cognitive empathy skills, 59% in affective empathy, 64% in empathic concern, & 66% maintained or improved in overall empathy.

Was improvement overtime comparable for continuing & new children?

- About 82% of continuing children, but only 58% of new children, showed improvement in overall empathy over time. For cognitive empathy, the groups were comparable--about 64% of both continuing and new children improved over time. In terms of level of improvement, continuing children improved significantly in overall empathy & showed marginally significant improvement in affective empathy, cognitive empathy, & empathic concern. New students demonstrated marginally significant improvement only in overall empathy & empathetic concern.

Overview of Findings for Griffith Empathy

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

- About 73% of lower SES children & 59% of higher SES children improved over time in cognitive empathy. For overall empathy, 60% of lower & almost 66% of higher SES children improved over time. In terms of level of improvement, only children from higher SES families improved significantly in cognitive empathy, empathetic concern, & overall empathy; lower SES children improved, but with a smaller sample, the change was not statistically significant.

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

- Younger children had higher rates of improvement & tended to improve more. About 61% of younger children & only 38% of older children improved over time in affective empathy. For overall empathy, 68% of younger & 56% of older children showed improvement over time. In terms of level of improvement, younger children significantly improved in affective empathy, empathic concern, & overall empathy, whereas older children significantly improved only in cognitive empathy over time.

Was improvement overtime comparable for girls & boys?

- In terms of level of improvement, boys showed significant improvement over time in all areas (affective empathy, cognitive empathy, & empathetic concern) as well as overall empathy. Girls tended to have higher scores in fall but did not show significant improvement over time on any of the empathy areas.

Percentages of children improving over time are listed below.
Statistical tests are in the appendices.
Detailed graphs & results on selected significant findings follow!

Griffith Empathy: Percentage of Children who Improved over Time

In this pandemic stressed year, we looked at both percentage of children who improved, & the percentage who at least maintained skills

Subscale	% Improved	% Improved or Maintained
Affective Empathy (n = 44)	**52.3% (n = 23)**	**59.1% (n = 26)**
Cognitive Empathy (n = 44)	**63.6% (n = 28)**	**68.2% (n = 30)**
Empathic Concern (n = 44)	**50.0% (n = 22)**	**63.6% (n = 28)**
Overall Score (n = 44)	**63.6% (n = 28)**	**65.9% (n = 20)**

Griffith Empathy: Comparison of Percentage of Continuing *vs* New Students' who Improved Over Time

In this pandemic stressed year, we looked at both percentage of children who improved, & the percentage who at least maintained skills

Subscale	Group	% Improved	Chi-square	% Improved or Maintained	Chi-square
Affective Empathy	Continuing Students(n = 11)	63.6% (n = 7)	Chi-square = .76, *ns, no significant differences*	63.6% (n = 7)	Chi-square = .13, *ns, no significant differences*
	New Students (n = 33)	48.5% (n = 16)		57.6% (n = 19)	
Cognitive Empathy	Continuing Students(n = 11)	63.6% (n = 7)	Chi-square = .00, *ns, no significant differences*	63.6% (n = 7)	Chi-square = .14, *ns, no significant differences*
	New Students (n = 33)	63.6% (n = 21)		69.7% (n = 23)	
Empathic Concern	Continuing Students(n = 11)	54.5% (n = 6)	Chi-square = .12, *ns, no significant differences*	81.8% (n = 9)	Chi-square = 2.10, *p = .148, no significant differences*
	New Students (n = 33)	48.5% (n = 16)		57.6% (n = 19)	
Overall Score	Continuing Students(n = 11)	81.8% (n = 9)	Chi-square = 2.10, p = *.148, no significant differences*	81.8% (n = 9)	Chi-square = 1.65, *ns, no significant differences*
	New Students (n = 33)	57.6% (n = 19)		60.6% (n = 20)	

Griffith Empath Improvement Comparisons by Age

In this pandemic stressed year, we looked at both percentage of children who improved, & the percentage who at least maintained skills

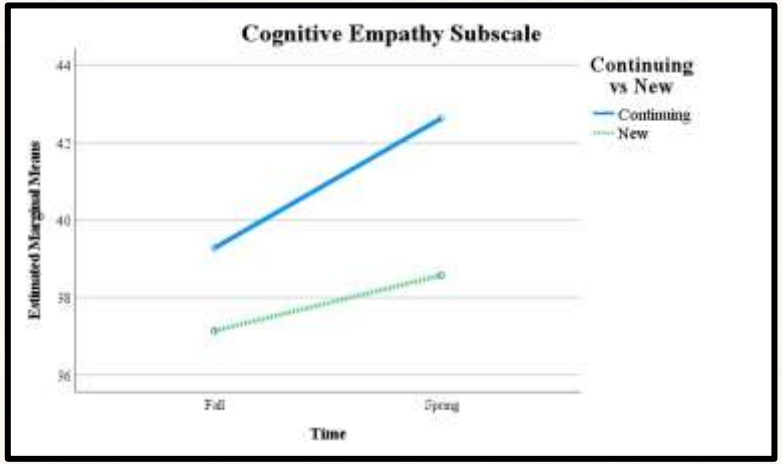
Subscale	Group	% Improved	Chi-square	% Improved or Maintained	Chi-square
Affective Empathy	<48 months (n = 28)	60.7% (n = 17)	Chi-square = 2.20, *p* = .138, *no significant differences*	67.9% (n = 19)	Chi-square = 2.45, *p* = .118, *no significant differences*
	48 months or older (n = 16)	37.5% (n = 6)		43.8% (n = 7)	
Cognitive Empathy	<48 months (n = 28)	64.3% (n = 18)	Chi-square = .01, *ns, no significant differences*	64.3% (n = 18)	Chi-square = .54, *ns, no significant differences*
	48 months or older (n = 16)	62.5% (n = 10)		75.0% (n = 12)	
Empathic Concern	<48 months (n = 28)	50.0% (n = 14)	Chi-square = .00. *ns, no significant differences*	67.9% (n = 19)	Chi-square = .59, *ns, no significant differences*
	48 months or older (n = 16)	50.0% (n = 8)		56.3% (n = 9)	
Overall Score	<48 months (n = 28)	67.9% (n = 19)	Chi-square = .60, *ns, no significant differences*	71.4% (n = 20)	Chi-square = 1.04, *ns, no significant differences*
	48 months or older (n = 16)	56.3% (n = 9)		56.3% (n = 9)	

Griffith Empathy Improvement Comparisons by Socioeconomic status (SES)

In this pandemic stressed year, we looked at both percentage of children who improved, & the percentage who at least maintained skills

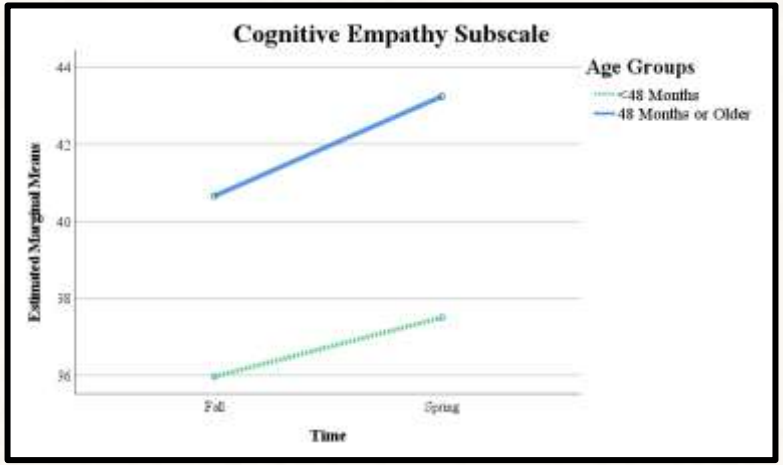
Subscale	Group	% Improved	Chi-square	% Improved or Maintained	Chi-square
Affective Empathy	Low SES (n = 15)	53.3% (n = 8)	Chi-square = .01, *ns, no significant differences*	53.3% (n = 8)	Chi-square = .31, *ns, no significant differences*
	High SES (n = 29)	51.7% (n = 15)		62.1% (n = 18)	
Cognitive Empathy	Low SES (n = 15)	73.3% (n = 11)	Chi-square = .93, *ns, no significant differences*	80.0% (n = 12)	Chi-square = 1.47, *ns, no significant differences*
	High SES (n = 29)	58.6% (n = 17)		62.1% (n = 18)	
Empathic Concern	Low SES (n = 15)	46.7% (n = 7)	Chi-square = .10, *ns, no significant differences*	53.3% (n = 8)	Chi-square = 1.04, *ns, no significant differences*
	High SES (n = 29)	51.7% (n = 15)		69.0% (n = 20)	
Overall Score	Low SES (n = 15)	60.0% (n = 9)	Chi-square = .13, *ns, no significant differences*	60.0% (n = 9)	Chi-square = .35, *ns, no significant differences*
	High SES (n = 29)	65.5% (n = 19)		69.0% (n = 20)	

Griffith Cognitive Empathy varied Continuing vs New Students & by Age



- New students started with **lower cognitive empathy scores** & **improved** over time.
- Continuing students had **higher cognitive empathy scores overall** & **improved** over time.

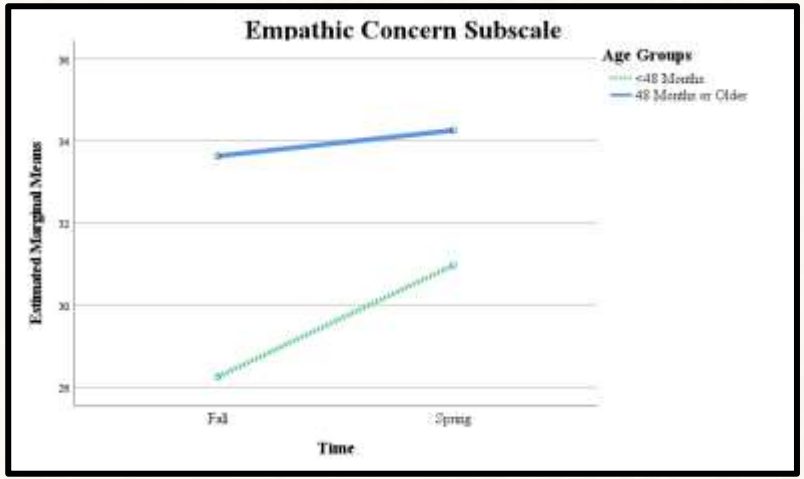
Main effect Time: $F(1, 44) = 7.18$, $p = .010$
Time x Continuing vs New: $F(1, 44) = 1.15$, $p = .289$
ME Continuing vs New: $F(1, 44) = 2.98$, $p = .092$

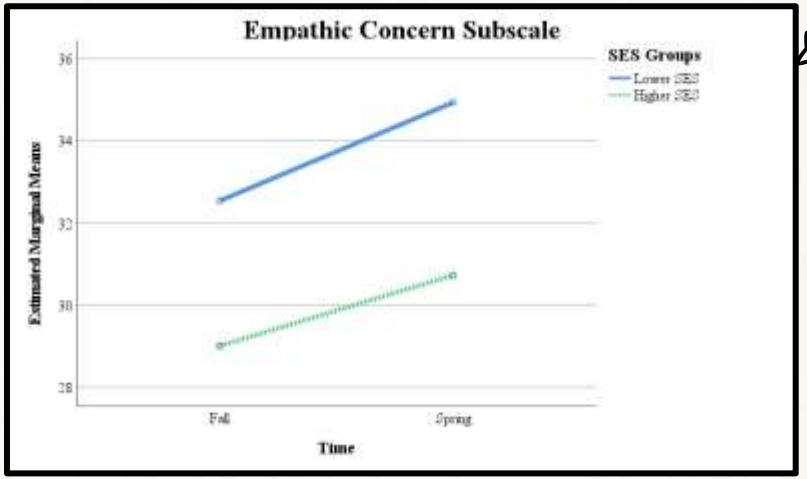


- Younger children started with **lower cognitive empathy scores & improved** over time.
- Older children **higher cognitive empathy scores** overall & **improved more** over time.

Main effect Time: $F(1, 44) = 6.45$, $p = .015$
Time x Age: $F(1, 44) = .423$, $p = .519$
ME Age: $F(1, 44) = 12.69$, $p = <.001$

Empathic Concern varied by Age & by SES





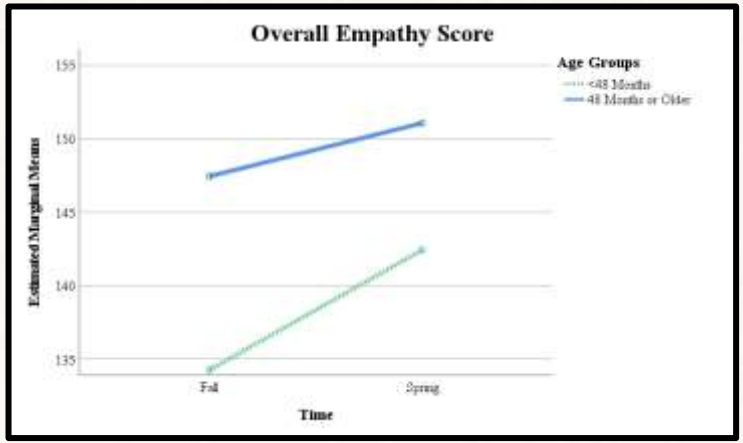
- Younger children started with **lower empathic concern scores** & **improved** over time.
- Older children had **higher empathic concern scores overall,** but only **improved slightly** over time.

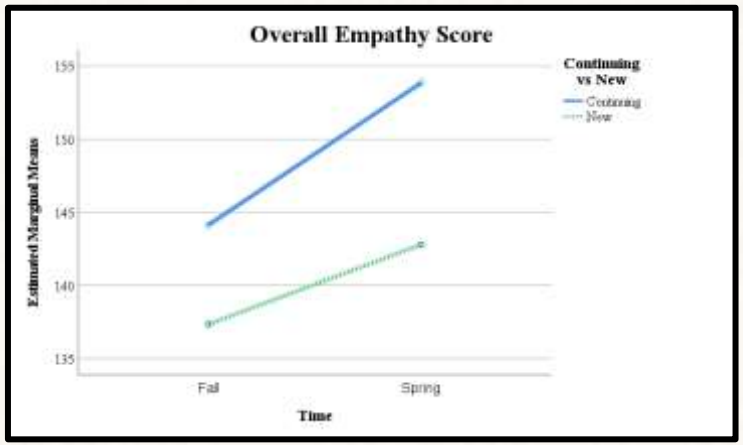
Main effect Time: $F(1, 44) = 4.26$, $p = .045$
Time x Age: $F(1, 44) = 1.67$, $p = .204$
ME Age: $F(1, 44) = 8.98$, $p = .005$

- Lower SES students had **higher empathic concern overall & improved more** over time.
- Higher SES students started with **lower empathic concern scores & improved** over time.

Main effect Time: $F(1, 44) = 6.09$, $p = .018$
Time x SES: $F(1, 44) = .164$, $p = .688$
ME SES: $F(1, 44) = 6.65$, $p = .014$

Overall Empathy Skills varied by Age & by Continuing vs New Students





- Younger children started with **lower overall empathy skills but improved more** over time.
- Older children had **higher overall empathy skills & improved** over time.

