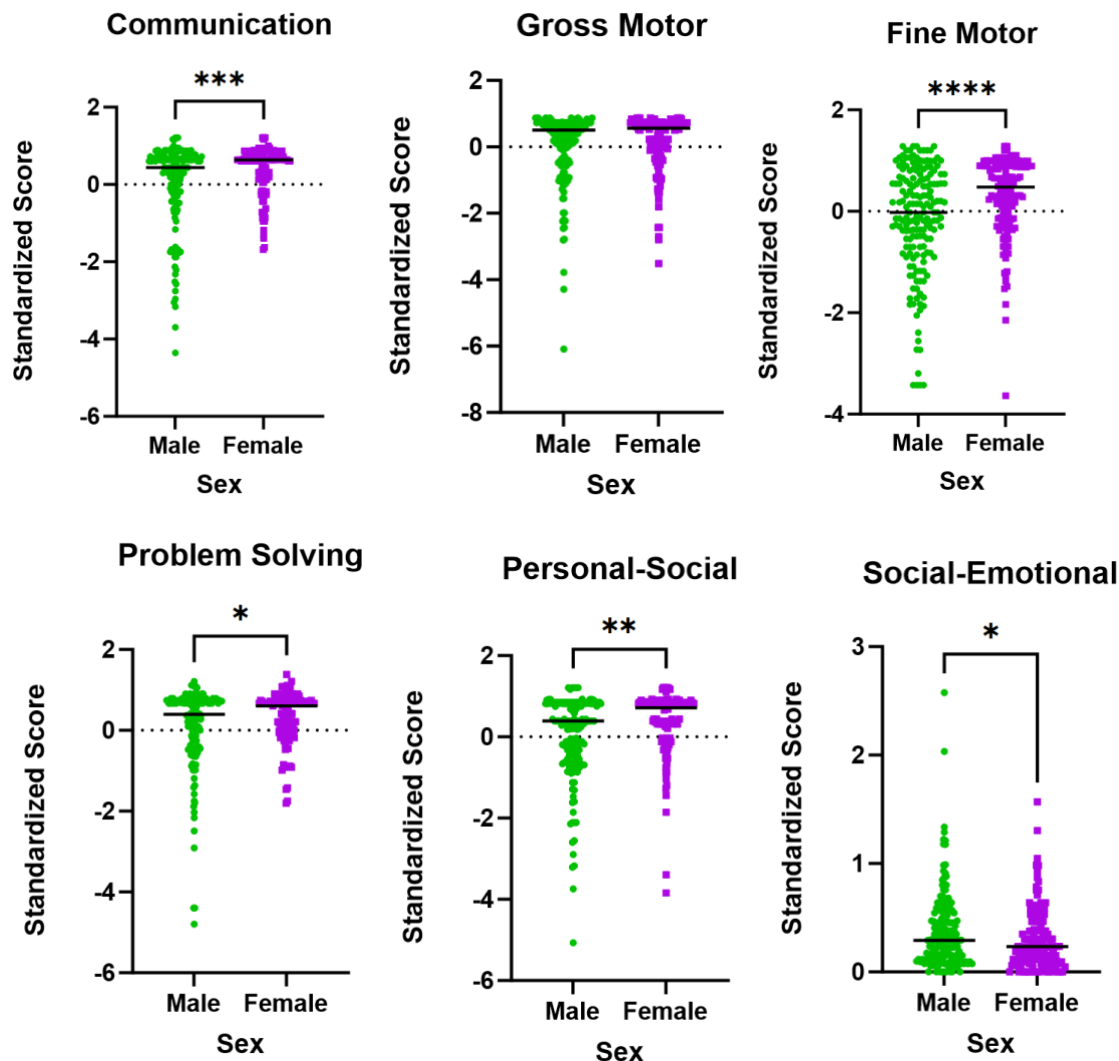# Community Ages and Stages Questionnaire Data Report

