

Level of Agreement of 36-Month ASQ-3 between Parents, Child Care Providers, and Health Care Professionals

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Introduction

- Developmental delay is present in approximately 15% of children in the United States.¹
- Less than one-fifth of those children receive early intervention before age 3.¹
- Screening processes in pediatric settings are insufficient to identify all children with developmental delay.²

Objective

Investigate the level of agreement in typical methods of administration of the 36-month Ages and Stages Questionnaire 3rd ed. (ASQ-3) between parents, CCPs, and student physical therapists (SPTs).

Participants

- 11 children and parents from 2 childcare centers
- 5 childcare providers (CCPs)
- 7 student physical therapists (SPTs)

Methods

Outcome Measure: 36-month ASQ-3

- Standardized developmental screening tool designed to test a wide age range and be administered by various parties
- Rapid, simple, and cost-effective way to monitor a child's development

Developmental screening was conducted across two testing sessions for each child based on common practices of ASQ-3 administration (Fig. 1).

- **Session 1:** Parent scored child's performance from memory, unless confronted with novel items in which scoring was inferred or administered. SPT was present for questions.
- **Session 2:** CCP administered every item and scored the child based on their elicited performance while another SPT scored as an observer.

Figure 1. Session Design



Results

Inter-rater Agreement:

- CCPs and SPTs significantly agreed in 4/5 domains
- No significant agreement between parents/CCPs or parents/SPTs for any domain (Table 1).

Trends in specific domains (Fig. 2):

- Highly variable across the 5 domains
- Gross Motor: 73% of parents scored their child's ability higher than at least one rater from the standardized session by as much as 25 points.
- Problem Solving: 64% of the parents scored their child as much as 30 points lower than at least one other rater.

Table 1. Spearman's Rho Values

ASQ-3 Developmental Domain					
Dyad	Communication	Gross Motor	Fine Motor	Problem Solving	Personal Social
Parent-CCP	0.371	0.161	0.343	-0.487	-0.151
Parent-SPT	0.108	0.437	0.223	-0.381	0.284
CCP-SPT	0.699*	0.603*	0.254	0.842*	0.686*

*Rho value is significant at the 0.05 level

Conclusion

Inter-rater agreement between parents and CCPs or healthcare professionals was limited.

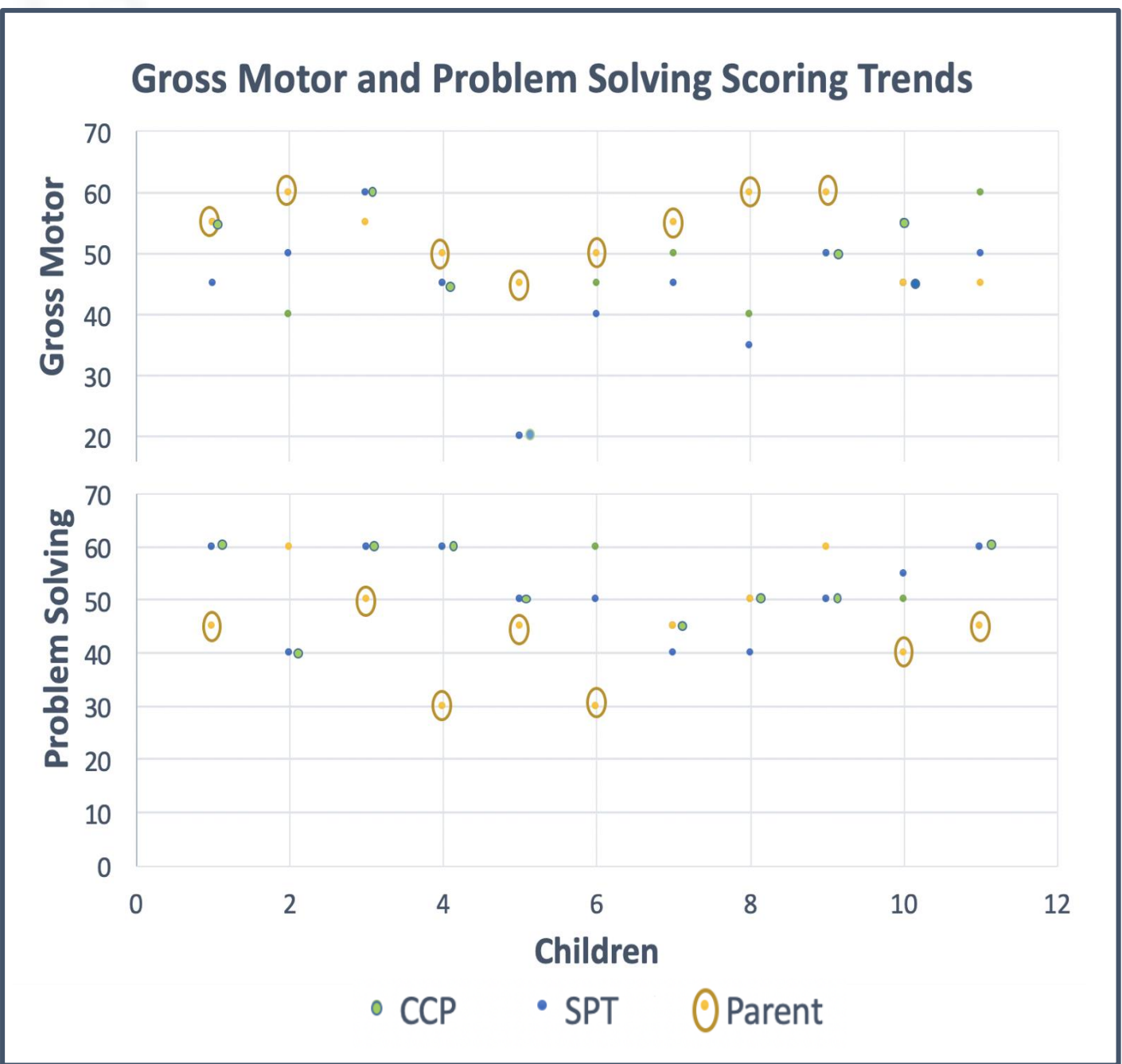
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Clinical Relevance

- Testing condition for parents was not parallel to the condition for other groups
- Recommend future exploration into:
 - Interpretation of this screening tool
 - Best use of the ASQ-3 and by parents and CCPs to promote their participation

Figure 2. Scoring Trends



References

1. Vitrikas K, Savard D, Bucaj M. Developmental delay: when and how to screen. *Am Fam Phys* 2017;96(1), 36-43. PMID: 28671370
2. Mackrides PS, Ryherd SJ. Screening for developmental delay. *Am Fam Phys* 2011;84(5),544-549. PMID: 21888305