Main effect Time: $F(1, 44) = 5.90$, $p = .019$
Time x Age: $F(1, 44) = .88$, $p = .354$
ME Age: $F(1, 44) = 6.17$, $p = .017$

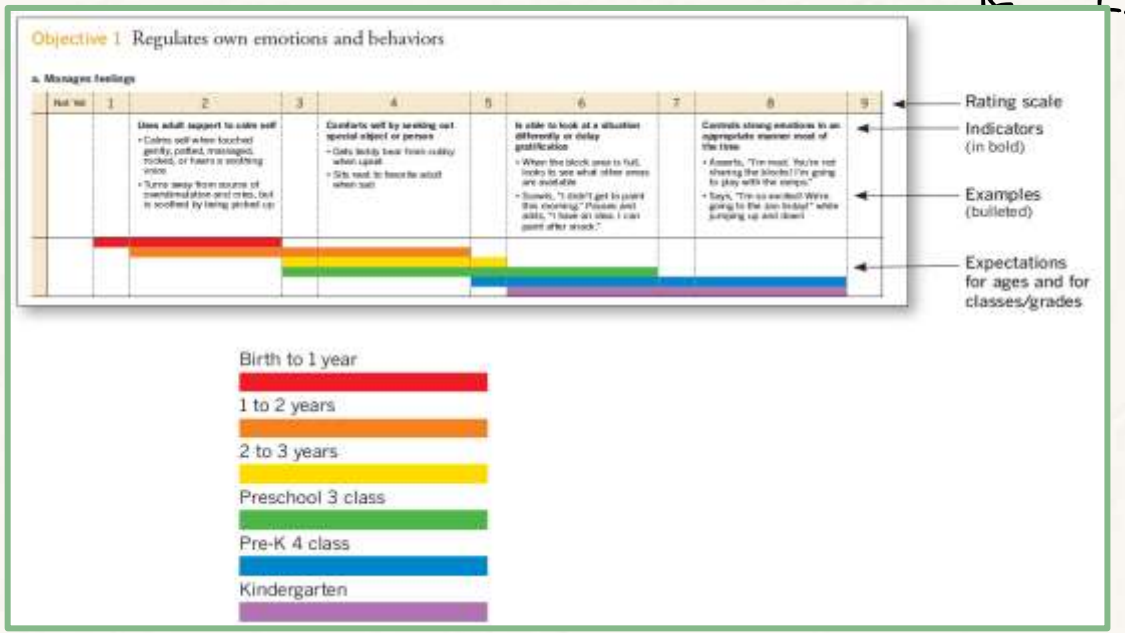
- New students started with **lower overall empathy skills & improved** over time.
- Continuing students started with **higher overall empathy skills & improved** more over time.

Main effect Time: $F(1, 44) = 7.86$, $p = .008$
Time x Continuing vs New: $F(1, 44) = .62$, $p = .434$
ME Continuing vs New: $F(1, 44) = 3.13$, $p = .084$

TS-Gold: Teaching Strategies-Gold

TS-Gold measures the **knowledge, skills, & behaviors** most predictive of school success. Teachers at the CELC agencies use the TS-Gold regularly to **track children's developmental progress.**

- Social Emotional Development
- Physical Development
- Language Development
- Cognitive Development
- Literacy Development
- Mathematics Development



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

Overview of Findings for TS-Gold

Note: TS-Gold scores were completed by teachers in Fall, Winter, & Spring

In Fall, how did children from *continuing vs new* to the programs compare?

- In fall, students continuing in the agencies (had the Kindness Curriculum in the previous year) had higher scores in all TS-Gold areas: social emotional, physical, language, cognitive, literacy, mathematics, & overall scores) than children who were new to the program.

Was there improvement *over time*?

- There was significant improvement over time across all TS-Gold outcomes for all subgroups of participants including: continuing vs. new children, age, gender, & socioeconomic groups. Across all TS-Gold areas, 91% to 98% of children showed improvement over time.

Was improvement overtime comparable for continuing & new children?

- Both continuing & new children improved significantly over time. Continuing children did have significantly higher scores overall on all TS-Gold areas, & improved more over time on literacy, social-emotional, & overall scores than new children. These findings suggest that there may be added benefit of repeated exposure to the Kindness Curriculum.

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

- Both lower & higher SES children improved significantly in all TS-Gold areas. Children from higher SES families had higher scores on some subscales: literacy & mathematics.

Statistical tests are in the appendices.

Overview of Findings for TS-GOLD

Was improvement overtime comparable for preschool and 4K children?

- Preschool & 4K children improved on all subscales from Fall to Spring, with 4K children showing stronger gains than younger children in social-emotional, physical, cognitive, literacy, and math skills over time. As expected, older (i.e., 4K) children also scored significantly higher overall on all TS-Gold areas: social-emotional, physical, language, cognitive, literacy, math, & overall scores than preschool children.

Was improvement overtime comparable for girls and boys?

- Both girls & boys significantly improved over time on all TS-Gold area. Girls' social emotional scores were significantly higher than boys' scores overall.

Percentages of children improving over time are listed in Tables below & show that a very high percentage of children in all subgroups improved their TS-Gold Developmental scores over the course of the school year.

Detailed graphs & results on selected significant findings follow!

Results TS-Gold: Percentage of Children Who Improved or Maintained Skills over Time

Subscale	% Improved	% Improved or Maintained
Cognitive (n = 93)	93.6% (n = 88)	97.8% (n = 91)
Language (n = 92)	95.6% (n = 87)	95.7% (n = 88)
Literacy(n = 91)	91.3% (n = 84)	95.6% (n = 87)
Mathematics (n = 95)	93.7% (n = 89)	94.7% (n = 90)
Social-Emotional (n = 112)	91.1% (n = 102)	94.6% (n = 106)
Physical (n = 93)	96.8 (n = 90)	97.8 (n = 91)
Overall Score (n = 111)	98.2% (n = 109)	99.1% (n = 110)

TS-Gold Social Skills: Improvement over Time in Continuing vs New Students

Subscale	Group	% Improved	Chi-square	% Improved or Maintained	Chi-square
Social Emotional	Continuing Students (n = 38)	92.1% (n = 35)	Chi-square = .08, *ns*, *no significant differences*	94.7% (n = 36)	Chi-square = .001, *ns*, *no significant differences*
	New Students (n = 74)	90.5% (n = 67)		94.6% (n = 70)	
Language	Continuing Students (n = 33/34)	97.0% (n = 32)	Chi-square = .23, *ns*, *no significant differences*	97.1% (n = 33)	Chi-square = .26, *ns*, *no significant differences*
	New Students (n = 58)	94.8% (n = 55)		94.8% (n = 55)	
Physical	Continuing Students (n = 35)	97.1% (n = 34)	Chi-square = .02, *ns*, *no significant differences*	97.1% (n = 34)	Chi-square = .13, *ns*, *no significant differences*
	New Students (n = 58)	96.6% (n = 72)		98.3% (n = 91)	

TS-Gold Cognitive Skills: Improvement Over Time in Continuing vs new Students

Subscale	Group	% Improved	Chi-square	% Improved or Maintained	Chi-square
Cognitive	Continuing Students (n = 35)	97.1% (n = 34)	Chi-square = 1.16, *ns*, *no significant differences*	97.1% (n = 34)	Chi-square = .13, *ns*, *no significant differences*
	New Students (n = 58)	91.5% (n = 54)		98.3% (n = 57)	
Literacy	Continuing Students (n = 35)	100.0% (n = 34)	Chi-square = 5.14, *p* = .023, *Continuing improved more*	100.0% (n = 35)	Chi-square = 2.62, *p* = .106 *Marginal differences*
	New Students (n = 56)	86.2% (n = 50)		92.9% (n = 52)	
Mathematics	Continuing Students (n = 36)	94.4% (n = 34)	Chi-square = .06, *ns*, *no significant differences*	97.2% (n = 35)	Chi-square = .72, *ns*, *no significant differences*
	New Students (n = 59)	93.2% (n= 55)		93.2% (n= 55)	
Overall Score	Continuing Students (n = 38)	97.4% (n = 37)	Chi-square = .23, *ns*, *no significant differences*	97.4% (n = 37)	Chi-square = 1.94, *ns*, *no significant differences*
	New Students (n = 73)	98.6% (n = 72)		100.0% (n = 73)	

TS-Gold Skills: Improvement over Time by Age Group

Subscale	Group	% Improved	Chi-square	% Improved or Maintained	Chi-square
Social Emotional	<48 months (n = 44)	93.2% (n = 41)	Chi-square = .38, *ns*, *no significant differences*	95.5% (n = 42)	Chi-square = .09, *ns*, *no significant differences*
	48 months or older (n = 68)	89.7% (n = 61)		94.1% (n = 64)	
Language	<48 months (n = 28)	96.4% (n = 27)	Chi-square = .07, *ns*, *no significant differences*	96.4% (n = 27)	Chi-square = .06, *ns*, *no significant differences*
	48 months or older (n = 64)	95.2% (n = 60)		95.3% (n = 61)	
Physical	<48 months (n = 44)	92.9% (n = 26)	Chi-square = 1.97, *ns*, *no significant differences*	96.4% (n = 27)	Chi-square = .38, *ns*, *no significant differences*
	48 months or older (n = 68)	98.5% (n = 64)		98.5% (n = 66)	

TS-Gold Cognitive Skills: Improvement over Time by Age Group

Subscale	Group	% Improved	Chi Square	% Improved or Maintained	Chi Square
Cognitive	<48 months (n = 29)	93.1% (n = 27)	Chi-square = .02, *ns, no significant differences*	96.6% (n = 28)	Chi-square = .34, *ns, no significant differences*
	48 months or older (n = 65)	93.8% (n = 61)		98.4% (n = 63)	
Literacy	<48 months (n = 28)	82.1% (n = 23)	Chi-square = 4.26, *p* = .039, older improved more	89.3% (n = 25)	Chi-square = 3.84, *p* = .050, *more older children improved*
	48 months or older (n = 64)	95.3% (n = 61)		98.4% (n = 62)	
Mathematics	<48 months (n = 29)	93.1% (n = 27)	Chi-square = .02, *ns, no significant differences*	93.1% (n = 27)	Chi-square = .22, *ns, no significant differences*
	48 months or older (n = 66)	93.9% (n = 62)		95.5% (n = 63)	
Overall Score	<48 months (n = 44)	100.0% (n = 43)	Chi-square = .1.23, *ns, no significant differences*	100.0% (n = 44)	Chi-square = .66, *ns, no significant differences*
	48 months or older (n = 68)	97.1% (n = 66)		98.5% (n = 66)	

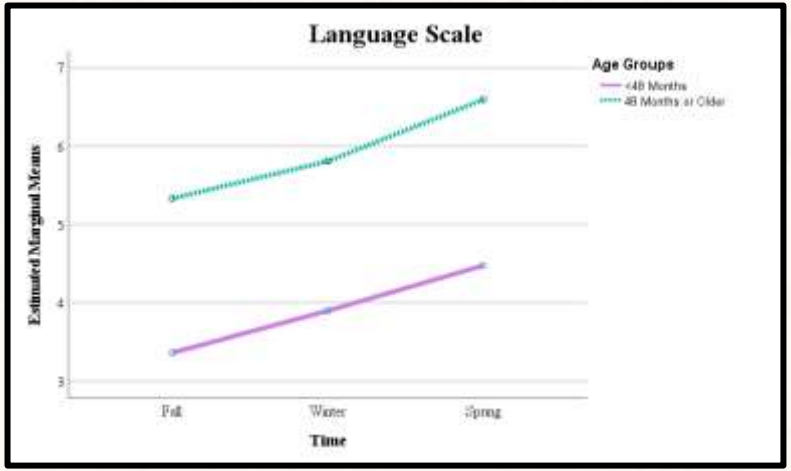
TS-Gold Social Skills: Improvement Over Time by SES Groups

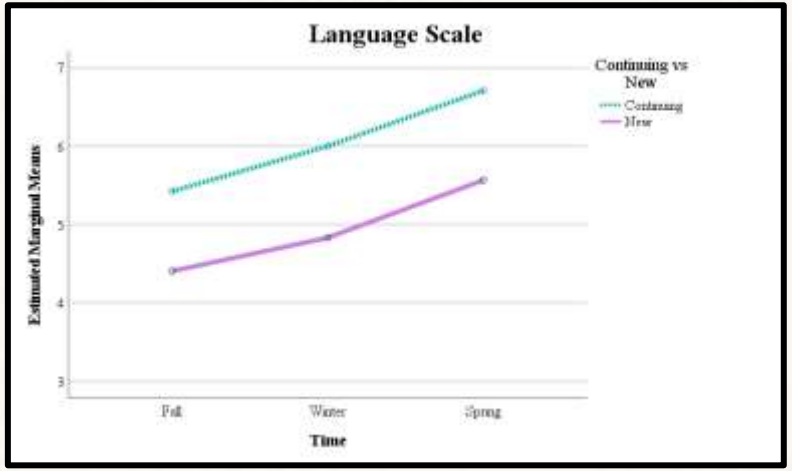
Subscale	Group	% Improved	Chi-square	% Improved or Maintained	Chi-square
Social Emotional	Lower SES (n = 70)	94.3% (n = 66)	Chi-square = 3.80, *p* = .150, *no significant differences*	97.1% (n = 68)	Chi-square = 3.31, *p* = .190, *no significant differences*
	Higher SES (n = 37)	83.8% (n = 31)		89.2% (n = 32)	
Language	Lower SES (n = 66)	96.9% (n = 63)	Chi-square = 1.81, *ns, no significant differences*	97.0% (n = 64)	Chi-square = 1.86, *ns, no significant differences*
	Higher SES (n = 21)	90.5% (n = 19)		90.5% (n = 19)	
Physical	Lower SES (n = 67)	95.5% (n = 64)	Chi-square = 1.20, *ns, no significant differences*	97.0% (n = 65)	Chi-square = .79, *ns, no significant differences*
	Higher SES (n = 21)	100.0% (n = 21)		100.0% (n = 21)	

TS-Gold Cognitive Skills: Improvement over Time by SES Groups

Subscale	Group	% Improved	Chi Square	% Improved or Maintained	Chi Square
Cognitive	Lower SES (n = 66/67)	92.5% (n = 62)	Chi-square = .60, *ns, no significant differences*	98.5% (n = 65)	Chi-square = .84, *ns, no significant differences*
	Higher SES (n = 22)	95.5% (n = 21)		95.5% (n = 21)	
Literacy	Lower SES (n = 64/65)	90.8% (n = 59)	Chi-square = .50, *ns, no significant differences*	96.9% (n = 62)	Chi-square = 1.63, *ns, no significant differences*
	Higher SES (n = 22)	90.9% (n = 20)		90.9% (n = 20)	
Mathematics	Lower SES (n = 67)	95.55% (n = 64)	Chi-square = 2.48, *p* = .29, *no significant differences*	95.55% (n = 64)	Chi-square = .90, *ns, no significant differences*
	Higher SES (n = 23)	87.0% (n = 20)		91.3% (n = 21)	
Overall Score	Lower SES (n = 69)	97.1% (n = 67)	Chi-square = 1.24, *ns, no significant differences*	98.6% (n = 68)	Chi-square = .61, *ns, no significant differences*
	Higher SES (n = 37)	100.0% (n = 37)		100.0% (n = 37)	

TS-Gold Language Improvement Varied with Age & Continuing vs New Students





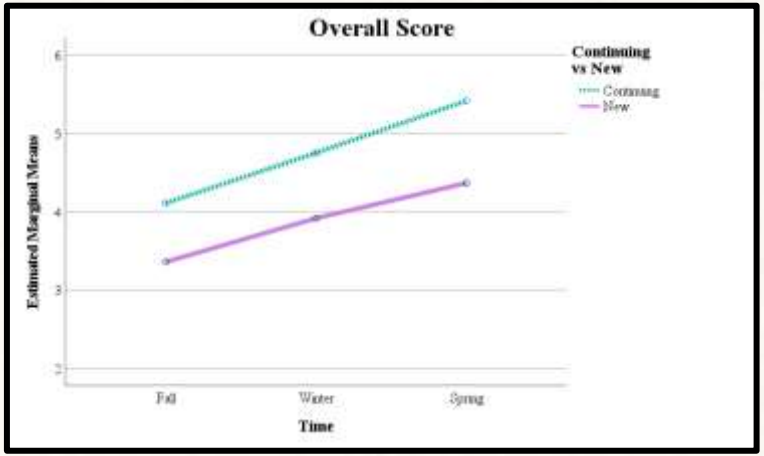
- As expected, older children had **higher language scores** overall. Both younger & older groups **showed significant gains** over time.

