



Background

- The **transition** from kindergarten to primary school is one of the major turning points of a kid’s life¹
- Potential **challenges** encountered during the transition: adapting to new physical and social environments, extended school hours etc¹.
- The term “**School readiness**” represented the level of kid’s development across **5 major domains**, including “physical well-being, motor development, social and emotional development, language and speech development, general knowledge and cognition”, that are essential for optimal **school performance**²
- Participating in sufficient amount of **physical activity (PA)** have been well-acknowledged as the medicine to improve physical and mental health, and recent research also supported its benefits on emotional and cognitive development^{3,4}
- However, only around 15% of preschoolers meet the PA recommendations (**60 mins/day** of moderate-to-vigorous PA)⁵
- There was limited evidence on assessing the effectiveness of the incorporation of PA-enhanced kindergarten curriculum in promoting preschoolers’ growth and readiness for primary school

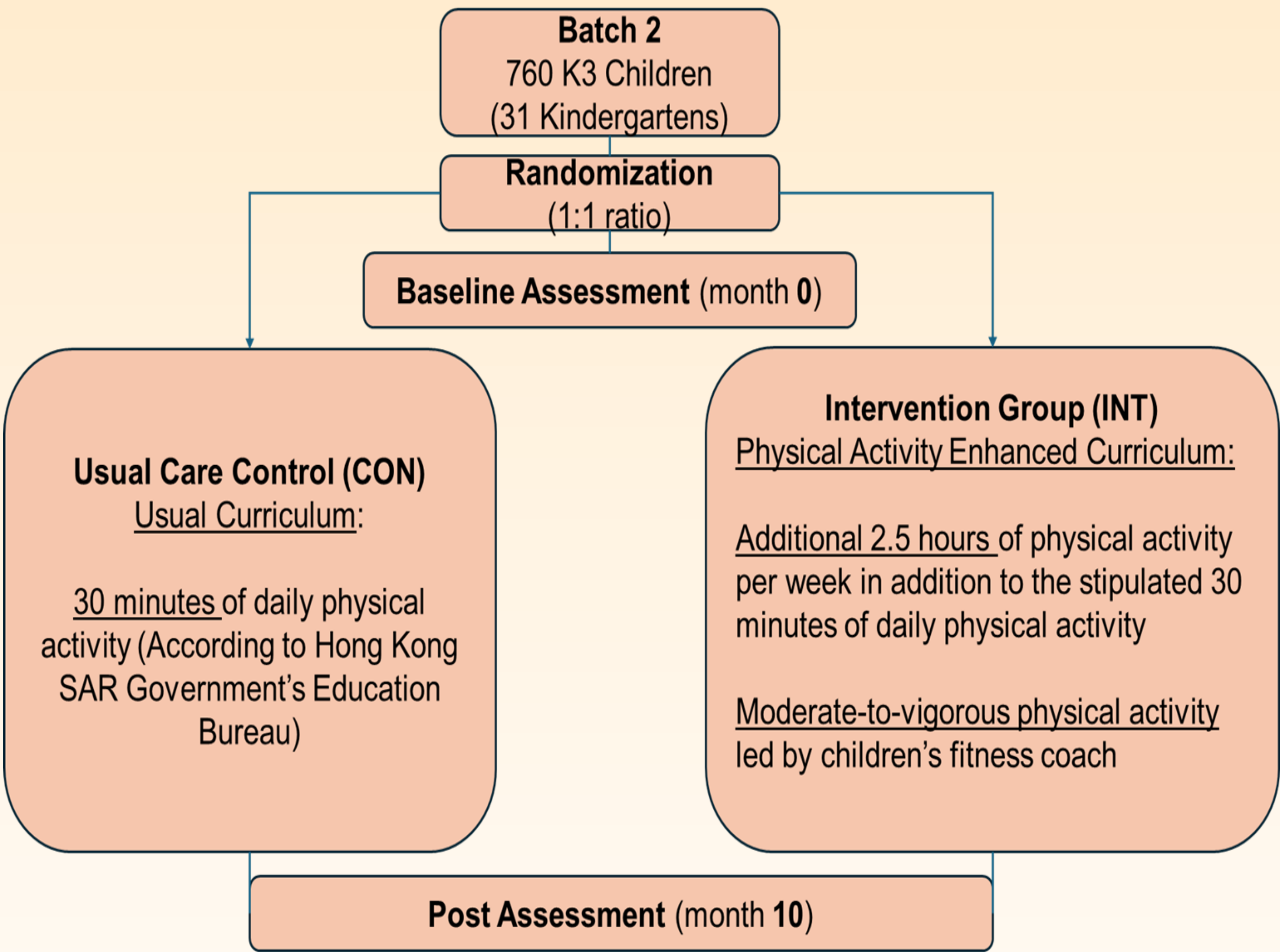
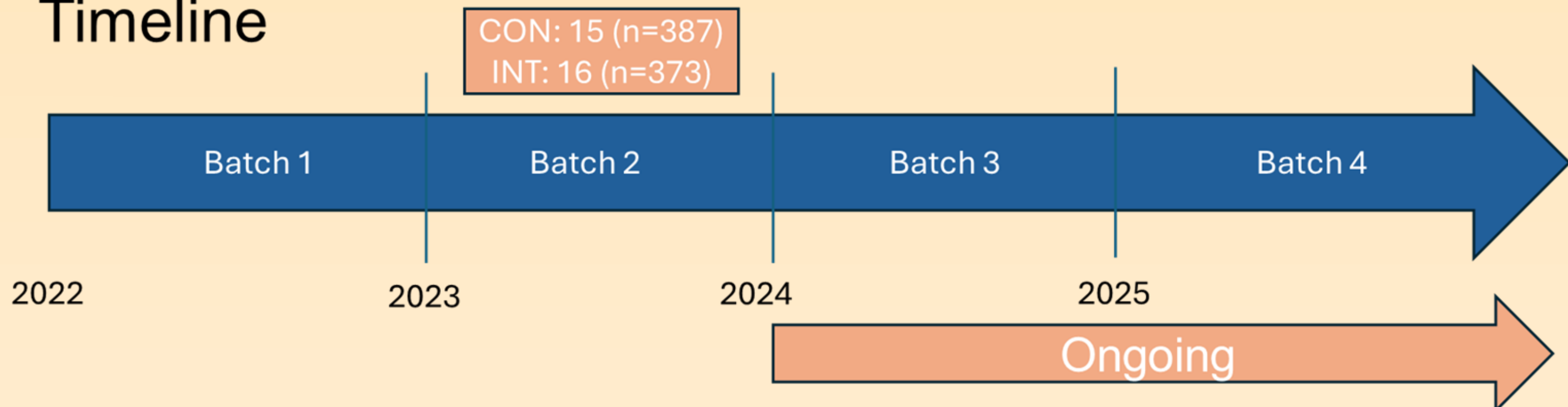
Objectives