May 2024

Dr. Karys Peterson-Katz

Infant and Early Mental Health Promotion
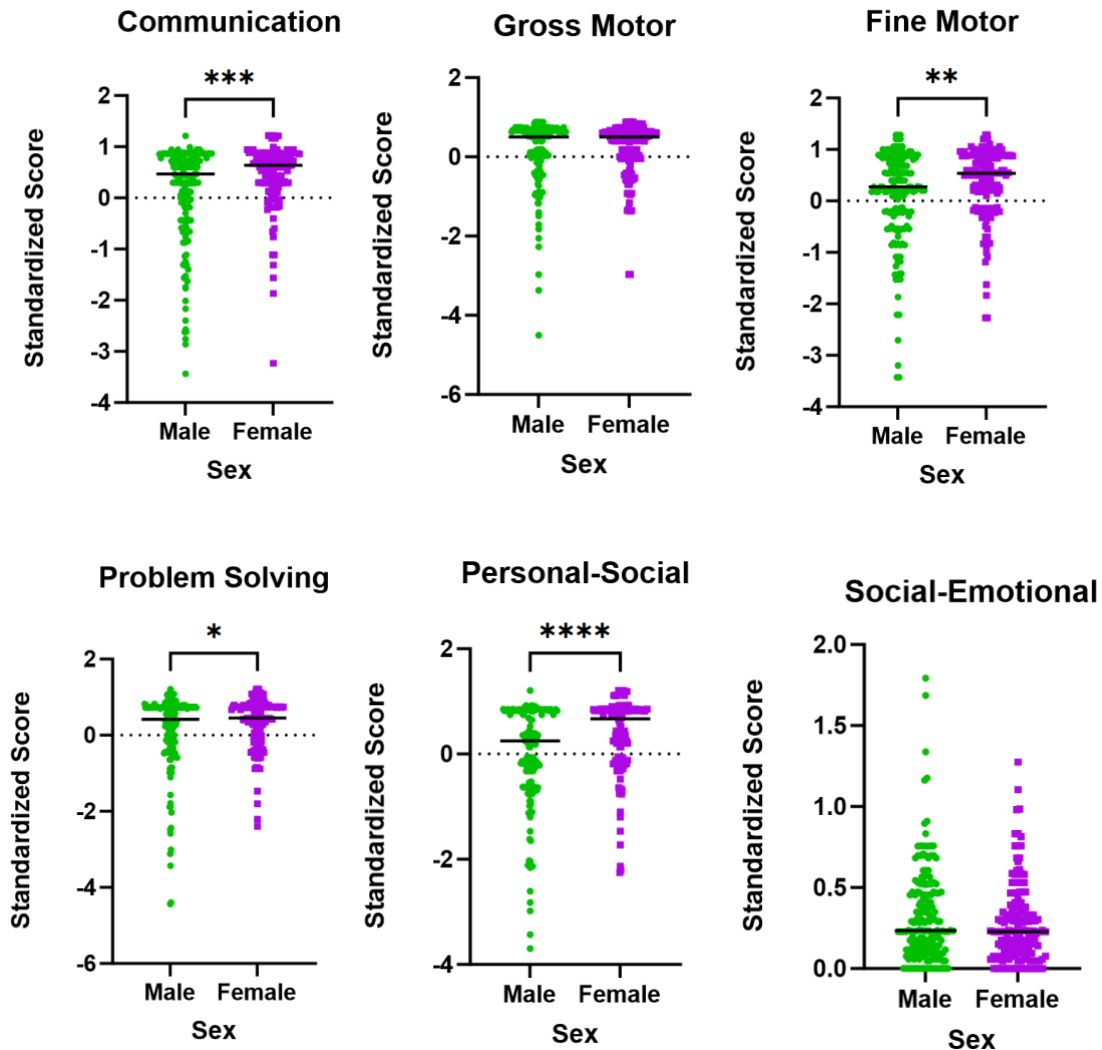
Spring Scan 2023

(Male n=178; Female n=142)