Main effect Time: $F(1, 87) = 138.78$, $p = <.001$
Time x Age: $F(1, 87) = 1.14$, $p = .322$
ME Age: $F(1, 87) = 137.58$, $p = <.001$

- New students started with **lower** language **scores** but **improved** over time.
- Continuing students had **higher language scores** overall & **improved** over time.

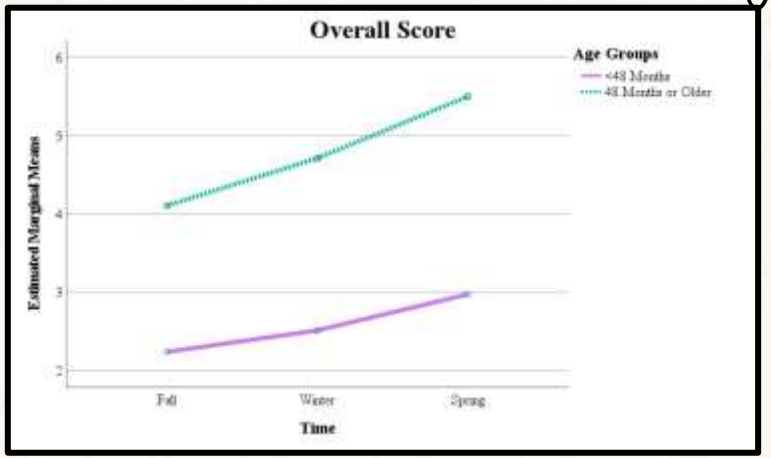
Main effect Time: $F(1, 88) = 174.58$, $p = <.001$
Time x Continuing vs New: $F(1, 88) = .75$, $p = .476$
ME Continuing vs New: $F(1, 88) = 25.47$, $p = <.001$

TS-Gold Overall Scores for Continuing vs New Students & Age Groups



- Overall, continuing students had **higher TS Gold overall scores** & **improved** over time.
- New students started with **lower overall scores** but **improved** over time.

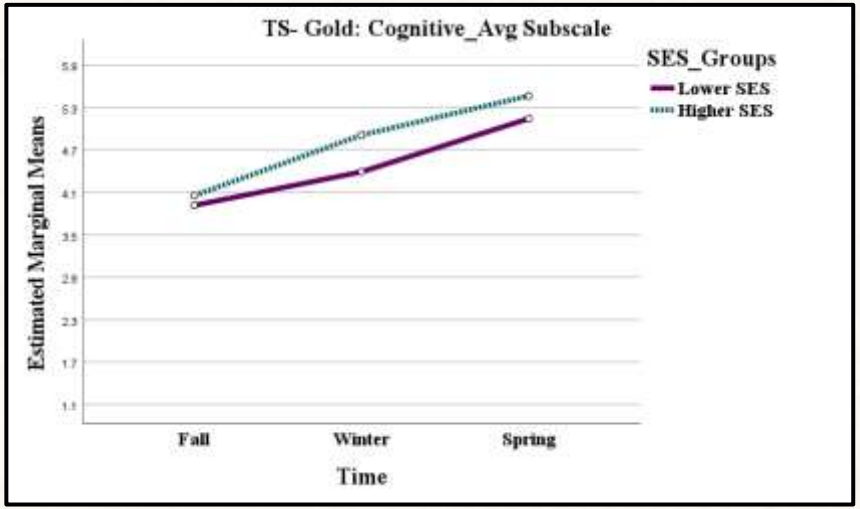
Main effect Time: $F(1, 111) = 109.42$, $p = <.001$
Time x Continuing vs New: $F(1, 111) = 2.64$, $p = .074$
ME Continuing vs New: $F(1, 111) = 37.32$, $p = <.001$

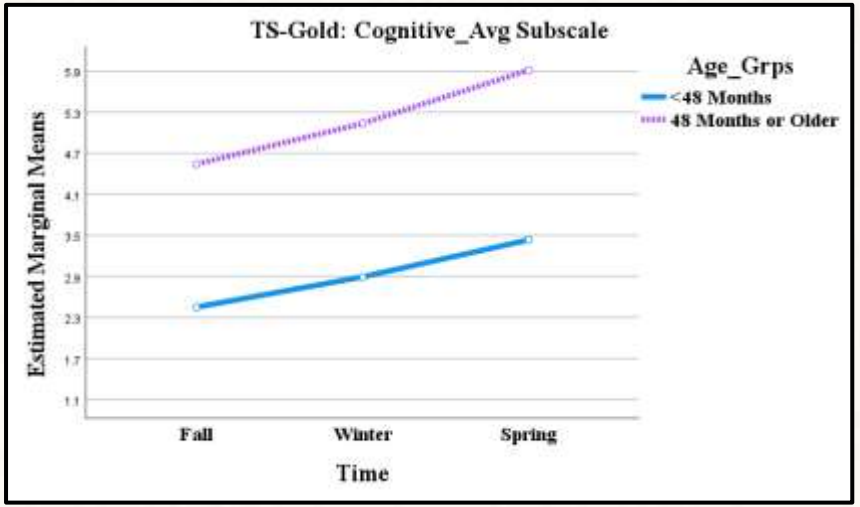


- Older children had **higher TS-Gold overall scores** & **improved more** over time.
- Younger children had **lower overall scores** & showed some **improvement** over time.

Main effect Time: $F(1, 87) = 144.63$, $p = <.001$
Time x Age: $F(1, 87) = 13.69$, $p = <.001$
ME Age: $F(1, 87) = 200.96$, $p = <.001$

TS-Gold Cognitive Subscale varied by SES & Age





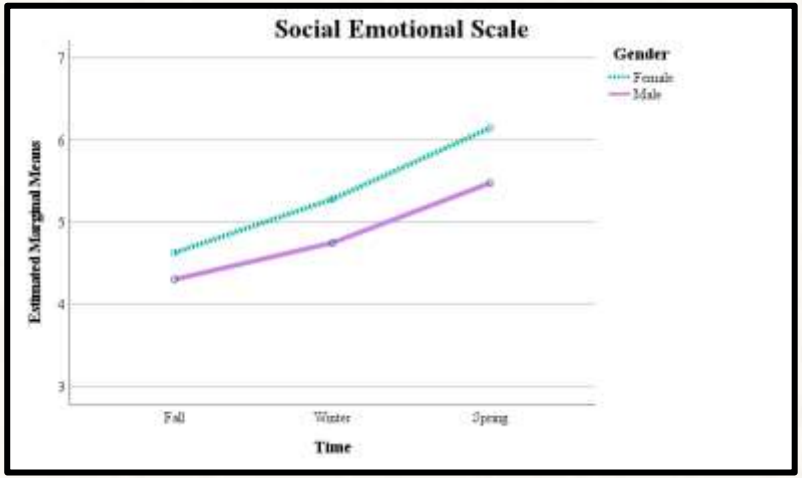
Children from both lower & higher SES families significantly improved in cognitive skills over time. There were no overall differences in cognitive skills between lower & higher SES children.

Main effect Time: $F(1, 111) = 202.02$, $p = < .001$
Time x SES: $F(1, 111) = .98$, $p = .074$
ME SES: $F(1, 111) = .99$, $p = .32$

As expected, older children had higher cognitive scores overall. Younger children & older children improved on cognitive measures over time, with 4K children showing greater gains than preschool children.

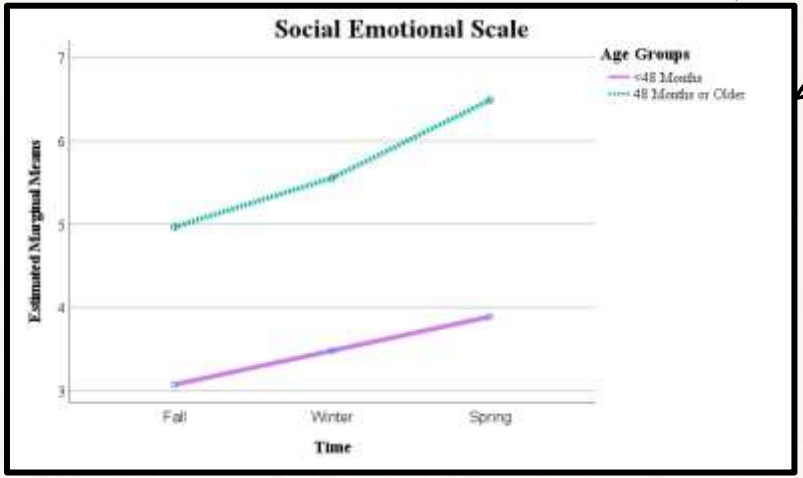
Main effect Time: $F(1, 111) = 199.92$, $p = < .001$
Time x Age: $F(1, 111) = 5.50$, $p = .02$
ME Age: $F(1, 111) = 212.02$, $p = <.001$

TS-Gold Social Emotional Score varied with Gender & Age



- Boys had **lower social emotional scores overall** but **improved** over time.
- Girls improved in social emotional scores over time too.

Main effect Time: $F(1, 87) = 157.34$, $p = <.001$
Time x Gender: $F(1, 87) = 2.60$, $p = .077$
ME Gender: $F(1, 87) = 4.08$, $p = .047$



- Older children had **higher social emotional scores** & **improved more** over time.
- Younger children started with **lower social emotional scores** & showed **improvement** over time.

Main effect Time: $F(1, 87) = 103.85$, $p = <.001$
Time x Age: $F(1, 87) = 10.23$, $p = <.001$
ME Age: $F(1, 87) = 183.28$, $p = <.001$

Report Cards

Report Cards were completed by teachers following each semester of school.

Bridges Enrichment Center, Head Start, & Even Start use the same 4K Report Card system.

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

Agency:	Head Start	Bridges CEC	Even Start	Children's Center
Report Cards for:	4K	4K	Preschool	4K & Preschool
Areas & Number of Questions:	6 social emotional 9 language 5 mathematics 4 health & physical development	6 social emotional 9 language 5 mathematics 4 health & physical development	6 social emotional 9 language 5 mathematics 4 health & physical development	1 social emotional 1 language 1 mathematics 1 health & physical development

Overview of Findings for Report Cards

Please note that we have a small sample (n = 59) of report card grades primarily due to difficulty in obtaining consent from parents when classes were virtual.

At the end of first semester, how did *continuing* children *vs those new* to the programs compare?

- At the end of 1st semester, continuing & new children got comparable grades. There were also *no significant differences* between lower & higher SES children in the 1st semester. These findings are encouraging given that fall of 2020 was particularly difficult due to ongoing pandemic challenges.

Was there improvement *over time*?

- The 4K children improved significantly from fall to spring semester in all four report card areas: Social-Emotional, Language, Math, & Health/Physical Development grades. Overall, 80 to 90% of children's grades improved over time in each area.

Was improvement overtime comparable for continuing & new children?

- Yes, new & continuing children improved significantly from fall to spring semester in all four areas. New children started lower in language skills but caught up to continuing children by spring semester.

Please See Appendix 1 for a Summary of the Statistical Findings.

Overview of Findings for Report Cards

Was improvement over time comparable for girls & boys?

- Yes, both boys & girls improved significantly in all 4 areas: Social-Emotional, Language, Math, & Health/Physical Development grades. Girls had higher Social/Emotional & significantly higher Health/Physical Development grades than boys overall.

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

- Yes, both lower & higher SES children improved significantly over time in all areas: Social-Emotional, Language, Math, & Health/Physical Development. There were no significant differences in grades between low & high SES children in any area. Between 80 to 93% lower SES children, and 79 to 86% of higher SES children, improved their grades over the year.

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

Report Cards: Percentage of Children who Improved

Area	% Improved	% Improved or Maintained
Social-Emotional (n = 59)	83.1% (n = 49)	93.2% (n = 55)
Language (n = 59)	89.8% (n = 53)	93.2% (n = 55)
Mathematics (n = 59)	79.7% (n = 47)	91.5% (n = 54)
Health – Physical Development (n = 59)	84.7% (n = 50)	96.6% (n = 57)

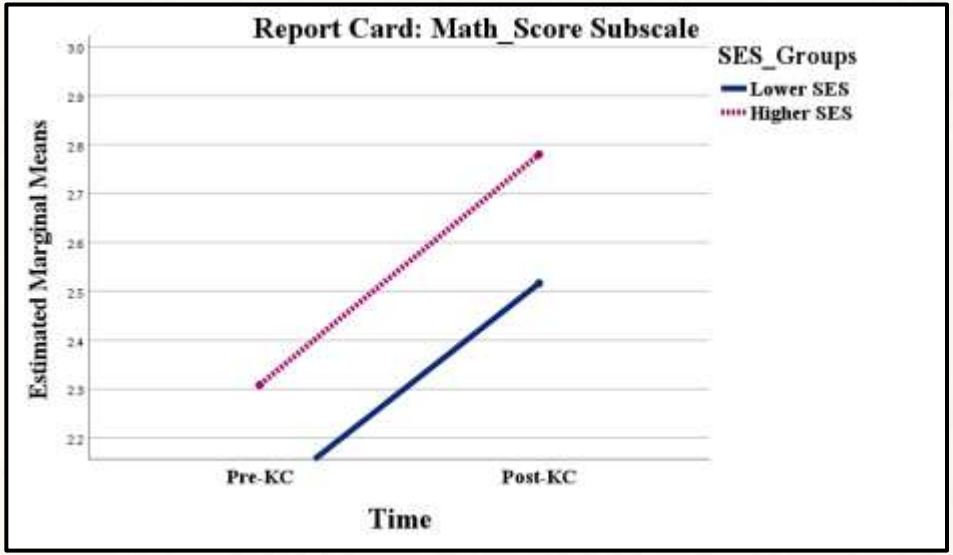
Report Cards: Percentage of Continuing vs. New Children who Improved

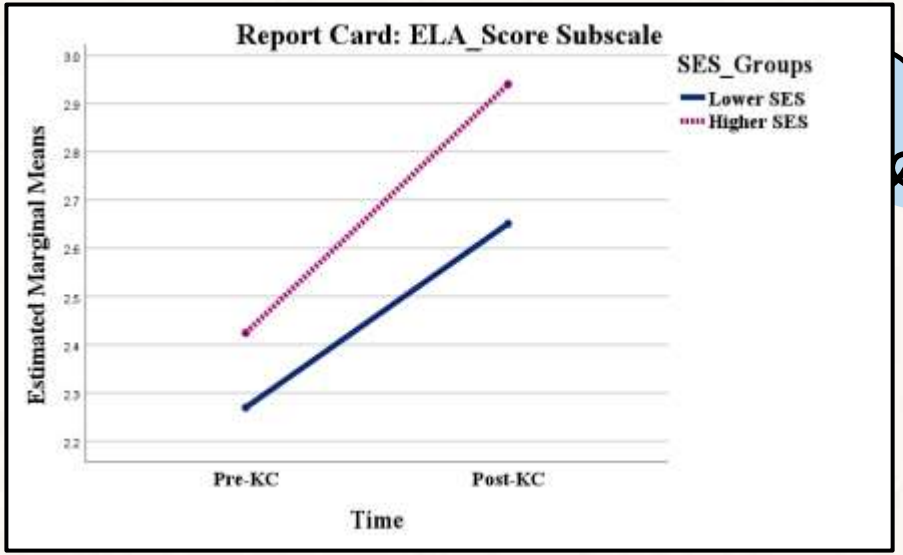
Subscale	Group	% Improved	Chi-square	% Improved or Maintained	Chi-square
Social Emotional (n = 59)	Continuing (n = 32)	87.5% (n = 28)	Chi-square = .98, *ns*, *no significant differences*	100% (n = 32)	*Chi-square = 5.09, p =* .024, *more continuing children improved*
	New (n = 27)	77.8% (n = 21)		85.2% (n = 23)	
Language (n = 59)	Continuing (n =32)	87.5% (n = 28)	Chi-square = .42, *ns*, *no significant differences*	93.8% (n = 30)	Chi-square = .03, *ns*, *no significant differences*
	New (n= 27)	92.6% (n = 25)		92.6% (n = 25)	
Mathematics (n = 59)	Continuing (n = 32)	81.3% (n = 26)	Chi-square = .11, *ns*, *no significant differences*	90.6% (n = 29)	Chi-square = .07, *ns*, *no significant differences*
	New (n = 27)	77.8% (n = 21)		92.6% (n = 25)	
Health – Physical Development (n = 59)	Continuing (n = 32)	78.1% (n = 25)	Chi-square = 2.37, *p* = .124, *no significant differences*	96.9% (n = 31)	Chi-square = .02, *ns*, *no significant differences*
	New (n = 27)	92.6% (n = 25)		96.3% (n = 26)	

