Aim: Examine whether a comprehensive school readiness intervention prior to kindergarten entry had an effect on fine motor manipulation and writing skills in at-risk children.

Methods

Participants: 22 children aged 4 – 5 years were enrolled in the 7-week Summer Treatment Program for PreKindergarteners (STP-PreK) at a local early childhood center. Children were from a low-income community; some diagnosed with one or more behavior problems.

STP-PreK: STP-PreK focused on improving academic and behavioral skills to prepare underprivileged children for entry into kindergarten. Along with an intervention targeting emergent literacy skills, the STP-PreK classroom also targets early writing skills through a curriculum, Handwriting Without Tears. School readiness and fine motor skills were assessed pre/post STP-PreK participation.

School Readiness: Children’s school readiness was assessed via the Bracken School Readiness Assessment 3rd Edition (BSRA-3).

Fine Motor Skills: Children’s fine motor manipulation skills (FM) and fine motor writing skills (FW) were assessed via the Learning Accomplishment Profile-Diagnostic Edition (LAP-D).

Analyses: Paired samples t-tests were conducted to identify pre and post differences on the BSRA-3 and the LAP-D FM and FW subscales. Correlations between program attendance and rate of change in FM and FW scores were conducted. High/Low FW and FM groups were created by comparing individual scores to the sample’s mean score for each subscale at pre-intervention. Groups were then compared separately with paired samples t-tests to evaluate whether there were differential gains in school readiness on the BSRA-3 based on children’s fine motor skill baseline at the start of the intervention.

Results and Discussion

Fig. 1. FM and FW scores pre-/post-intervention.

Fig. 2. BSRA-3 scores pre-/post-intervention.

Fig. 3. FW change and attendance.

Fig. 4. High and Low FW groups on pre-/post-BSRA-3.

Fig. 5. High and Low FM groups on pre-/post-BSRA-3.

References and Acknowledgements

Take-Home Points:

✓ Improved writing, fine motor skills, and school readiness after STP-PreK participation.
✓ Greater program attendance is linked to greater positive rates of change in writing skills.
✓ High scoring FW and FM as well as low scoring FM groups showed significant differences in school readiness.

Background and Aims

- Evidence suggests that early motor skills have cascading effects on subsequent academic performance.1,3
- Early fine motor manipulation and writing skills at preschool are predictive of reading and math achievement on standardized tests in second grade2, as well as reading and math outcomes in 5th grade.3
- Programs that target improving school readiness outcomes early in education for at risk children may benefit from including fine motor manipulation and writing interventions in their curricula.

- Aim: Examine whether a comprehensive school readiness intervention prior to kindergarten entry had an effect on fine motor manipulation and writing skills in at-risk children.

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Fig. 1: FM and FW scores pre-/post-intervention.

Fig. 2: BSRA-3 scores pre-/post-intervention.

Fig. 3: FW change and attendance.

Fig. 4: High and Low FW groups on pre-/post-BSRA-3.

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References and Acknowledgements


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