T-tests were conducted to compare the average standardizes scores between males and females across all 5 domains screened by the ASQ-3, as well as the 1 domain screened in the ASQ:SE-2. Females were found to score significantly higher than males in Communication, Fine Motor, Problem-Solving, and Personal-Social. Females were found to score significantly lower than males in Social-Emotional (which indicates they are more likely to be in the 'typically developing' zone, as the scoring for the ASQ:SE-2 is inverted

from the ASQ-3). For the 5 domains screened by the ASQ-3, a score of -1.5 or lower indicates that a child is at risk for developmental delay. For the 1 domain screened by the ASQ:SE-2, a score of 1 or higher indicates that a child is at risk for developmental delay. The black horizontal lines on each of the graphs indicates the median score for each sex.

Fall Scan 2023

(Male n=183; Female n=153)

T-tests were conducted to compare the average standardizes scores between males and females across all 5 domains screened by the ASQ-3, as well as the 1 domain screened in

the ASQ:SE-2. Females were found to score significantly higher than males in Communication, Fine Motor, Problem-Solving, and Personal-Social. There was no found significant difference between males and females in the domains of Gross Motor or Social-Emotional. For the 5 domains screened by the ASQ-3, a score of -1.5 or lower indicates that a child is at risk for developmental delay. For the 1 domain screened by the ASQ:SE-2, a score of 1 or higher indicates that a child is at risk for developmental delay. The black horizontal lines on each of the graphs indicates the median score for each sex.

Table Representation of Developmental Delay by Gender for 2023 Screening Year

Number of children at risk for developmental delay by domain by gender in 2023

April/ Spring 2023 Screen

Gender		Communication	Gross Motor	Fine Motor	Problem Solving	Personal Social
Male	n = 178	24	15	21	11	14
Female	n = 142	2	7	4	2	3

October/ Fall 2023 Screen

Gender		Communication	Gross Motor	Fine Motor	Problem Solving	Personal Social
Male	n = 183	14	7	11	13	13
Female	n = 153	3	2	4	3	4

Number of children at risk for social-emotional delay by gender in 2023

April/ Spring 2023 Screen			*October/ Fall 2023 Screen*		
Gender		Children at risk of SE delay	Gender		Children at risk of SE delay
Male	n = 185	8	Male	n = 182	5
Female	n = 151	3	Female	n = 157	2

Table Representation of Developmental Delay by Year

Number of children at risk for developmental delay by domain by screening period

Screening Period		Domain				
		Communication	Gross Motor	Fine Motor	Problem Solving	Personal Social
2019	n = 25	0	1	0	1	0
Spring 2020	n = 4	0	0	0	0	0
Fall 2020	n = 368	17	15	21	10	14
Spring 2021	n = 316	18	16	16	9	12
Fall 2021	n = 209	24	17	26	19	12
Spring 2022	n = 338	22	18	22	20	17
Fall 2022	n = 317	18	12	27	20	15
Spring 2023	n = 321	26	21	25	12	17
Fall 2023	n = 328	17	9	16	15	17

Number of children at risk for social-emotional delay by screening period

Screening Period		Children at risk of SE delay
Spring 2020	n = 2	0
Fall 2020	n = 360	10
Spring 2021	n = 308	12
Fall 2021	n = 209	20
Spring 2022	n = 331	13
Fall 2022	n = 329	14
Spring 2023	n = 338	11
Fall 2023	n = 339	7