Report Cards – Percentage of Children Improving by Socioeconomic Group

Subscale	Group	% Improved	Chi-square	% Improved or Maintained	Chi-square
Social Emotional (n = 59)	Lower SES (n = 41)	82.9% (n = 34)	Chi-square = .26, *ns*, *no significant differences*	95.1% (n = 39)	Chi-square = 2.34, *p* = .311, *no significant differences*
	Higher SES (n = 14)	85.7% (n = 12)		92.9% (n = 13)	
Language (n = 59)	Lower SES (n = 41)	92.7% (n = 38)	Chi-square = .2.76, *p* = .251, *no significant differences*	95.1% (n = 39)	Chi-square = 1.77, *ns*, *no significant differences*
	Higher SES (n = 14)	78.6% (n = 11)		85.7% (n = 12)	
Mathematics (n = 59)	Lower SES (n = 41)	80.5% (n = 33)	Chi-square = .08, *ns*, *no significant differences*	92.7% (n = 38)	Chi-square = 1.05, *ns*, *no significant differences*
	Higher SES (n = 14)	78.6% (n = 11)		85.7% (n = 12)	
Health – Physical Development (n = 59)	Lower SES (n = 41)	82.9% (n = 34)	Chi-square = .84, *ns*, *no significant differences*	97.6% (n = 40)	Chi-square = .86, *ns*, *no significant differences*
	Higher SES (n = 14)	85.7% (n = 12)		92.9% (n = 13)	

Results: Report Card Math & Language Scores Across Socioeconomic Groups



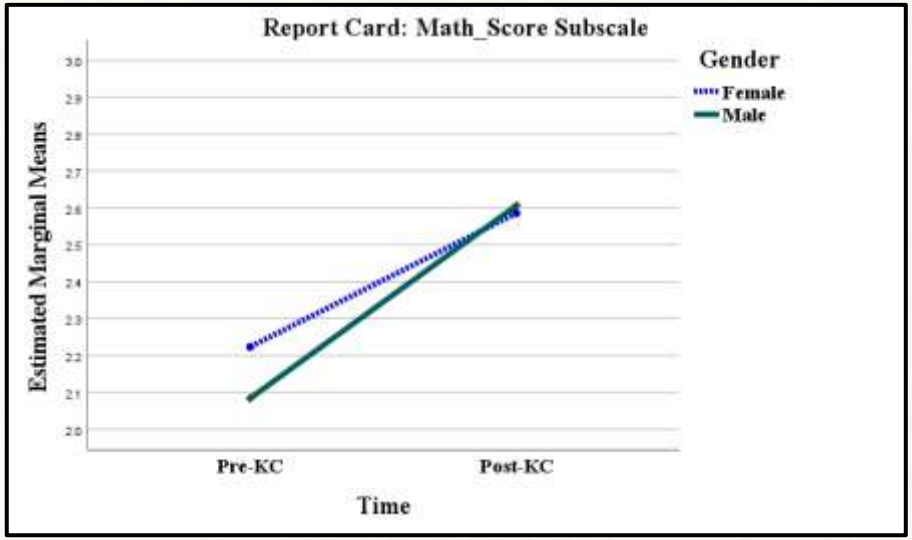


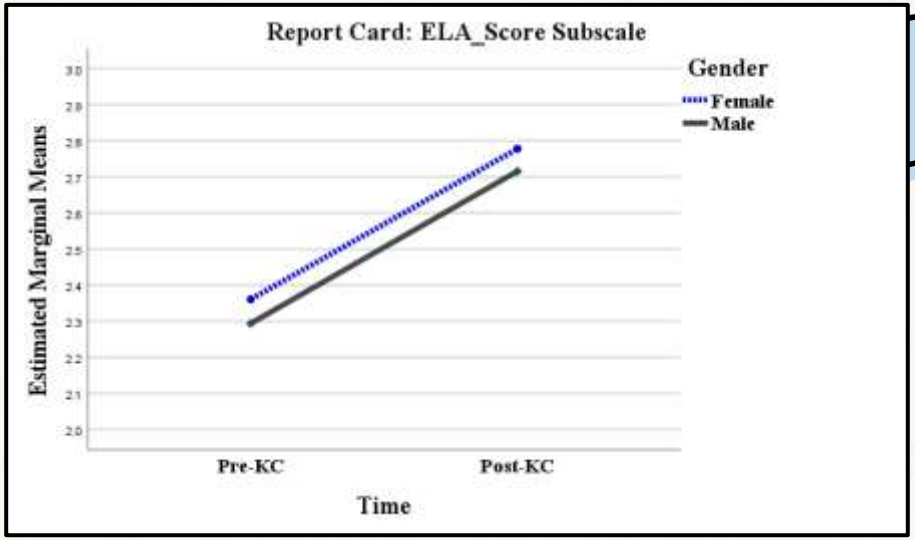
ME Time: $F(1, 53) = 44.33$, $p < .001$, *ES = .46
ME Time x SES: $F(1, 53) = .030$, $p < .863$, *ES = .001
ME SES: $F(1, 53) = 2.30$, $p = .135$, *ES = .042
***ES = Effect size, eta squared**

ME Time: $F(1, 53) = 76.27$, $p < .001$, *ES = .590
ME Time x SES: $F(1, 53) = 1.71$, $p = .197$, *ES = .031
ME SES: $F(1, 53) = 1.44$, $p = .235$, *ES = .027
***ES = Effect size, eta squared**

There were no significant differences between lower & higher SES children in math & language scores. Also, both lower & higher SES children's language & math scores significantly improved over time.

Report Card Math & Language Scores Across Gender



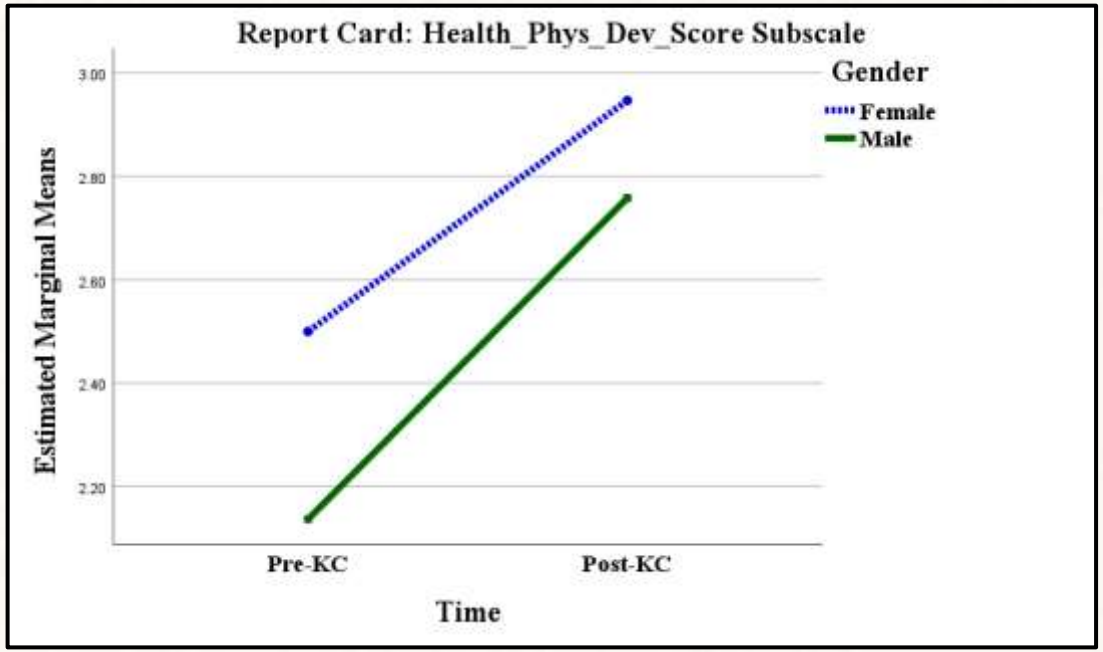


ME Time: $F(1, 57) = 62.22$, $p < .001$, *ES = .52
ME Time x Gender: $F(1, 57) = 2.03$, $p = .961$, *ES = .034
ME Gender: $F(1, 57) = .172$, $p = .680$, *ES = .003
***ES = Effect size, eta squared**

ME Time: $F(1, 57) = 90.52$, $p < .001$, *ES = .614
ME Time x Gender: $F(1, 57) = .002$, $p = .159$, *ES = .034
ME Gender: $F(1, 57) = .169$, $p = .683$, *ES = .003
***ES = Effect size, eta squared**

Both boys & girls' math & language scores significantly improved over time, & there were no significant differences between boys & girls overall.

Report Cards: Health & Physical Development Scores Varied with Gender



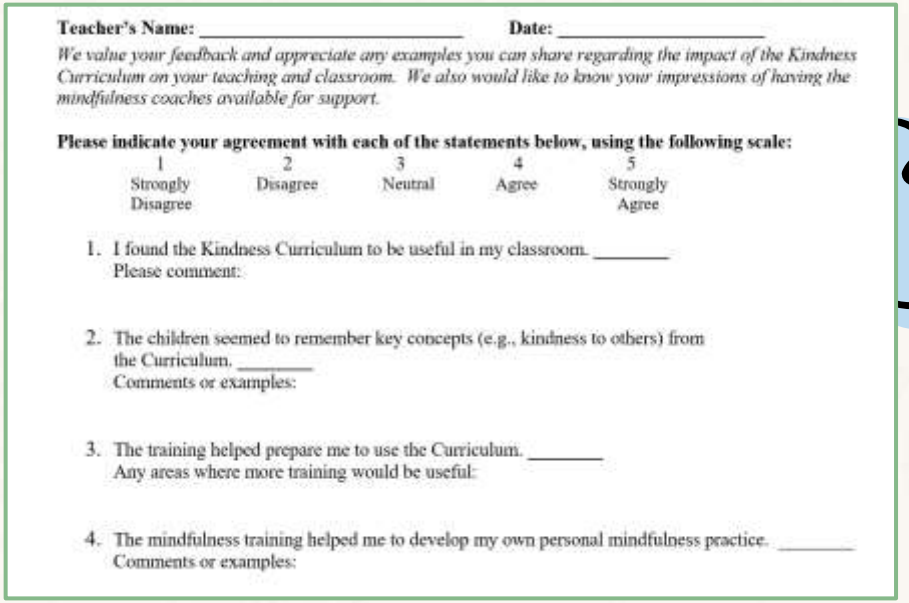
Girls started with & had significantly better heath & physical developmental scores than boys overall. However, both boys & girls scores improved significantly over time.

ME Time: $F(1, 57) = 92.96$, $p < .001$, *ES = .620
ME Time x Gender: $F(1, 57) = 2.45$, $p = .120$, *ES = .042
ME Gender: $F(1, 57) = 5.14$, $p = .027$, *ES = .083
***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:

From 1=strongly disagree to 5=strongly agree

Results: Teacher Impact on Classroom - Rating

Item	Mean	Std. Dev.
Usefulness of KC	4.00	0.79
Children remembered the **Key Concepts**	3.63	0.89
Training - teach KC	4.00	0.63
Training - develop Personal Mindfulness	4.00	0.63
KC - **Positive Impact**	3.82	0.64
Coaches - support in the **Class**	4.29	0.69
Coaches – **support** for the **Self**	4.18	0.81
Using the KC **Next Year**	4.35	0.61

Results: Teacher Impact on Classroom

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:

- "The children enjoy it as well as the staff."

The children seemed to remember key concepts from the curriculum:

- "Love growing friendship wish and the bell."
- "It is a little difficult for toddlers, especially this year being half virtual half in person."

The training helped prepare me to use the Curriculum:

- "It helped for us to practice the skills on our own before teaching the children to use them."
- "I feel it would be good to continue training--also add more book options."

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

- "Joy really helped me to process/begin my own mindfulness journey. I love the text message reminders too!"
- "It's hard to find time for mindfulness practice."

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

- "Yes, but not as impactful as the previous. I feel this past year was tougher than previous--due to masks."

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

- "I didn't need support but they always offered to help."
- "They were amazing!"

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

- "Again, hard this year with Covid."
- "Miriam and I met often!"

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

- "With Virtual learning for part of the year and Covid mitigation, as well as new 4K curriculum, kindness curriculum was [not] as much a focus as it should have been."

Parents' Impressions of Kindness Curriculum Impact on Their Children

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

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

Sample Items

	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?					

	Never				Often
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:					

	Never				Often
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:					

From 0=never to 4=often

Results: Parent Impact on Child - Ratings

Item	Mean	Std. Dev.
Question stem first 3: How often does your child …	**Mean (1 – 5 scale)**	**Standard Deviation**
talk about things they learned in the Kindness Curriculum at home?	3.10	1.23
use mindfulness/kindness activities at home?	3.02	1.25
display kindness to others or to you?	4.10	0.78
Have you noticed any **changes in your child's behavior** since participating in the KC?	3.36	1.06

Results: Parent Impact on Classroom

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?

- "He talked about 'loving the earth'."
- "She frequently shares details about lessons, she practices breathing exercises, discusses caring for the earth/animals."

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

- "Sharing and learning to share with friends. Listens to music and sings songs to us."

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:

- "She loves holding the door open when we go places and opening all the car doors for everyone."
- "Shares snacks and things to show kindness, making things for others, often helps others, picks things up, holds doors, says kind things like 'that shirt looks really nice on you!'"

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:

- "[Child] has been really kind to kids at school (noticed by his teachers) and done some kind things at home (picked flowers for me, helped without asking)."
- "[Child] has a lot of big emotions. I have noticed lately that when given reminders he is able to take deep breaths and calm down rather than acting aggressively."
- "My child has completed this curriculum for 3 years, and we saw more noticeable effects and behaviors from the curriculum when she was younger. This year, I haven't noticed any standout, new kindness behaviors."

Summary & Key Takeaways

In the 2020-21 school year, all the agencies and many children, their families, & their teachers faced a variety of **additional stressors as the pandemic was ongoing.** Only Children's Center and some Bridges & Head Start classrooms were able to start in–person. All agencies experienced interruptions in programming due to COVID, difficult staffing shortages, & challenges as they adapted to hybrid & virtual instruction. This report looks at two main categories of outcomes following Kindness Curriculum & general programming:

1. What percentage of children improved or at least maintained skills over the school year?
2. How did the ***amount of improvement*** compare for children in various subgroups: age, socioeconomic, gender, & those continuing in or new to the agencies.

Percentage of Children Improving or Maintaining Skills:

- On the measures of social, behavioral, & empathy skills typically between 50 to 64% of children improved, with somewhat higher percentages (up to 77%) maintaining skills. However, in a few areas (e.g., conduct & emotional problems), improvement was lower (e.g., 30%) but most children maintained their skills, suggesting the pandemic may have contributed to more behavioral challenges in the classroom.
- On report cards & the TS-Gold developmental assessment, gains were consistently higher in all areas with a high percentage of children (80 – 90% report cards; 91- 98% TS-Gold) showing improvement over the school year. In fact, 100% of continuing children maintained social-emotional skills!