To evaluate the effects of the physical activity-embedded curriculum on the improvement of school readiness of the kindergarten children.

Methods

An ongoing research that involved 3300 kindergarten children aged 5-6 years old from 110 kindergarten

Timeline



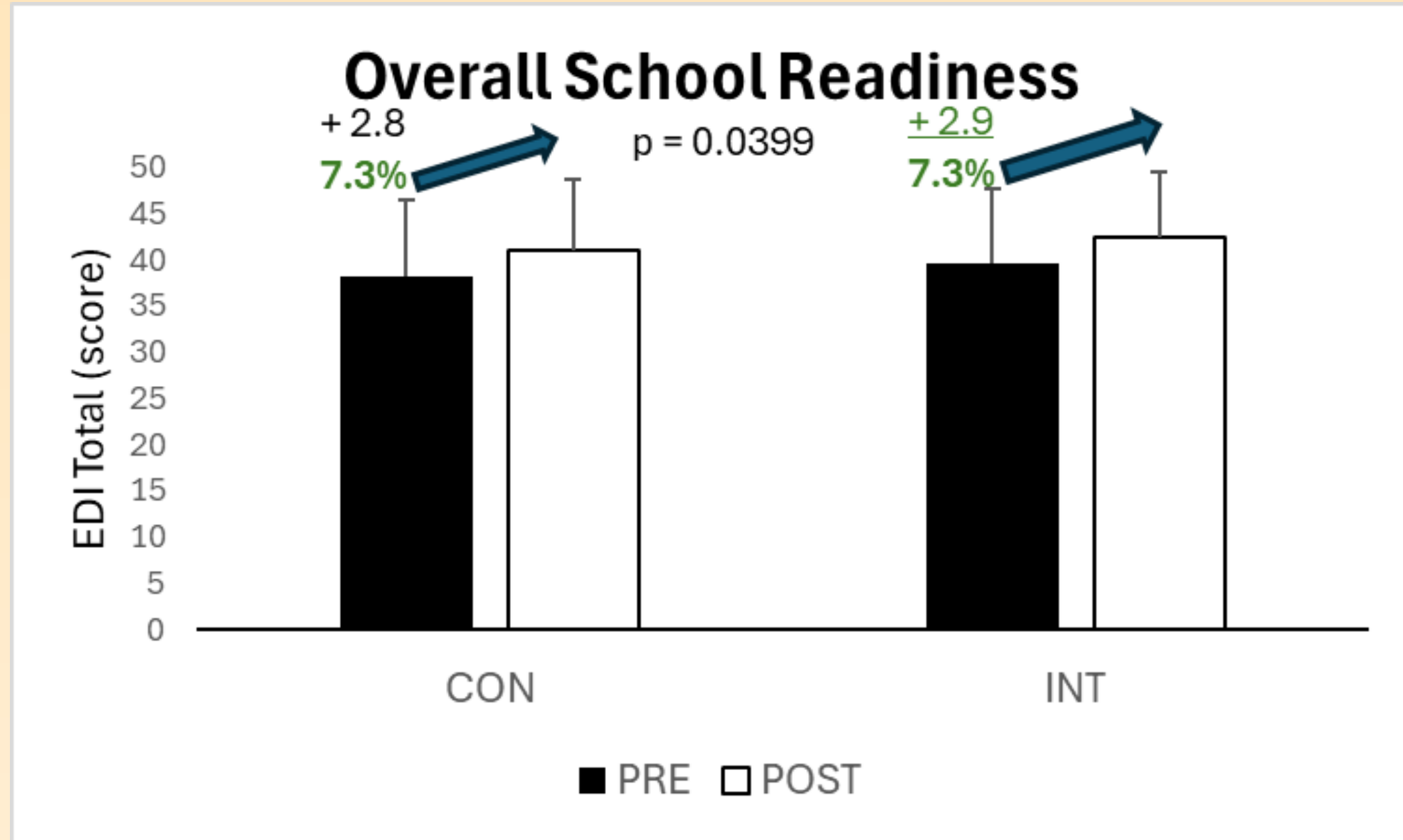