Graph Representation of Developmental Status by Year
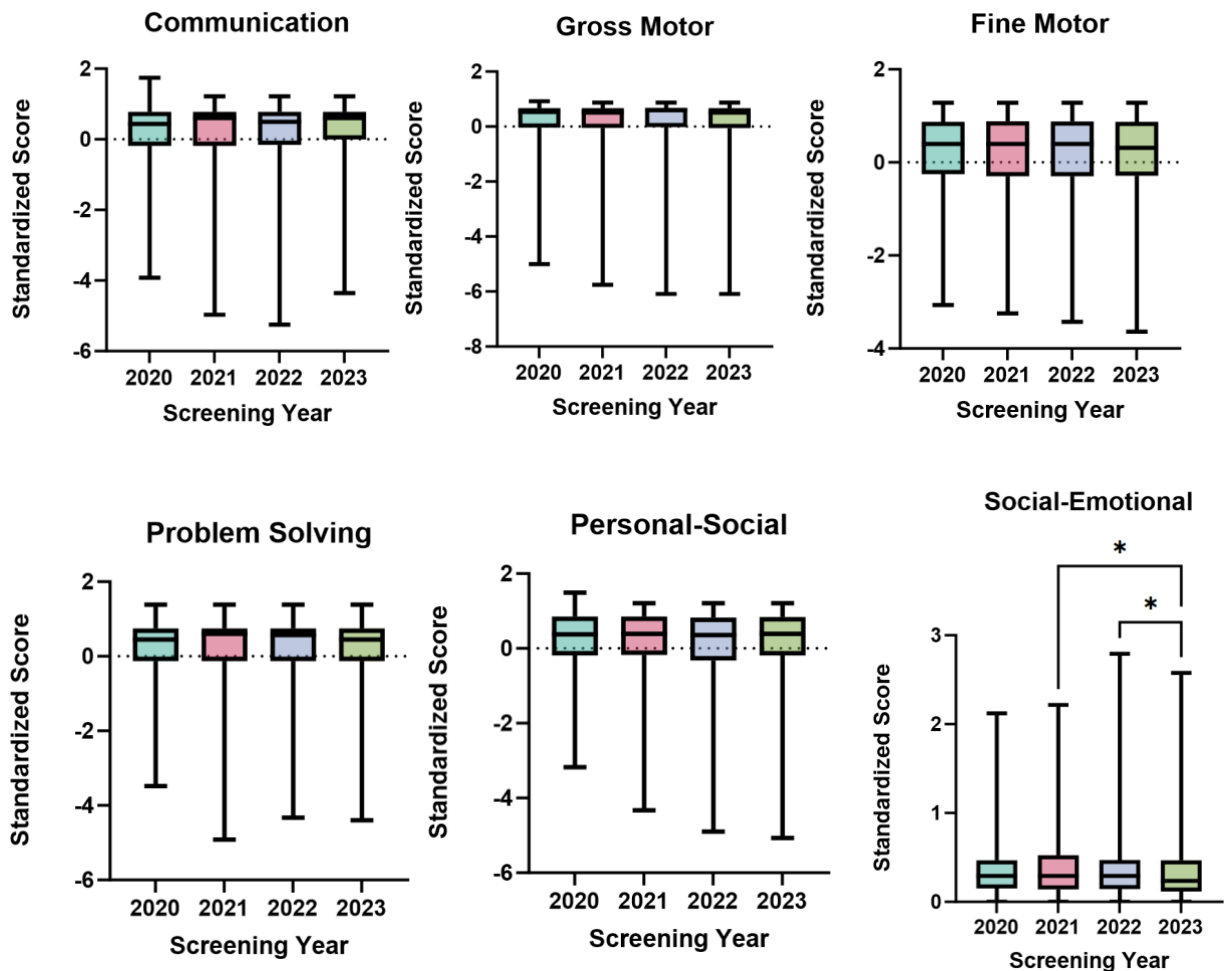
(2020 n=372; 2021 n=525; 2022 n=655; 2023 n=649).

Ordinary one-way ANOVA were conducted to compare standardized scores across years. 2019 was not included in this analysis due to the small sample size. No significant differences were found between years for any of the domains screened by the ASQ-3. Significant difference in scores were found for the social-emotional domain: the scores for the ASQ:SE-2 in 2023 were significantly lower (i.e., more children were scoring in the "typically developing" zone) than the scores collected in 2022 and 2021. This finding suggests that children's social-emotional development may be improving in the year 2023 as compared to 2022 and 2021. The black horizontal lines on each graph indicate the median score for each year.