Summary & Key Takeaways (Continued)

Amount of Improvement by Subgroups (i.e., were the gains statistically significant) after receiving the Kindness Curriculum (KC):

- Children continuing in & new to the agencies significantly improved in: Prosocial Behavior & Empathy Skills, Report Cards (Math, Language, Literacy & Physical/Health Development) & TS-Gold Developmental Skills (social-emotional, language, cognitive, physical, literacy, mathematics, & overall).
- Children of both lower & higher socioeconomic status significantly improved in: Prosocial Behavior, Empathy Skills, Emotional Regulation, Report Cards (all areas) & TS-Gold Developmental Skills (all areas).
- Children in both preschool (3-4 years) & 4K (4-5 years) showed improvement in: Empathy Skills & Report Cards (all areas).
- Finally, both boys & girls significantly improved in: Prosocial Behavior, Empathy Skills, Report Cards (all areas) & TS-Gold Developmental Skills (all areas).

Clearly, there were many encouraging improvements even during this extremely stressful year. Next, we highlight some areas where we did not see improvement or saw challenges to suggest ways that we might further enhance the Kindness Curriculum & promote application of skills at home & beyond the classroom.

Areas of Challenge or No Improvement

In some cases, results pointed to areas of no gain, suggesting challenges for certain subgroups:

- **Older children did not significantly improve in several areas where younger children did, including:**
  - **Emotional Regulation & Emotional Problems**
  - **Hyperactivity, Peer Problems, Prosocial Behavior**
  - **Affective Empathy & Empathic Concern**

  It is possible that older children were more aware & also more vulnerable to the stressors of the pandemic and struggled more in terms of emotional & behavioral skills during this challenging year.

- **Continuing children did not significantly improve in Emotional Problems and Peer Problems.**
  - **Perhaps the skills related to improvement in these areas may not carry over from the previous year or the continuing children may have been more aware of classroom changes & stresses during COVID.**
  - **Handling emotional strain & peer problems are areas that could be emphasized further in the Kindness Curriculum.**

Areas of Challenge & Conclusions Continued

- **Boys did not improve in overall behavioral difficulties over the year, whereas girls did. Further, boys significantly increased in conduct problems (e.g., misbehavior).**
- **Girls showed significantly fewer difficulties over time but did not significantly change or improve in teacher-reported emotional problems, conduct problems, peer problems, or improve in parent-reported empathy.**

Lack of change may reflect pandemic stressors or higher expectations for girls in the areas of empathy and behavioral control in these areas.

- **Boys did not significantly improve on emotional regulation, hyperactivity, or prosocial behavior.**

Parents **reported improvements in only boys' empathy skills, whereas** ***teachers*** **saw improved empathy & prosocial skills in both boys & girls. This finding may reflect differential behavior at home & in school.** ***The KC could add activities to encourage application of skills at home.***

Both boys & girls struggled most with behavioral problems despite many areas of improvement, i.e., both boys & girls also significantly improved on all report cards areas & all TS-Gold Developmental Skills. Struggles with behavioral problems may reflect pandemic-related stress, but also suggests that the KC could emphasize behavioral self-regulation more.

Key Takeaways & Comparisons Across Years

During the difficult 2020-2021 pandemic-challenged school year, the results show *statistically significant gains* in many areas including social, emotional, & academic skills across socioeconomic & age groups. These findings suggest that the mindfulness-based Kindness Curriculum can positively benefit children, even in challenging times.

However, the *percentage of children* showing gains varied substantially from before the pandemic (year 1) to during the pandemic (years 2 & 3), showing that some children may need more support. Measuring how often children received KC programming (*dosage*) given the many COVID interruptions may have provided insights, but these data were not available. It is clear the number of children showing gains dropped during COVID, although 66-70% at least maintained skills. Also, the percentage of children improving on developmental assessments (TS-Gold) remained high (90 – 98%) in all 3 years.

Measure	Year 1 (2018-19) Percent Improved	Year 2 (2019 - 20) Percent Improved	Year 3 (2020 -21) Percent Improved
Prosocial Competency TRSC (Teacher reported)	78.8%	65.9%	54.5%
Empathy Skills (Parent reported)	78.5%	63.0%	63.6%
Behavioral Difficulties SDQ (Teacher reported)	Not collected Y1	70.3%	49.0%
Prosocial Behavior SDQ (Teacher reported)	Not collected Y1	81.1%	49.0%

Implications & Conclusions

- **These results show that all children, whether preschool (3 years) or 4K (4 – 5 years), lower or higher SES, new to the Kindness Curriculum or continuing, can positively benefit from learning mindfulness-skills through the Kindness Curriculum.**
- **Stresses of pandemic seemed to have their greatest impact on → emotional regulation (e.g., handling emotional stress) & behavioral challenges (e.g., conduct & peer problems).**
- **Suggestions for strengthening & expanding Kindness Curriculum**
  - **Handling emotional strain & peer problems are areas that could be emphasized further in the Kindness Curriculum. For example, adding lessons that give children tools for handling negative emotions, e.g., pausing & taking 3 breaths, or stopping impulsive behavior (e.g., a visual cue in the classroom that signals a behavioral pause).**
  - **Struggles with behavioral problems may reflect pandemic-related stress, but also suggests that the KC could emphasize <u>emotional & behavioral self-regulation</u> more.**
  - **Adding additional movement activities that help children to pause when encountering something new, unexpected, or unsettling.**
  - **Helping parents to promote application of skills at home & beyond the classroom. Creating activity packets or virtual libraries with read-aloud stories that parents can share with their children.**

Results as Compared to our Previous KC Findings & Past Research

- **Flook and colleagues (2015) found greater improvement** by the Kindness Curriculum (KC) group in **prosocial behavior**, **emotional regulation**, and **in teacher-reported social competence** (TRSC) than in the Control Group.

- Similarly, in **our randomized-control Kindness Project study using the same TRSC,** we found significantly **greater improvement** by the Kindness Curriculum (KC) group in in **prosocial behavior**, **emotional regulation**, **as well as in *empathetic regulation & empathetic understanding.***
- In addition, we found that KC training significantly improved certain cognitive & executive functioning skills such as planning & organizational skills, & inhibition of negative responses.
- We also demonstrated in the original study & across years 2 & 3 that **even 3-year-olds benefitted from the KC**, for example, they improved significantly in **prosocial behavior & empathetic behavior.**
- Across years 1 to 3, we also found that children **from lower income families showed comparable** benefits of the Kindness training to children from higher income families. For example, in the randomized control comparison, **children from lower income families** improved more in **empathetic behavior** than those in the control group.

Recommendations for Supporting Teachers

- The investment in the **Kindness Curriculum (KC)** seems to promote social & academic gains for children, so training teachers on mindfulness & the Kindness Curriculum is worthwhile.
- Teachers reported positive impacts of the KC in their classrooms & planned to continue to use it.
- Teachers appreciated that the Kindness Curriculum provided them with more tools for helping children, especially those with emotional or behavioral challenges. They adapted the KC for use virtually, with toddlers, & to serve special needs, & found that it complemented other Social-Emotional lessons well.
- Teachers appreciated the ***personal support & classroom support of the mindfulness coaches.*** Coaches offered individual support of classroom needs as well as movement & mindfulness group sessions for teachers.

Selected References

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Appendices Year 3 2020-2021

1. ***Teacher-Rated Social Competence***
2. ***Children's Strengths & Difficulties***
3. ***Children's Empathy - Parent-Rated***
4. ***Developmental Skills – TS-Gold***
5. ***Report Cards***

Appendices report statistical results that may be of interest to researchers and others

Two types of comparisons are reported in each appendix:

A. Fall comparisons of children:

- Did spring 2020 closures impact fall 2020 performance? Schools closed for a period in Spring 2020, so in Fall we wondered whether children new to the programs or those continuing came back with comparable skills.
- We also checked whether in fall, children from lower SES families showed comparable skills to those from higher SES families.

B. Comparisons of children's performance over fall 2020 to spring 2021 by groups:

- Continuing vs. New
- Age Groups: Preschool (< 48 months) vs. 4K (4 & 5-year-olds)
- SES Groups: Lower vs. Higher SES
- Gender: Girls vs. Boys

Appendix 1: Teacher Rated Social Competence, Year 3 (2020 – 2021)

Part A - Comparisons at Time 1 (Fall 2020): How did Continuing vs. New Children, & Lower vs. Higher Socioeconomic Status Children Compare at the Beginning of the School Year?

Continuing vs. New: Continuing tended to start with higher scores

Subscale	Group	Mean	T-test
Prosocial	Continuing (54)	2.95	*t* = 1.57, *p* = .119, *continuing students higher*
	New Students (106)	2.68	
Emotional Regulation	Continuing (54)	3.38	*t* = 2.20, *p* = .029, *continuing students higher*
	New Students (106)	3.04	
Empathy Skills	Continuing (54)	2.84	*t* = 1.57, *p* = .119, *continuing students higher*
	New Students (106)	2.55	

Lower vs. Higher SES: No Differences between SES Groups in Fall

Subscale	Group	Mean	T-test
Prosocial	Lower SES (87)	2.73	*t* = .15, *ns, no significant difference*
	Higher SES (63)	2.76	
Emotional Regulation	Lower SES (87)	3.16	*t* = .30, *ns, no significant difference*
	Higher SES (63)	3.11	
Empathy Skills	Lower SES (87)	2.56	*t* =.75, *ns, no significant difference*
	Higher SES (63)	2.69	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Part B - TRSC Performance Over Time

Continuing vs. New: Did continuing & new children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Prosocial *F*(1,142) = .22, *ns interaction*	Continuing (48)	3.04	3.37	*t* = 2.69, *p* = .010*	$ME_{Cont/new}$ = 4.81, *p* = .030 *Continuing students higher*
	New Students (96)	2.72	2.98	*t* = 2.74, *p* = .007*	
Emotional Regulation *F*(1,142) = .04, *ns interaction*	Continuing (48)	3.44	3.61	*t* = 1.94, *p* = .058	$ME_{Cont/new}$ = 7.25, *p* = .008 *Continuing students higher*
	New Students (96)	3.08	3.22	*t* = 1.76, *p* = .082	
Empathy Skills *F*(1,142) = 1.96, *p* = .16, *ns interaction*	Continuing (48)	2.89	3.33	*t* = 3.83, *p* <.001*	$ME_{Cont/new}$ = 5.16, *p* = .025 *Continuing students higher*
	New Students (96)	2.60	2.84	*t* = 2.74, *p* <.007*	

Continuing vs New Comparisons: Both groups showed improvements in all areas.

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

TRSC Performance Over Time: Younger vs. Older Children

Did younger & older children comparably improve over time?

Subscale & Interaction time x group	Group	Fall	Spring	Paired t-test	ANOVA: Main Effect—groups differ?
Prosocial $F(1,141) = 5.35$, p = .022 ***significant interaction***	Younger (58)	2.44	2.91	$t = 4.03$, $p < .001$*	$ME_{Age} = 10.22$, $p = .002$ *Older students higher*
	Older (86)	3.09	3.24	$t = 1.62$, $p = .110$	
Emotional Regulation $F(1,141) = .43$, *ns interaction*	Younger (57)	2.82	3.03	$t = 2.13$, $p = .038$*	$ME_{Age} = 20.50$, $p < .001$ *Older students higher*
	Older (86)	3.45	3.58	$t = 1.57$, $p = .122$	
Empathy Skills $F(1,141) = .16$, *ns interaction*	Younger (58)	2.22	2.56	$t = 3.00$, $p = .004$*	$ME_{Age} = 23.84$, $p < .001$ *Older students higher*
	Older (86)	3.00	3.30	$t = 3.20$, $p = .002$*	

Age Comparisons: Both groups showed improvements in Prosocial Behaviors & Empathy Skills. Only younger children improved in Emotional Regulation over time. Younger children also showed better improvement in Prosocial Behaviors.

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

TRSC Performance Over Time: Higher vs. Lower Socioeconomic Status

Did lower SES & higher SES children comparably improve over time?

Subscale & Interaction time x group	Group	Fall	Spring	Paired t-test	ANOVA: Main Effect—groups differ?
Prosocial $F(1,134) = .81$, *ns interaction*	Lower SES (78)	2.79	3.07	$t = 3.02$, $p = .003$*	$ME_{SES} = .24$, *no significant difference*
	Higher SES (59)	2.80	3.22	$t = 3.75$, $p < .001$*	
Emotional Regulation $F(1,134) = .02$, *ns interaction*	Lower SES (78)	3.18	3.37	$t = 2.20$, $p = .031$*	$ME_{SES} = .02$, *no significant difference*
	Higher SES (59)	3.15	3.36	$t = 2.18$, $p = .034$*	
Empathy Skills $F(1,134) = .25$, *ns interaction*	Lower SES (78)	2.60	2.98	$t = 4.04$, $p < .001$*	$ME_{SES} = .25$, *no significant difference*
	Higher SES (59)	2.71	3.04	$t = 3.03$, $p = .004$*	

Socioeconomic Comparisons: Both groups showed improvement in all areas.

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

TRSC Performance Over Time: Girls vs. Boys

Did girls & boys comparably improve over time?

Subscale & Interaction time x group	Group	Fall	Spring	Paired t-test	ANOVA: Main Effect—groups differ?
Prosocial: $F(1,141) = .17$, *ns interaction*	Girls (61)	3.10	3.43	$t = 3.33$, $p = .002$*	$ME_{Gender} = 11.20$, $p = .001$, *Girls Higher*
	Boys (83)	2.63	2.88	$t = 2.35$, $p = .021$*	
Emotional Regulation $F(1,141) = 1.25$, *ns interaction*	Girls (61)	3.41	3.65	$t = 2.54$, $p = .014$*	$ME_{Gender} = 10.94$, $p = .001$, *Girls Higher*
	Boys (83)	3.04	3.14	$t = 1.20$, $p = .233$	
Empathy Skills $F(1,141) = .88$, *ns interaction*	Girls (61)	2.91	3.31	$t = 3.73$, $p < .001$*	$ME_{Gender} = 7.49$, $p = .007$, *Girls Higher*
	Boys (83)	2.53	2.78	$t = 2.62$, $p = .011$*	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Gender Comparisons: Both groups showed improvements in Prosocial Behaviors & Empathy Skills. Only girls improved in Emotional Regulation over time.