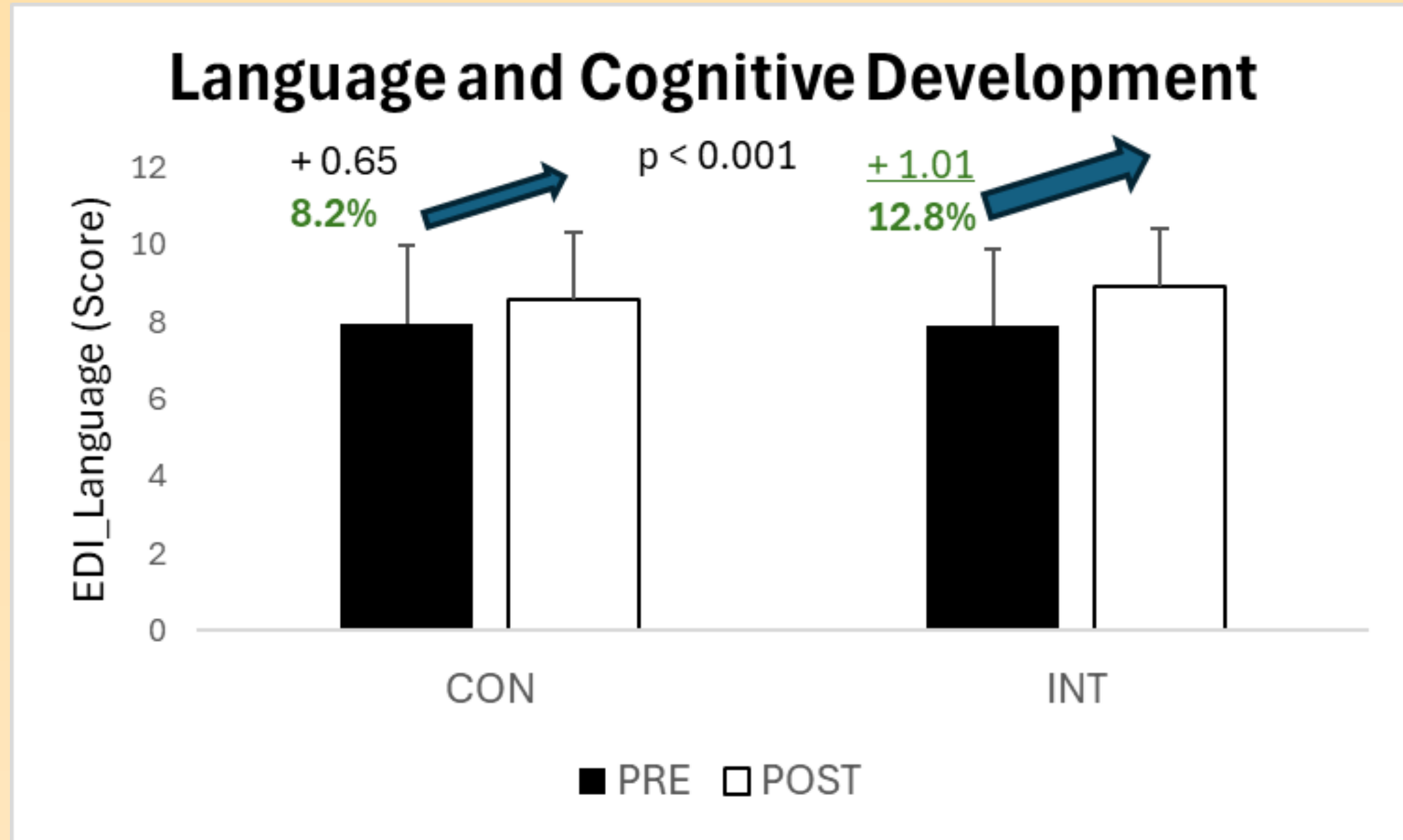
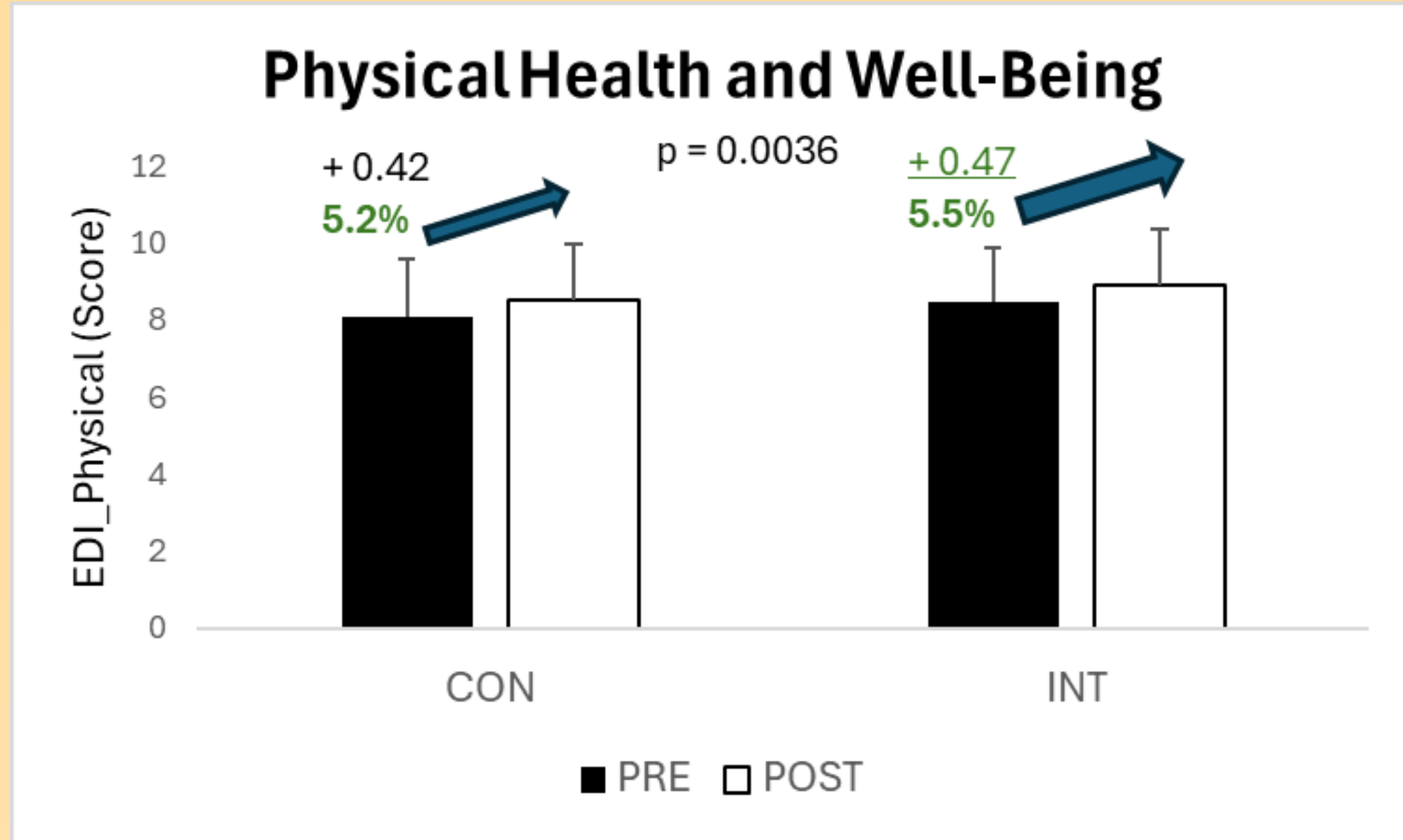
Outcome Measures – Early Development Instrument (EDI)⁶