Table Representation of Developmental Delay by Municipality

Number of children at risk for developmental delay by domain by Municipality in 2023

Municipality		Communication	Gross Motor	Fine Motor	Problem Solving	Personal Social
Anonymized Municipality 1	n = 16	4	2	2	1	2
Anonymized Municipality 2	n = 51	0	2	1	1	1
Anonymized Municipality 3	n = 46	3	5	3	2	2
Anonymized Municipality 4	n = 19	2	3	1	1	1
Anonymized Municipality 5	n = 10	1	1	2	1	2
Anonymized Municipality 6	n = 80	5	1	7	3	4
Anonymized Municipality 7	n = 31	2	3	4	1	2
Anonymized Municipality 8	n = 31	1	1	2	1	1
Other	n = 22	1	4	2	0	1

Municipality		Communication	Gross Motor	Fine Motor	Problem Solving	Personal Social
Anonymized Municipality 1	n = 19	1	1	0	0	0
Anonymized Municipality 2	n = 52	2	0	3	1	0
Anonymized Municipality 3	n = 55	1	0	5	3	4
Anonymized Municipality 4	n = 11	0	1	0	0	0
Anonymized Municipality 5	n = 16	1	0	0	0	0
Anonymized Municipality 6	n = 71	4	2	1	4	3
Anonymized Municipality 7	n = 24	0	0	0	0	0
Anonymized Municipality 8	n = 33	3	1	1	2	3
Other	n = 23	1	1	1	1	3

Number of children at risk for social-emotional delay by Municipality in 2023

April/ Spring 2023 Screen				October/ Fall 2023 Screen		
Municipality		*# At-Risk*		*Municipality*		*# At-Risk*
Anonymized Municipality 1	n = 18	0		*Anonymized Municipality 1*	n = 21	0
Anonymized Municipality 2	n = 53	1		*Anonymized Municipality 2*	n = 53	1
Anonymized Municipality 3	n = 49	0		*Anonymized Municipality 3*	n = 54	1
Anonymized Municipality 4	n = 23	1		*Anonymized Municipality 4*	n = 11	0
Anonymized Municipality 5	n = 13	0		*Anonymized Municipality 5*	n = 18	0
Anonymized Municipality 6	n = 77	2		*Anonymized Municipality 6*	n = 73	1
Anonymized Municipality 7	n = 33	4		*Anonymized Municipality 7*	n = 26	0
Anonymized Municipality 8	n = 34	1		*Anonymized Municipality 8*	n = 34	0
Other	n = 22	1		*Other*	n = 23	2

Graph Representation of Average Developmental Screening Score by Municipality
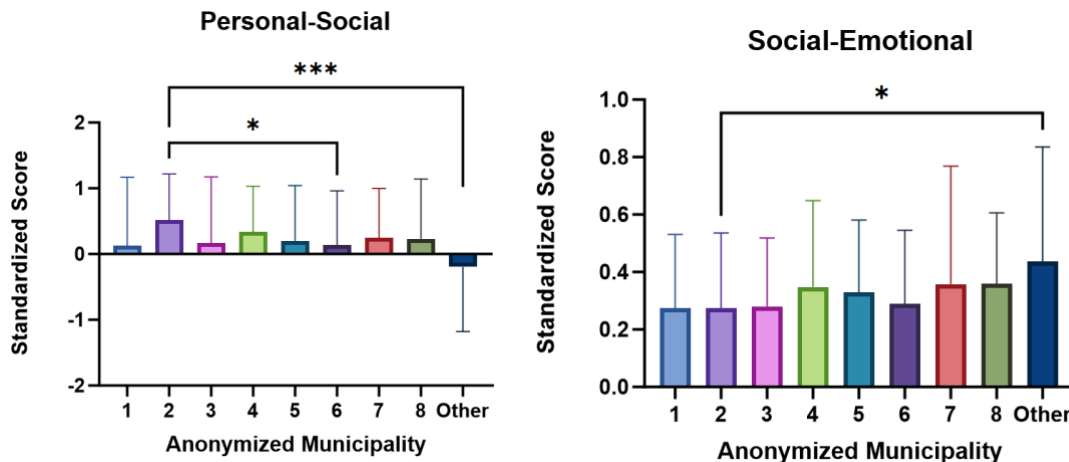
Ordinary one-way ANOVA were conducted to compare standardized scores across municipalities. Significant difference in average scores was found between Anonymized Municipality 2 and 'Other Municipality' in the Personal-Social and Social-Emotional domains. Significant difference in average scores was also found between Anonymized Municipality 2 and Anonymized Municipality 6 in the Personal-Social domain. In both cases of found significance in the Personal-Social domain, children have significantly higher