Appendix 2: Strengths & Difficulties Questionnaire (SDQ), Year 3 (2020 – 2021)

Part A - Comparisons at Time 1: How did Continuing vs. New Children & Lower vs. Higher Socioeconomic Status Children Compare in Fall?**

Continuing vs. New: No differences in Fall

Subscale	Group	Mean	t-test
Emotional Problems (n =162)	Continuing (57)	5.94	*t* = 1.16, *ns, no significant difference*
	New Students (105)	6.23	
Conduct Problems (n =162)	Continuing (57)	6.46	*t* = 1.77, *p* = .079, New students more problems
	New Students (105)	7.09	
Hyperactivity/Inattention (n =162)	Continuing (57)	9.07	*t* = .15, *ns, no significant difference*
	New Students (105)	9.15	
Peer Relationship Problems (n =162)	Continuing (57)	7.05	*t* = .71, *ns, no significant difference*
	New Students (105)	7.26	
Prosocial Behavior (n =162)	Continuing (57)	11.60	*t* = 1.37, *ns, no significant difference*
	New Students (105)	10.98	
Total Difficulties (n =162)	Continuing (57)	28.52	*t* = 1.19, *ns, no significant difference*
	New Students (105)	29.73	

Lower vs. Higher SES: Only Difference is in Peer Problems

Subscale	Group	Mean	t-test
Emotional Problems (n = 151)	Lower SES (88)	6.09	*t* = .11, *no significant difference*
	Higher SES (63)	6.06	
Conduct Problems (n = 151)	Lower SES (88)	6.94	*t* = .04, *no significant difference*
	Higher SES (63)	6.92	
Hyperactivity/Inattention (n = 151)	Lower SES (88)	9.36	*t* = .99, *no significant difference*
	Higher SES (63)	8.85	
Peer Relationship Problems (n = 151)	Lower SES (88)	7.58	*t* = 2.92, *p* = .004, *lower SES more problems*
	Higher SES (63)	6.74	
Prosocial Behavior (n = 151)	Lower SES (88)	11.02	*t* = .28, *no significant difference*
	Higher SES (63)	11.15	
Total Difficulties (n = 151)	Lower SES (88)	29.97	*t* = 1.38, *p* = .169, *ns*
	Higher SES (63)	28.56	

****Remember lower scores are better on all subscales except Prosocial Behavior, as higher scores indicate more problems. On the Prosocial subscale, higher scores are better. Total Difficulties does not include the Prosocial subscale.**

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Part B - SDQ Performance Over Time**

Continuing vs. New: Did continuing & new children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Emotional Problems *F*(1,143) = .22, *ns interaction*	Continuing (51)	5.97	5.78	*t* = .85, *p* = .397	$ME_{Cont/new}$ *F* = .13, ns
	New Students (94)	6.12	5.78	*t* = 1.86, *p* = .066	
Conduct Problems *F*(1,143) = .51, *ns interaction*	Continuing (51)	6.31	6.68	*t* = 1.24, *p* = .221	$ME_{Cont/new}$ *F* = 2.65, *p* = .106, *Continuing fewer problems*
	New Students (94)	6.98	7.05	*t* = .30, *p* = .768	
Hyperactivity *F*(1,143) = 2.57, *p* = .111 *marginal interaction*	Continuing (51)	8.86	8.17	*t* = 2.03, *p* = .048*	$ME_{Cont/new}$ *F = 1.20, ns*
	New Students (94)	9.01	9.06	*t* = .18, *p* = .855	
Peer Problems *F*(1,143) = .73, *ns interaction*	Continuing (51)	6.92	6.69	*t* = 1.10, *p* = .277	$ME_{Cont/new}$ = .22, *ns*
	New Students (94)	7.18	6.68	*t* = 2.50, *p* = .014*	
Prosocial Behavior *F*(1,143) = .02, *ns interaction*	Continuing (51)	11.71	12.35	*t* = 1.74, *p* = .088	$ME_{Cont/new}$ *F* = 2.49, *p* = .117, *Continuing fewer problems*
	New Students (94)	11.12	11.70	*t* = 2.26, *p* = .026*	
Total Difficulties *F*(1,143) = .01, *ns interaction*	Continuing (51)	28.07	27.31	*t* = 1.10, *p* = .277	$ME_{Cont/new}$ *F* = 1.88, *p* = .173, ns
	New Students (94)	29.28	28.52	*t* =1.13, *p* = .262	

****Remember lower scores are better on all subscales except Prosocial Behavior, as higher scores indicate more problems. On the Prosocial subscale, higher scores are better. Total Difficulties does not include the Prosocial subscale.**

Continuing vs. New Comparisons: Continuing children showed improvement in hyperactivity & prosocial behavior. New Children improved in emotional problems, peer problems, & prosocial behavior.

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

SDQ Performance Over Time: Younger vs. Older Children**

Did younger & older children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Emotional Problems *F*(1,143) = 2.43, *p* = .121, *marginal interaction*	Younger (58)	6.31	5.78	*t* = 2.49, *p* = .016*	ME_{age} *F* = 1.18, *ns*
	Older (87)	5.89	5.78	*t* = .64, *p* = .524, *ns*	
Conduct Problems *F*(1,143) = 3.33, *p* =.070 *interaction*	Younger (58)	7.21	6.95	*t* = .91, *p* = .369, *ns*	ME_{age} *F* = 1.74, *p* = .189, *ns*
	Older (87)	6.44	6.89	*t* = 1.82, *p* = .072	
Hyperactivity *F*(1,142) = 1.84, *p* = .177 *ns interaction*	Younger (58)	9.07	8.47	*t* = 2.03, *p* = .047*	ME_{age} *F* = .07, *ns*
	Older (86)	8.89	8.90	*t* = .16, *p* = .870, *ns*	
Peer Problems *F*(1,143) = 2.86, *p* = .093, *marginal interaction*	Younger (58)	7.10	6.38	*t* = 3.04, *p* = .004*	ME_{age} *F* = .82, *ns*
	Older (86)	7.08	6.87	*t* = 1.04, *p* = .302, *ns*	
Prosocial Behavior *F*(1,143) = 2.79, *p* = .097, *marginal interaction*	Younger (58)	10.60	11.64	*t* = 3.26, *p* = .002*	ME_{age} *F* = 4.93, *p* = .028, *Older students higher*
	Older (86)	11.81	12.13	*t* = 1.14, *p* = .259, *ns*	
Total Difficulties *F*(1,143) = 5.94, *p* =.016 interaction	Younger (58)	29.69	27.57	*t* = 3.05, *p* = .003*	ME_{age} *F* = .09, *ns*
	Older (86)	28.29	28.45	*t* = .36, *p* = .719, *ns*	

****Remember lower scores are better on all subscales except Prosocial Behavior, as higher scores indicate more problems. On the Prosocial subscale, higher scores are better. Total Difficulties does not include the Prosocial subscale.**

Age Group Comparisons: Younger children more often showed improvement

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

SDQ Performance Over Time: Higher vs. Lower Socioeconomic Status**

Did lower SES & higher SES children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Emotional Problems *F*(1,136) = .41, *ns interaction*	Lower SES (79)	6.05	5.85	*t* = 1.13, *p* = .263, *ns*	ME_{SES} *F* = .17, *ns*
	Higher SES (59)	6.06	5.68	*t* = 1.76, *p* = .085	
Conduct Problems *F*(1, 136) = .17, *ns interaction*	Lower SES (79)	6.85	6.96	*t* = .49, *p* = .626, *ns*	ME_{SES} = .26, *p* = .612, *ns*
	Higher SES (59)	6.76	6.71	*t* = .17, *p* = .866, *ns*	
Hyperactivity *F*(1,136) = .39, *ns interaction*	Lower SES (79)	9.29	9.08	*t* = .56, *p* = .579, *ns*	ME_{SES} *F* = 2.97, *p* = .087 *Higher SES fewer problems*
	Higher SES (59)	8.62	8.14	*t* = 1.46, *p* =.149, *ns*	
Peer Problems *F*(1,136) = .73, *ns interaction*	Lower SES (79)	7.48	7.13	*t* = 1.49, *p* = .140, *ns*	ME_{SES} *F* = 14.21 *p* < .001 *Higher SES fewer problems*
	Higher SES (59)	6.65	6.03	*t* = 3.25, *p* < .001*	
Prosocial Behavior *F*(1,136) = .38, *ns interaction*	Lower SES (79)	11.22	11.85	*t* = 2.17, *p* = .033*	ME_{SES} *F* = .07, *ns*
	Higher SES (59)	11.20	12.08	*t* = 2.91, *p* = .005*	
Total Difficulties *F*(1,136) = .92, *ns interaction*	Lower SES (79)	29.67	29.01	*t* = 1.10, *p* = .275, *ns*	ME_{SES} *F* = 5.20, *p* = .024 *Higher SES fewer problems*
	Higher SES (59)	28.09	26.56	*t* = 2.17, *p* = .040*	

****Remember lower scores are better on all subscales except Prosocial Behavior, as higher scores indicate more problems. On the Prosocial subscale, higher scores are better. Total Difficulties does not include the Prosocial subscale.**

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Socioeconomic Comparisons: Both groups improved in prosocial behavior. Only higher SES showed fewer peer problems & total difficulties.

SDQ Performance Over Time: Girls vs. Boys**

Did girls & boys comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Emotional Problems $F(1,143) = .01$, *ns interaction*	Girls (62)	6.08	5.79	$t = 1.34$, $p = .187$, *ns*	ME_{gender} $F = .02$, *ns*
	Boys (83)	6.04	5.77	$t = 1.59$, $p = .116$	
Conduct Problems $F(1,143) = 4.98$, $p = .027$* *interaction*	Girls (62)	6.74	6.42	$t = 1.22$, $p = .226$	ME_{gender} $F = 1.96$, $p = .163$, *ns.*
	Boys (83)	6.75	7.28	$t = 2.05$, $p = .043$*, **increase** in problems	
Hyperactivity $F(1,143) = 2.17$, $p = .14$, *ns interaction*	Girls (62)	8.24	7.63	$t = 1.86$, $p = .068$	ME_{gender} $F = 12.78$, $p < .001$ *Boys more problems*
	Boys (83)	9.49	9.55	$t = .26$, $p = .800$, *ns*	
Peer Problems $F(1,143) = .02$, *ns interaction*	Girls (62)	6.86	6.47	$t = 1.54$, $p = .129$, *ns*	ME_{gender} $F = 2.29$, $p = .133$, *ns.*
	Boys (83)	7.27	6.83	$t = 2.33$, $p = .022$*	
Prosocial Behavior $F(1,143) = 2.02$, $p = .16$, *ns interaction*	Girls (62)	11.76	12.71	$t = 3.04$, $p = .003$*	ME_{gender} $F = 8.04$, $p = .005$ *Girls higher*
	Boys (83)	11.00	11.35	$t = 1.24$, $p = .218$, *ns*	
Total Difficulties $F(1,143) = 2.57$, $p = .11$, *ns interaction*	Girls (62)	27.92	26.31	$t = 2.38$, $p = .021$*	ME_{gender} $F = 7.76$, $p = .006$ *Boys more problems*
	Boys (83)	29.55	29.43	$t = .18$, $p = .856$, *ns*	

****Remember lower scores are better on all subscales except Prosocial Behavior, as higher scores indicate more problems. On the Prosocial subscale, higher scores are better. Total Difficulties does not include the Prosocial subscale.**

Gender Comparisons: Girls showed improved prosocial behavior & fewer difficulties over time. Boys showed fewer peer problems, but more conduct problems over time.

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Appendix 3: Griffith Empathy Scale, Year 3 (2020 – 2021)
Part A - Comparisons at Time 1: How did Continuing vs. New Children & Lower vs. Higher Socioeconomic Status Children Compare in Fall?

Continuing vs. New: Some differences in Fall with continuing children starting higher

Subscale	Group	Mean	t-test
Affective Empathy	Continuing (32)	51.56	*t* = .81, *ns, no significant difference*
	New (48)	49.72	
Cognitive Empathy	Continuing (32)	38.59	*t* = 1.64, *p*= .106, *Continuing Students Higher*
	New (48)	36.25	
Empathetic Concern	Continuing (32)	32.34	*t* = 2.39, *p* = .019, *Continuing Students Higher*
	New (48)	28.91	
Overall Score	Continuing (32)	143.56	*t* = 1.97, *p* = .052, *Continuing Students Higher*
	New (48)	134.96	

SES Groups: No SES differences in Fall

Subscale	Group	Mean	t-test
Affective Empathy	Lower SES (33)	48.68	*t* = 1.34, *ns, no significant difference*
	Higher SES (47)	51.70	
Cognitive Empathy	Lower SES (33)	36.11	*t* = 1.28, *ns, no significant difference*
	Higher SES (47)	37.95	
Empathetic Concern	Lower SES (33)	31.47	*t* = 1.38, *ns, no significant difference*
	Higher SES (47)	29.45	
Overall Score	Lower SES (33)	136.29	*t* = .81, *ns, no significant difference*
	Higher SES (47)	139.88	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Part B - Griffith Performance Over Time

Continuing vs. New: Did continuing & new children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Affective Empathy $F(1,42) = .19$, *ns interaction*	Continuing (11)	50.91	54.05	$t = 1.83$, $p = .098$	$ME_{Cont/new}$ $F = .19$, *ns*
	New (33)	50.35	52.14	$t = 1.06$, $p = .297$	
Cognitive Empathy $F(1,42) = 1.15$, *ns interaction*	Continuing (11)	39.27	42.64	$t = 2.09$, $p = .063$	$ME_{Cont/new}$ $F = 2.98$, $p = .092$, *Continuing Students Higher*
	New (33)	37.14	38.58	$t = 1.63$, $p = .114$	
Empathetic Concern $F(1,42) = .16$, *ns interaction*	Continuing (11)	32.23	34.73	$t = 1.87$, $p = .091$	$ME_{Cont/new}$ $F = 3.22$, $p = .080$, *Continuing Students Higher*
	New (33)	29.53	31.30	$t = 1.86$, $p = .073$	
Overall Score $F(1,42) = .62$, *ns interaction*	Continuing (11)	144.14	153.86	$t = 2.72$, $p = .022$	$ME_{Cont/new}$ $F = 3.13$, $p = .084$, *Continuing Students Higher*
	New (33)	137.35	142.80	$t = 1.90$, $p = .067$	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Continuing vs New Comparisons: Both groups showed improvements in empathetic concerns & overall; only continuing children showed improvements in affective empathy &cognitive empathy.

Griffith Performance Over Time: Younger vs. Older Children

Did younger & older children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Affective Empathy $F(1,42) = 2.24$, $p = .142$, *ns interaction*	Younger (28)	49.82	53.43	$t = 2.05$, $p = .050$	ME_{Age} $F = .01$, *ns*
	Older (16)	51.66	51.19	$t = .25$, $p = .804$	
Cognitive Empathy $F(1,42) = .42$, *ns interaction*	Younger (28)	35.96	37.50	$t = 1.34$, $p = .190$	ME_{Age} $F = 12.69$, $p < .001$, *Older students higher*
	Older (16)	40.66	43.25	$t = 3.33$, $p = .005$	
Empathetic Concern $F(1,42) = 1.67$, *ns interaction*	Younger (28)	28.25	30.96	$t = 2.47$, $p = .020$	ME_{Age} $F = 8.98$, $p = .005$, *Older students higher*
	Older (16)	33.63	34.25	$t = .67$, $p = .513$	
Overall Score $F(1,42) = .88$, *ns interaction*	Younger (28)	134.25	142.43	$t = 2.63$, $p = .014$	ME_{Age} $F = 6.17$, $p = .017$, *Older students higher*
	Older (16)	147.44	151.06	$t = 1.07$, $p = .304$	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Age Comparisons: Younger children more often showed improvement; only older children showed improvement in cognitive empathy.

Griffith Performance Over Time: Higher vs. Lower Socioeconomic Status

Did lower SES & higher SES children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Affective Empathy $F(1,42) = .36$, *ns interaction*	Lower SES (15)	48.03	51.27	$t = .94$, $p = .362$	ME_{SES} $F = 1.29$, *ns*
	Higher SES (29)	51.76	53.31	$t = 1.52$, $p = .139$	
Cognitive Empathy $F(1,42) = .43$, *ns interaction*	Lower SES (15)	36.37	39.00	$t = 1.56$, $p = .142$	ME_{SES} $F = .73$, *ns*
	Higher SES (29)	38.35	39.90	$t = 1.92$, $p = .065$	
Empathetic Concern $F(1,42) = .16$, *ns interaction*	Lower SES (15)	32.53	34.93	$t = 1.41$, $p = .181$	ME_{SES} $F = 6.65$, $p = .014$, *Higher SES higher*
	Higher SES (29)	29.00	30.72	$t = 2.10$, $p = .045$	
Overall Score $F(1,42) = .82$, *ns interaction*	Lower SES (15)	136.93	146.40	$t = 1.69$, $p = .114$	ME_{SES} $F = .04$, *ns*
	Higher SES (29)	140.14	145.14	$t = 2.41$, $p = .023$	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Socioeconomic Comparisons: Higher SES showed improvements in most areas; Lower SES showed improvement in overall score.