- A psychometrically adequate indicator of general well-being in young children aged 5 years
- Assess children’s readiness on **five developmental domains**:
 - (1) physical health and well-being
 - (2) social competence
 - (3) emotional maturity
 - (4) language and cognitive development
 - (5) communication skills and general knowledge
- Each domain score range from 0-10
- Total Score range from 0-50

Statistical Analysis

- Generalized estimating equations (GEE) was used with adjustment for baseline values

Results



Statistically significant results (improvement in INT > CON) in:

- Physical Health and Well-Being
- Language and Cognitive Development
- Overall School readiness (EDI total score)

*Language and Cognitive Development domain (CON: +8.2%, INT: +12.8%)

	CON		INT		p-value
	PRE	POST	PRE	POST	
EDI_Physical	8.08 (1.49)	8.50 (1.44)	8.46 (1.44)	8.93 (1.42)	0.0036
EDI_Social	7.41 (2.30)	7.85 (2.13)	7.55 (2.16)	8.05 (1.97)	0.2117
EDI_Emotional	7.98 (1.70)	8.26 (1.62)	8.06 (1.67)	8.33 (1.65)	0.5086
EDI_Language	7.95 (2.05)	8.61 (1.73)	7.91 (2.02)	8.92 (1.50)	0.0002
EDI_Communication	7.27 (2.64)	7.84 (2.44)	7.70 (2.51)	8.31 (2.25)	<u>0.0685</u>
EDI_Total	38.16 (8.33)	40.95 (7.84)	39.66 (8.12)	42.54 (6.96)	0.0399

Conclusion

- Physical activity-embedded curriculum might present promising effects in promoting preschoolers’ overall school readiness (particularly shown significant improvement on their physical health and well-being, and language and cognitive development)
- Further exploration on the other domains contributing to the overall school readiness is needed in the coming batches so as to gain a more comprehensive picture on the effectiveness of the PA intervention

References

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