developmental screening scores in Anonymized Municipality 2. In the case of found significance in the Social-Emotional domain, children have significantly lower developmental screening scores in Anonymized Municipality 2 (i.e., more children scoring in the "typically developing" zone).

Table Representation of Developmental Delay by Services Received (2023)

April/ Spring 2023 Screen

Service Received		Communication	Gross Motor	Fine Motor	Problem Solving	Personal Social
Resource Program	n = 22	6	7	11	5	7
Healthy Babies Healthy Children Home Visiting Program	n = 0	-	-	-	-	-
Infant and Child Development	n = 1	1	1	1	1	1
Keystone Child, Youth and Family Services	n =2	0	0	0	0	0
Occupational Therapy and/or Physiotherapy	n = 9	6	4	9	3	5
Speech and Language Services	n = 34	7	7	13	6	7
Other	n = 0	-	-	-	-	-

October/ Fall 2023 Screen

Service Received		Communication	Gross Motor	Fine Motor	Problem Solving	Personal Social
Resource Program	n = 13	5	1	3	5	7
Healthy Babies Healthy Children Home Visiting Program	n = 0	-	-	-	-	-
Infant and Child Development	n = 1	0	0	0	0	0
Keystone Child, Youth and Family Services	n = 1	0	0	0	0	0
Occupational Therapy and/or Physiotherapy	n = 10	2	2	3	2	4
Speech and Language Services	n = 23	3	2	5	5	5
Other	n = 0	-	-	-	-	-

Number of children at risk for social-emotional delay by services received in 2023

April/ Spring 2023 Screen

Service Received		Children at risk of SE delay
Resource Program	n = 22	5
Healthy Babies Healthy Children Home Visiting Program	n = 0	-
Infant and Child Development	n = 1	0
Keystone Child, Youth and Family Services	n = 2	0
Occupational Therapy and/or Physiotherapy	n = 8	1
Speech and Language Services	n = 35	5
Other	n = 0	-

October/ Fall 2023 Screen

Service Received		Children at risk of SE delay
Resource Program	n = 14	1
Healthy Babies Healthy Children Home Visiting Program	n = 0	-
Infant and Child Development	n = 2	0
Keystone Child, Youth and Family Services	n = 1	0
Occupational Therapy and/or Physiotherapy	n = 10	3
Speech and Language Services	n = 24	1
Other	n = 0	-