Griffith Performance Over Time: Girls vs. Boys

Did girls & boys comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Affective Empathy $F(1,42) = 2.19$, $p = .146$, *ns interaction*	Girls (20)	51.55	51.55	$t = .00$, $p = 1.000$	ME_{Gender} $F = .00$, *ns*
	Boys (24)	49.60	53.50	$t = 2.10$, $p = .047$	
Cognitive Empathy $F(1,42) = .00$, *ns interaction*	Girls (20)	37.75	39.70	$t = 1.49$, $p = .152$	ME_{Gender} $F = .01$, *ns*
	Boys (24)	37.60	39.50	$t = 2.00$, $p = .057$	
Empathetic Concern $F(1,42) = 2.29$, $p = .138$, *ns interaction*	Girls (20)	31.38	32.05	$t = .68$, $p = .503$	ME_{Gender} $F = .40$, *ns*
	Boys (24)	29.23	32.25	$t = 2.63$, $p = .015$	
Overall Score $F(1,42) = 1.34$, *ns interaction*	Girls (20)	141.53	145.10	$t = 1.16$, $p = .259$	ME_{Gender} $F = .17$, *ns*
	Boys (24)	136.98	145.96	$t = 2.64$, $p = .015$	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Gender Comparisons: Boys showed improvements in all areas.

Appendix 4: TS-Gold, Year 3 (2020 – 2021)

Part A - Comparisons at Time 1: How did Continuing vs. New Children & Lower vs. Higher Socioeconomic Status Children Compare in Fall?

Continuing vs. New (Fall): Continuing children scored higher

Subscale	Group	Mean	t-test
Social Emotional	Continuing (38)	5.14	$t = 6.75$, $p = < .001$* *Continuing Children Higher*
	New students (85)	3.98	
Physical	Continuing (37)	5.98	$t = 8.13$, $p = < .001$* *Continuing Children Higher*
	New Students (80)	4.86	
Language	Continuing (36)	5.42	$t = 5.42$, $p = < .001$* *Continuing Children Higher*
	New students (79)	4.48	
Cognitive	Continuing (37)	4.65	$t = 7.79$, $p = < .001$* *Continuing Children Higher*
	New students (79)	3.53	
Literacy	Continuing (37)	2.73	$t = 4.84$, $p = < .001$* *Continuing Children Higher*
	New students (80)	1.93	
Mathematics	Continuing (38)	2.99	$t = 4.59$, $p = < .001$* *Continuing Children Higher*
	New students (80)	2.08	
Overall	Continuing (38)	4.11	$t = 6.51$, $p = < .001$* *Continuing Children Higher*
	New students (85)	3.25	

SES Groups (Fall): Higher SES children scored higher in language skills

Subscale	Group	Mean	t-test
Social Emotional	Lower SES (76)	4.35	$t = .17$, $p = .868$, *ns*
	Higher SES (40)	4.32	
Physical	Lower SES (73)	5.29	$t = 1.50$, $p = .136$, *ns*
	Higher SES (38)	5.03	
Language	Lower SES (71)	4.64	$t = 1.96$, $p = .053$, *Higher SES higher*
	Higher SES (38)	5.03	
Cognitive	Lower SES (72)	3.88	$t = .09$, $p = .929$, *ns*
	Higher SES (38)	3.90	
Literacy	Lower SES (73)	2.12	$t = .64$, $p = .523$, *ns*
	Higher SES (38)	2.26	
Mathematics	Lower SES (73)	2.27	$t = -1.06$, $p = .290$, *ns*
	Higher SES (39)	2.51	
Overall	Lower SES (76)	3.42	$t = -1.32$, $p = .191$, *ns*
	Higher SES (40)	3.66	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Part B - TS-Gold Performance Over Time

Continuing vs. New: Did continuing & new children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Winter Mean	Spring Mean	RM Time ANOVA: change within each group over time	ANOVA: Main Effect—groups differ?
Social Emotional $F(1,109) = 2.64$, $p = .087$, *marginally significant interaction*	Continuing (37)	5.15	5.66	6.48	$F = 37.88$, $p = < .001$* $t_{F\ to\ S} = 7.01$, $p = < .001$* $t_{F\ to\ W} = 3.37$, $p = .002$* $t_{W\ to\ S} = 7.42$, $p = < .001$*	$ME_{Cont/new}$ $F = 37.32$, $p = < .001$, *Continuing students higher*
	New students (74)	4.10	4.53	5.08	$F = 75.50$, $p = < .001$* $t_{F\ to\ S} = 9.93$, $p = < .001$* $t_{F\ to\ W} = 7.88$, $p = < .001$* $t_{W\ to\ S} = 7.14$, $p = < .001$*	
Physical $F(1,86) = .69$, *ns*	Continuing (34)	6.05	6.64	7.57	$F = 91.67$, $p = < .001$* $t_{F\ to\ S} = 13.05$, $p = < .001$* $t_{F\ to\ W} = 5.94$, $p = < .001$* $t_{W\ to\ S} = 7.51$, $p = < .001$*	$ME_{Cont/new}$ $F = 27.74$, $p = < .001$, *Continuing students higher*
	New students (54)	5.01	5.46	6.37	$F = 123.37$, $p = < .001$* $t_{F\ to\ S} = 16.77$, $p = < .001$* $t_{F\ to\ W} = 5.35$, $p = < .001$* $t_{W\ to\ S} = 8.16$, $p = < .001$*	
Language $F(1,86) = .75$, *ns*	Continuing (34)	5.42	6.00	6.71	$F = 79.84$, $p = < .001$* $t_{F\ to\ S} = 10.81$, $p = < .001$* $t_{F\ to\ W} = 6.22$, $p = < .001$* $t_{W\ to\ S} = 7.82$, $p = < .001$*	$ME_{Cont/new}$ $F = 25.47$, $p = < .001$, *Continuing students higher*
	New students (54)	4.40	4.83	5.57	$F = 101.56$, $p = < .001$* $t_{F\ to\ S} = 12.64$, $p = < .001$* $t_{F\ to\ W} = 5.98$, $p = < .001$* $t_{W\ to\ S} = 10.17$, $p = < .001$*	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

TS-Gold Performance Over Time -- continued

Cognitive $F(1,87) = 1.50$, $p = .229$, *ns*	Continuing (34)	4.69	5.24	6.05	$F = 52.48$, $p = < .001$* $t_{F\ to\ S} = 8.47$, $p = < .001$* $t_{F\ to\ W} = 3.89$, $p = < .001$* $t_{W\ to\ S} = 9.41$, $p = < .001$*	$ME_{Cont/new}$ $F = 29.32$, $p = < .001$, *Continuing students higher*
	New students (55)	3.55	4.05	4.67	$F = 106.11$, $p = < .001$* $t_{F\ to\ S} = 12.61$, $p = < .001$* $t_{F\ to\ W} = 7.27$, $p = < .001$* $t_{W\ to\ S} = 8.99$, $p = < .001$*	
Literacy $F(1,88) = 3.75$, $p = .031$ *significant interaction*	Continuing (35)	2.79	3.53	4.31	$F = 58.80$, $p = < .001$* $t_{F\ to\ S} = 9.61$, $p = < .001$* $t_{F\ to\ W} = 4.57$, $p = < .001$* $t_{W\ to\ S} = 8.72$, $p = < .001$*	$ME_{Cont/new}$ $F = 9.99$, $p = .002$, *Continuing students higher*
	New students (55)	2.13	2.54	3.17	$F = 42.88$, $p = < .001$* $t_{F\ to\ S} = 8.41$, $p = < .001$* $t_{F\ to\ W} = 3.48$, $p = < .001$* $t_{W\ to\ S} = 6.34$, $p = < .001$*	
Mathematics $F(1,87) = 1.44$, *ns*	Continuing (34)	3.04	3.73	4.20	$F = 57.88$, $p = < .001$* $t_{F\ to\ S} = 9.56$, $p = < .001$* $t_{F\ to\ W} = 5.81$, $p = < .001$* $t_{W\ to\ S} = 5.61$, $p = < .001$*	$ME_{Cont/new}$ $F = 12.38$, $p = < .001$, *Continuing students higher*
	New students (55)	2.23	2.69	3.20	$F = 59.84$, $p = < .001$* $t_{F\ to\ S} = 9.85$, $p = < .001$* $t_{F\ to\ W} = 5.41$, $p = < .001$* $t_{W\ to\ S} = 6.09$, $p = < .001$*	
Overall $F(1,110) = 3.64$, $p = .028$ *significant interaction*	Continuing (38)	4.11	4.75	5.42	$F = 97.36$, $p = < .001$* $t_{F\ to\ S} = 12.29$, $p = < .001$* $t_{F\ to\ W} = 6.80$, $p = < .001$* $t_{W\ to\ S} = 8.52$, $p = < .001$*	$ME_{Cont/new}$ $F = 19.36$, $p = < .001$, *Continuing students higher*
	New students (74)	3.36	3.92	4.37	$F = 114.49$, $p = < .001$* $t_{F\ to\ S} = 14.67$, $p = < .001$* $t_{F\ to\ W} = 8.92$, $p = < .001$* $t_{W\ to\ S} = 7.19$, $p = < .001$*	

Continuing vs. New Comparisons (Continued): Both groups showed improvements in all areas. Continuing students showed more improvement.

TS-Gold Performance Over Time: Younger vs. Older Children

Did younger & older children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Winter Mean	Spring Mean	RM Time ANOVA: change within each group over time	ANOVA: Main Effect—groups differ?
Social Emotional $F(1,85) = 10.23$, $p < .001$ *significant interaction*	Younger (24)	3.07	3.48	3.89	$F = 42.45$, $p = < .001$* $t_{F\ to\ S} = 8.35$, $p = < .001$* $t_{F\ to\ W} = 6.02$, $p = < .001$* $t_{W\ to\ S} = 4.33$, $p = < .001$*	ME_{Age} $F = 183.28$, $p = < .001$, *Older students higher*
	Older (63)	4.97	5.55	6.49	$F = 87.44$, $p = < .001$* $t_{F\ to\ S} = 10.51$, $p = < .001$* $t_{F\ to\ W} = 5.50$, $p = < .001$* $t_{W\ to\ S} = 10.18$, $p = < .001$*	
Physical $F(1,85) = 10.51$, $p = < .001$ *significant interaction*	Younger (24)	4.05	4.39	4.99	$F = 35.51$, $p = < .001$* $t_{F\ to\ S} = 11.31$, $p = < .001$* $t_{F\ to\ W} = 3.21$, $p = .003$* $t_{W\ to\ S} = 3.24$, $p = .003$*	ME_{Age} $F = 266.12$, $p = < .001$, *Older students higher*
	Older (63)	5.95	6.51	7.56	$F = 205.29$, $p = < .001$* $t_{F\ to\ S} = 20.74$, $p = < .001$* $t_{F\ to\ W} = 7.26$, $p = < .001$* $t_{W\ to\ S} = 12.19$, $p = < .001$*	
Language Time x Language $F(1,85) = 1.14$, *ns*	Younger (24)	3.36	3.90	4.48	$F = 69.22$, $p = < .001$* $t_{F\ to\ S} = 10.24$, $p = < .001$* $t_{F\ to\ W} = 5.97$, $p = < .001$* $t_{W\ to\ S} = 8.35$, $p = < .001$*	ME_{Age} $F = 137.58$, $p = < .001$, *Older students higher*
	Older (63)	5.33	5.81	6.60	$F = 122.49$, $p = < .001$* $t_{F\ to\ S} = 13.66$, $p = < .001$* $t_{F\ to\ W} = 6.30$, $p = < .001$* $t_{W\ to\ S} = 10.30$, $p = < .001$*	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

TS-Gold Performance Over Time -- continued

Cognitive $F(1,85) = 3.70$, $p = .033$ *significant interaction*	Younger (24)	2.46	2.90	3.45	$F = 71.49$, $p = < .001$* $t_{F\ to\ S} = 11.66$, $p = < .001$* $t_{F\ to\ W} = 6.35$, $p = < .001$* $t_{W\ to\ S} = 5.63$, $p = < .001$*	ME_{Age} $F = 212.02$, $p = < .001$, *Older students higher*
	Older (63)	4.55	5.15	5.92	$F = 106.84$, $p = < .001$* $t_{F\ to\ S} = 12.13$, $p = < .001$* $t_{F\ to\ W} = 6.00$, $p = < .001$* $t_{W\ to\ S} = 11.93$, $p = < .001$*	
Literacy $F(1,85) = 14.24$, $p = < .001$ *significant interaction*	Younger (24)	1.01	1.14	1.58	$F = 8.19$, $p = < .001$* $t_{F\ to\ S} = 4.53$, $p = < .001$* $t_{F\ to\ W} = 2.05$, $p = .050$* $t_{W\ to\ S} = 2.61$, $p = .014$*	ME_{Age} $F = 118.54$, $p = < .001$, *Older students higher*
	Older (63)	2.94	3.63	4.48	$F = 105.12$, $p = < .001$* $t_{F\ to\ S} = 13.20$, $p = < .001$* $t_{F\ to\ W} = 5.34$, $p = < .001$* $t_{W\ to\ S} = 10.77$, $p = < .001$*	
Mathematics $F(1,85) = 6.56$, $p = .002$ *significant interaction*	Younger (24)	1.09	1.33	1.88	$F = 14.88$, $p = < .001$* $t_{F\ to\ S} = 5.42$, $p = < .001$* $t_{F\ to\ W} = 4.04$, $p = < .001$* $t_{W\ to\ S} = 2.88$, $p = .007$*	ME_{Age} $F = 132.03$, $p = < .001$, *Older students higher*
	Older (63)	3.09	3.78	4.30	$F = 112.79$, $p = < .001$* $t_{F\ to\ S} = 13.43$, $p = < .001$* $t_{F\ to\ W} = 7.09$, $p = < .001$* $t_{W\ to\ S} = 8.38$, $p = < .001$*	
Overall $F(1,85) = 13.69$, $p < .001$ *significant interaction*	Younger (24)	2.23	2.51	2.97	$F = 76.13$, $p = < .001$* $t_{F\ to\ S} = 15.37$, $p = < .001$* $t_{F\ to\ W} = 8.09$, $p = < .001$* $t_{W\ to\ S} = 3.34$, $p = .002$*	ME_{Age} $F = 200.96$, $p = < .001$, *Older students higher*
	Older (63)	4.10	4.71	5.50	$F = 163.59$, $p = < .001$* $t_{F\ to\ S} = 15.95$, $p = < .001$* $t_{F\ to\ W} = 8.00$, $p = < .001$* $t_{W\ to\ S} = 12.11$, $p = < .001$*	

Age Comparisons (Continued): Both groups showed improvements in all areas. Older children showed more improvement.

TS-Gold Performance Over Time: Higher vs. Lower Socioeconomic Status

Did lower SES & higher SES children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Winter Mean	Spring Mean	RM Time ANOVA: change within each group over time	ANOVA: Main Effect—groups differ?
Social Emotional $F(1,80) = 1.86$, $p = .160$, *ns*	Lower SES (64)	4.43	4.92	5.67	$F = 78.04$, $p < .001$* $t_{F\ to\ S} = 9.64$, p = < .001* $t_{F\ to\ W} = 5.59$, p = < .001* $t_{W\ to\ S} = 9.10$, p = < .001*	ME_{SES} $F = .426$, *ns*
	Higher SES (18)	4.43	5.22	6.01	$F = 61.22$, $p < .001$ $t_{F\ to\ S} = 6.15$, p = < .001* $t_{F\ to\ W} = 5.30$, p = < .001* $t_{W\ to\ S} = 3.80$, p = < .001*	
Physical $F(1,80) = 3.27$, $p = .041$ *significant interaction*	Lower SES (64)	5.41	5.85	6.72	$F = 144.90$, $p < .001$* $t_{F\ to\ S} = 17.04$, p = < .001* $t_{F\ to\ W} = 7.32$, p = < .001* $t_{W\ to\ S} = 8.16$, p = < .001*	ME_{SES} $F = .508$, *ns*
	Higher SES (18)	5.40	6.09	7.14	$F = 57.18$, $p < .001$* $t_{F\ to\ S} = 11.88$, p = < .001* $t_{F\ to\ W} = 3.22$, p = .005* $t_{W\ to\ S} = 8.23$, p = < .001*	
Language $F(1,80) = .38$, *ns*	Lower SES (64)	4.69	5.21	5.90	$F = 131.75$, $p < .001$* $t_{F\ to\ S} = 14.13$, p = < .001* $t_{F\ to\ W} = 8.53$, p = < .001* $t_{W\ to\ S} = 9.99$, p = < .001*	ME_{SES} $F = 1.886$, $p = .173$, *ns*
	Higher SES (18)	5.07	5.60	6.40	$F = 41.11$, $p < .001$* $t_{F\ to\ S} = 7.20$, p = < .001* $t_{F\ to\ W} = 3.59$, p = .002* $t_{W\ to\ S} = 7.68$, p = < .001*	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

TS-Gold Performance Over Time -- continued

Cognitive $F(1,80) = 3.00$, $p = .062$ *marginally significant interaction*	Lower SES (64)	3.93	4.40	5.16	$F = 123.95$, $p < .001$* $t_{F\ to\ S} = 12.37$, p = < .001* $t_{F\ to\ W} = 6.89$, $p = < .001$* $t_{W\ to\ S} = 11.14$, $p = < .001$*	ME_{SES} $F = .991$, *ns*
	Higher SES (18)	4.07	4.92	5.48	$F = 32.07$, $p = < .001$* $t_{F\ to\ S} = 7.41$, p = < .001* $t_{F\ to\ W} = 4.24$, $p = < .001$* $t_{W\ to\ S} = 6.03$, $p = < .001$*	
Literacy $F(1,80) = 1.34$, *ns*	Lower SES (64)	2.23	2.67	3.42	$F = 96.35$, $p < .001$* $t_{F\ to\ S} = 11.06$, p = < .001* $t_{F\ to\ W} = 5.43$, $p = < .001$* $t_{W\ to\ S} = 9.90$, $p = < .001$*	ME_{SES} $F = 5.767$, $p = .019$, *Higher SES higher*
	Higher SES (18)	2.92	3.70	4.38	$F = 10.73$, $p < .001$* $t_{F\ to\ S} = 4.71$, p = < .001* $t_{F\ to\ W} = 2.38$, $p = .028$* $t_{W\ to\ S} = 2.56$, $p = .019$*	
Mathematics $F(1,80) = 2.31$, $p = .108$, *ns*	Lower SES (64)	2.36	2.89	3.36	$F = 91.70$, $p < .001$* $t_{F\ to\ S} = 11.81$, p = < .001* $t_{F\ to\ W} = 6.58$, $p = < .001$* $t_{W\ to\ S} = 7.58$, $p = < .001$*	ME_{SES} $F = 6.034$, $p = .016$, *Higher SES higher*
	Higher SES (18)	3.03	3.71	4.37	$F = 18.63$, $p < .001$* $t_{F\ to\ S} = 5.76$, p = < .001* $t_{F\ to\ W} = 3.95$, $p = < .001$* $t_{W\ to\ S} = 2.71$, $p = .014$*	
Overall $F(1,80) = 2.26$, $p = .115$, *ns*	Lower SES (64)	3.49	3.95	4.63	$F = 148.18$, $p < .001$* $t_{F\ to\ S} = 14.46$, p = < .001* $t_{F\ to\ W} = 9.43$, $p = < .001$* $t_{W\ to\ S} = 10.35$, $p = < .001$*	ME_{SES} $F = 2.810$, $p = .098$, *Higher SES higher*
	Higher SES (18)	3.84	4.55	5.27	$F = 66.22$, $p < .001$* $t_{F\ to\ S} = 11.06$, p = < .001* $t_{F\ to\ W} = 7.70$, $p = < .001$* $t_{W\ to\ S} = 3.44$, $p = .001$*	

Socioeconomic Comparisons Continued: Both groups showed improvements in all areas. Higher SES children improved more in a few areas.

TS-Gold Performance Over Time: Girls vs. Boys

Did girls & boys comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Winter Mean	Spring Mean	RM Time ANOVA: change within each group over time	ANOVA: Main Effect—groups differ?
Social Emotional $F(1,85) = 2.60$, $p = .091$ *marginal interaction*	Girls (39)	4.62	5.28	6.14	$F = 75.89$, $p < .001$* $t_{F\ to\ S} = 10.26$, p = < .001* $t_{F\ to\ W} = 9.16$, $p = < .001$* $t_{W\ to\ S} = 7.57$, $p = < .001$*	ME_{Gender} $F = 4.078$, p = .047, *Girls higher*
	Boys (48)	4.30	4.74	5.47	$F = 68.58$, $p < .001$* $t_{F\ to\ S} = 7.34$, $p = < .001$* $t_{F\ to\ W} = 3.84$, $p = < .001$* $t_{W\ to\ S} = 6.64$, $p = < .001$*	
Physical $F(1,85) = 2.23$, $p = .111$, *ns*	Girls (39)	5.57	6.21	6.99	$F = 93.94$, $p < .001$* $t_{F\ to\ S} = 13.56$, p = < .001* $t_{F\ to\ W} = 7.43$, $p = < .001$* $t_{W\ to\ S} = 6.21$, $p = < .001$*	ME_{Gender} $F = 1.993$, $p = .162$, *ns*
	Boys (48)	5.31	5.69	6.74	$F = 126.27$, $p < .001$* $t_{F\ to\ S} = 16.21$, $p = < .001$* $t_{F\ to\ W} = 4.31$, $p = < .001$* $t_{W\ to\ S} = 9.36$, $p = < .001$*	
Language $F(1,85) = .94$, *ns*	Girls (39)	4.94	5.53	6.25	$F = 102.32$, $p < .001$* $t_{F\ to\ S} = 12.91$, p = < .001* $t_{F\ to\ W} = 6.84$, $p = < .001$* $t_{W\ to\ S} = 8.73$, $p = < .001$*	ME_{Gender} $F = 2.508$, $p = .117$, *ns*
	Boys (48)	4.66	5.08	5.82	$F = 82.55$, $p < .001$* $t_{F\ to\ S} = 10.98$, $p = < .001$* $t_{F\ to\ W} = 5.30$, $p = < .001$* $t_{W\ to\ S} = 9.41$, $p = < .001$*	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Cognitive $F(1,85) = 1.35$, *ns*	Girls (39)	4.15	4.82	5.46	$F = 86.01$, $p < .001$* $t_{F\ to\ S} = 10.65$, p = < .001* $t_{F\ to\ W} = 7.78$, $p = < .001$* $t_{W\ to\ S} = 8.29$, $p = < .001$*	ME_{Gender} $F = 2.567$, $p = .113$, *Girls higher*
	Boys (48)	3.84	4.29	5.06	$F = 71.33$, $p < .001$* $t_{F\ to\ S} = 10.20$, $p = < .001$* $t_{F\ to\ W} = 4.10$, $p = < .001$* $t_{W\ to\ S} = 9.52$, $p = < .001$*	
Literacy $F(1,85) = .46$, *ns*	Girls (39)	2.46	3.10	3.78	$F = 42.17$, $p < .001$* $t_{F\ to\ S} = 7.88$, $p = < .001$* $t_{F\ to\ W} = 5.08$, $p = < .001$* $t_{W\ to\ S} = 5.57$, $p = < .001$*	ME_{Gender} $F = .387$, *ns*
	Boys (48)	2.35	2.82	3.59	$F = 52.77$, $p < .001$* $t_{F\ to\ S} = 9.23$, $p = < .001$* $t_{F\ to\ W} = 3.13$, $p = .003$* $t_{W\ to\ S} = 8.15$, $p = < .001$*	
Mathematics $F(1,85) = 1.37$, *ns*	Girls (39)	2.68	3.24	3.67	$F = 45.66$, $p < .001$* $t_{F\ to\ S} = 8.39$, $p = < .001$* $t_{F\ to\ W} = 7.08$, $p = < .001$* $t_{W\ to\ S} = 3.79$, $p = < .001$*	ME_{Gender} $F = .433$, *ns*
	Boys (48)	2.43	2.99	3.60	$F = 70.86$, $p < .001$* $t_{F\ to\ S} = 10.74$, $p = < .001$* $t_{F\ to\ W} = 4.80$, $p = < .001$* $t_{W\ to\ S} = 7.97$, $p = < .001$*	
Overall $F(1,85) = .85$, *ns*	Girls (39)	3.72	4.32	4.98	$F = 117.38$, $p < .001$* $t_{F\ to\ S} = 13.39$, $p = < .001$* $t_{F\ to\ W} = 9.75$, $p = < .001$* $t_{W\ to\ S} = 7.39$, $p = < .001$*	ME_{Gender} $F = 1.617$, $p = .207$, *ns*
	Boys (48)	3.48	3.92	4.66	$F = 93.71$, $p < .001$* $t_{F\ to\ S} = 13.17$, $p = < .001$* $t_{F\ to\ W} = 6.91$, $p = < .001$* $t_{W\ to\ S} = 7.43$, $p = < .001$*	

Gender Comparisons (Continued): Both groups showed improvements in all areas. Girls improved more in social emotional scores.

Appendix 5: Report Cards, Year 3 (2020 -2021)
Part A - Comparisons at Time 1: How did Continuing vs. New Children, & Lower vs. Higher Socioeconomic Status Children Compare in Fall?

Continuing vs. New Comparisons : No differences between Continuing and New children in Fall

Subscale	Group	Mean	t-test
Social/Emotional	Continuing (32)	2.39	*t* = .63, *ns*, *no significant difference*
	New (27)	2.31	
Language	Continuing (32)	2.37	*t* = .68, *ns*, *no significant difference*
	New (27)	2.27	
Math	Continuing (32)	2.17	*t* = .30, *ns*, *no significant difference*
	New (27)	2.13	
Health/Physical Development	Continuing (32)	2.40	*t* = 1.41, *ns*, *no significant difference*
	New (27)	2.20	

Socioeconomic Comparisons: No differences between SES groups in Fall

Subscale	Group	Mean	t-test
Social/Emotional	Lower SES (41)	2.29	*t* = 1.37, *ns*, *no significant difference*
	Higher SES (14)	2.51	
Language	Lower SES (41)	2.29	*t* = .83, *ns*, no *significant difference*
	Higher SES (14)	2.44	
Math	Lower SES (41)	2.09	*t* = 1.38, *p* = .174, *ns*, *no significant difference*
	Higher SES (14)	2.33	
Health/Physical Development	Lower SES (41)	2.31	*t* = .06, *ns*, *no significant difference*
	Higher SES (14)	2.32	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Part B - Report Cards Performance Over Time

4K Only: Did 4K children improve over time?

4K Only: 4K children improved in all areas

Subscale	Age – 4K Children	Fall Mean	Spring Mean	Paired t-tests: change over time
Social/Emotional	4K Children (59)	2.36	2.76	$t = 8.81$, $p < .001$
Language	4K Children (59)	2.33	2.75	$t = 9.61$, $p < .001$
Math	4K Children (59)	2.15	2.60	$t = 7.90$, $p < .001$
Health/Physical Development	4K Children (59)	2.31	2.85	$t = 9.61$, $p < .001$

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Report Cards Performance Over Time: Continuing vs. New

Did continuing & new children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Social/Emotional $F(1,57) = .00$, *ns interaction*	Continuing (32)	2.39	2.80	$t = 9.24$, $p < .001$	$ME_{Cont/new}$ $F = .41$, *ns*
	New (27)	2.31	2.71	$t = 4.65$, $p < .001$	
Language $F(1,57) = 4.21$, $p = .045$, *significant interaction*	Continuing (32)	2.37	2.71	$t = 6.75$, $p < .001$	$ME_{Cont/new}$ $F = .02$, *ns*
	New (27)	2.27	2.78	$t = 7.22$, $p < .001$	
Math $F(1,57) = .86$, *ns interaction*	Continuing (32)	2.17	2.57	$t = 5.53$, $p < .001$	$ME_{Cont/new}$ $F = .00$, *ns*
	New (27)	2.13	2.63	$t = 5.63$, $p < .001$	
Health/Physical Development $F(1,57) = .80$, *ns interaction*	Continuing (32)	2.40	2.89	$t = 5.94$, $p < .001$	$ME_{Cont/new}$ $F = 1.32$, *ns*
	New (27)	2.20	2.80	$t = 8.09$, $p < .001$	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Continuing vs. New Comparisons: Both groups showed improvement in all areas. New children improved more in language.

Report Cards Performance Over Time: Higher vs. Lower Socioeconomic Status

Did lower SES & higher SES children comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Social/Emotional $F(1,57) = .06$, *ns interaction*	Lower SES (41)	2.29	2.69	$t = 7.48$, $p < .001$	ME_{SES} $F = 2.22$, $p = .142$, *ns*
	Higher SES (14)	2.51	2.94	$t = 4.93$, $p < .001$	
Language $F(1,57) = 1.71$, $p = .197$, *ns interaction*	Lower SES (41)	2.29	2.67	$t = 8.08$, $p < .001$	ME_{SES} $F = 1.44$, *ns*
	Higher SES (14)	2.44	2.96	$t = 4.71$, $p < .001$	
Math $F(1,57) = .03$, *ns interaction*	Lower SES (41)	2.09	2.54	$t = 6.44$, $p < .001$	ME_{SES} $F = 2.30$, $p = .135$, *ns*
	Higher SES (14)	2.33	2.80	$t = 3.94$, $p = .002$	
Health/Physical Development $F(1,57) = 2.98$, $p = .090$, marginal significant interaction	Lower SES (41)	2.31	2.78	$t = 7.91$, $p < .001$	ME_{SES} $F = .65$, *ns*
	Higher SES (14)	2.32	3.02	$t = 4.84$, $p < .001$	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Socioeconomic Comparisons: Both groups showed improvement in all areas. Higher SES children improved more in Health/Physical Development.

Report Cards Performance Over Time: Girls vs. Boys

Did girls & boys comparably improve over time?

Subscale & Interaction time x group	Groups compared	Fall Mean	Spring Mean	Paired t-test: change within each group over time	ANOVA: Main Effect—groups differ?
Social/Emotional $F(1,57) = .08$, *ns interaction*	Girls (28)	2.50	2.89	$t = 7.25$, $p < .001$	ME_{Gender} $F = 3.92$, $p = .052$, *Girls higher*
	Boys (31)	2.23	2.64	$t = 5.68$, $p < .001$	
Language $F(1,57) = .00$, *ns interaction*	Girls (28)	2.36	2.78	$t = 6.04$, $p < .001$	ME_{Gender} $F = .17$, *ns*
	Boys (31)	2.29	2.72	$t = 7.53$, $p < .001$	
Math $F(1,57) = 2.04$, $p = .159$, *ns interaction*	Girls (28)	2.22	2.59	$t = 4.40$, $p < .001$	ME_{Gender} $F = .17$, *ns*
	Boys (31)	2.08	2.61	$t = 6.85$, $p < .001$	
Health/Physical Development $F(1,57) = 2.49$, $p = .120$, *marginally significant*	Girls (28)	2.50	2.95	$t = 5.92$, $p < .001$	ME_{Gender} $F = 5.13$, $p = .027$, *Girls higher*
	Boys (31)	2.14	2.76	$t = 7.74$, $p < .001$	

Please Note:
Green Shading: Significant difference
Yellow Shading: Marginally significant difference

Gender Comparisons: Both groups showed improvements in all areas. Girls had higher Social/Emotional and significantly higher Health/Physical Development grades than boys overall.