Graph Representation of Change in Developmental Status over Screening Intervals
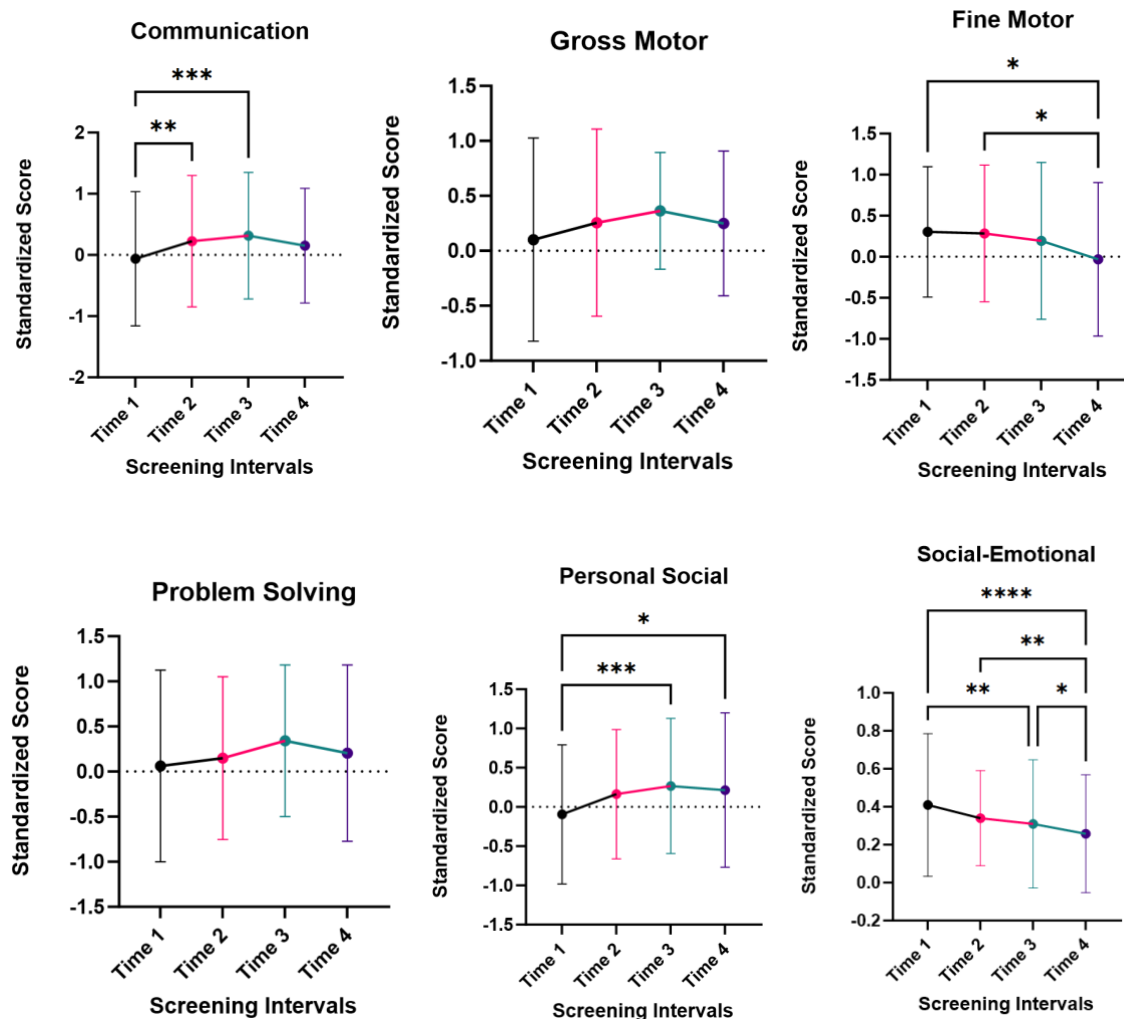
(n=82)

A mixed-effects model (REML) was utilized to compare standardized developmental screening scores across time. Each child was matched across screenings. Findings suggest that developmental screening scores significantly improve over the course of 3 and/or 4 screenings in the ASQ-3 domains of Communication and Personal-Social. While no significant difference was found in the analysis, developmental scores trend generally positively from Time 1 to Time 4 for Gross Motor and Problem-Solving. Findings also suggest that social-emotional scores (ASQ:SE-2) improve over the course of 4 screenings (as stated earlier, the scores from the ASQ:SE-2 are inverted from the ASQ-3). Findings

further suggest that fine motor scores significantly decline over the course of 4 screenings; the community partner may benefit from allocating resources and programming towards enhancing support for fine motor development in children under the age of 6.