

Relationship of Praxis to Avocational Skills in Children with Dyspraxia

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Dedication

This presentation is dedicated in memory of

Laird Cermak

**With love and respect for our friend and
colleague:**

Sharon Cermak



Hypotheses

- **There will be a strong positive relationship among objective assessment, therapist judgement and parent report of praxis/motor skills.**
- **There will be a strong positive relationship among objective assessment, therapist judgement and parent report of praxis/ motor skills and avocational skills.**



Participants

- **31 children identified with dyspraxia receiving intervention services at OTA-Watertown**
- **Age: 6 - 13 years, $m = 8.0$ years, $sd = 1.5$**
- **Gender: 4 females, 27 males**
- **Length of intervention: 6 mos - 3 years**



Measures

- **Avocational Measures**
 - **Child Behavior Checklist Activity Scale (CACT) (Achenbach, 1991)**
- **Praxis Measures**
 - **Sensory Integration and Praxis Tests (Ayres, 1989)**
 - **Praxis Inventory (Koomar, 1995)**
 - **Motor section of the OTA-Watertown Developmental/ Sensory History (SXHX) (OTA-Watertown)**



Sensory Integration and Praxis Tests

- **Praxis on Verbal Command**
- **Design Copying**
- **Constructional Praxis**
- **Postural Praxis**
- **Oral Praxis**
- **Sequencing Praxis**
- **Bilateral Motor Coordination**
- **Standing and Walking Balance**
- **Motor Accuracy**
- **Graphesthesia**



Child Behavior Checklist Activity Scale (CACT)

- **Activity score = sum of time participating in avocational activities and quality of participation.**
- **Avocational Activities**
 - **Sports**
 - **Hobbies/ Games**
 - **Groups/ Clubs/ Organizations**
 - **Teams**
 - **Chores**



Praxis Inventory

- **Sum of rating of child's competency in:**
 - **Level of adaptive responses**
 - **Projected action sequences**
 - **Overall practic abilities**



OTA - Sensory History (SXHX)

- **Consists of 127 items**
- **Has 7 sections:**
 - **visual**
 - **auditory**
 - **vestibular**
 - **taste/ smell**
 - **tactile**
 - **motor skills**
 - **social**



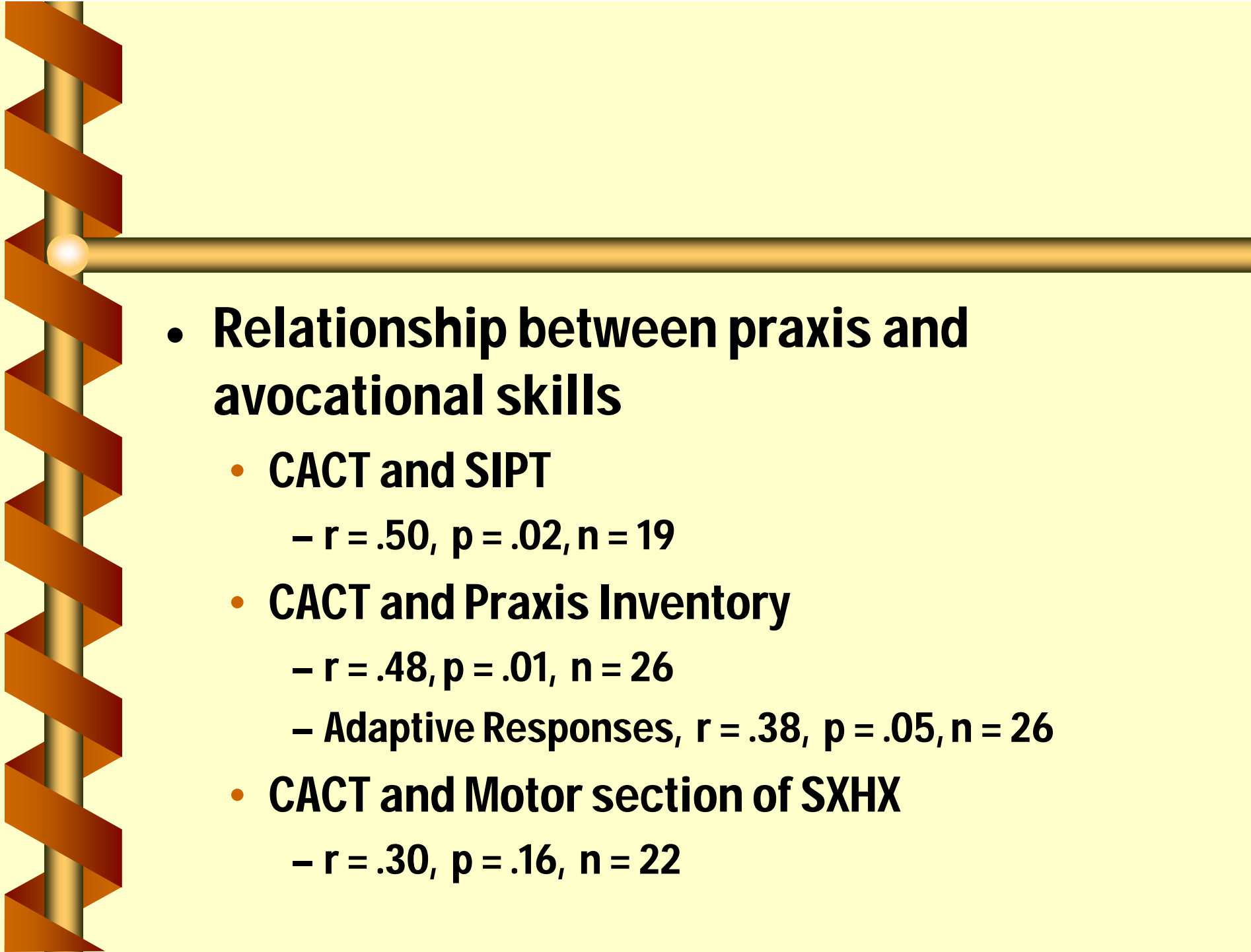
Procedure

- **All children received the SIPT as part of their initial evaluation at OTA-Watertown**
- **At the time of evaluation all parents completed the OTA-Watertown Sensory History**
- **The CACT was completed by the parents and the Praxis Inventory was completed by the treating therapist at the time of another study.**



Results

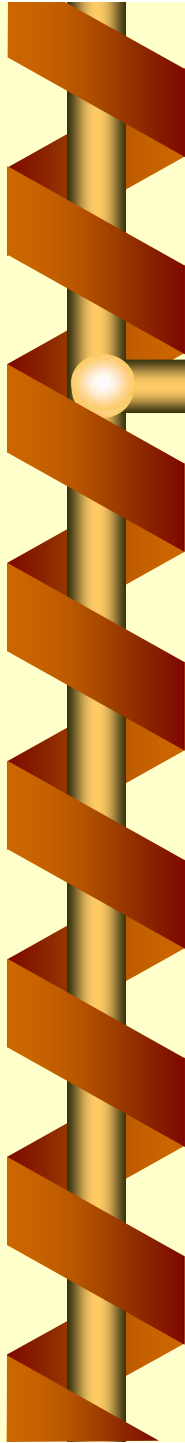
- **Relationship between praxis measures**
 - **SIPT and Motor Section SXHX**
 - $r = .43, p = .07, n = 18$
 - **SIPT and Praxis Inventory**
 - $r = .43, p = .06, n = 19$
 - Adaptive Responses, $r = .61, p = .005, n = 19$
 - **Praxis Inventory and Motor Section SXHX**
 - $r = .12, p = .55, n = 25$

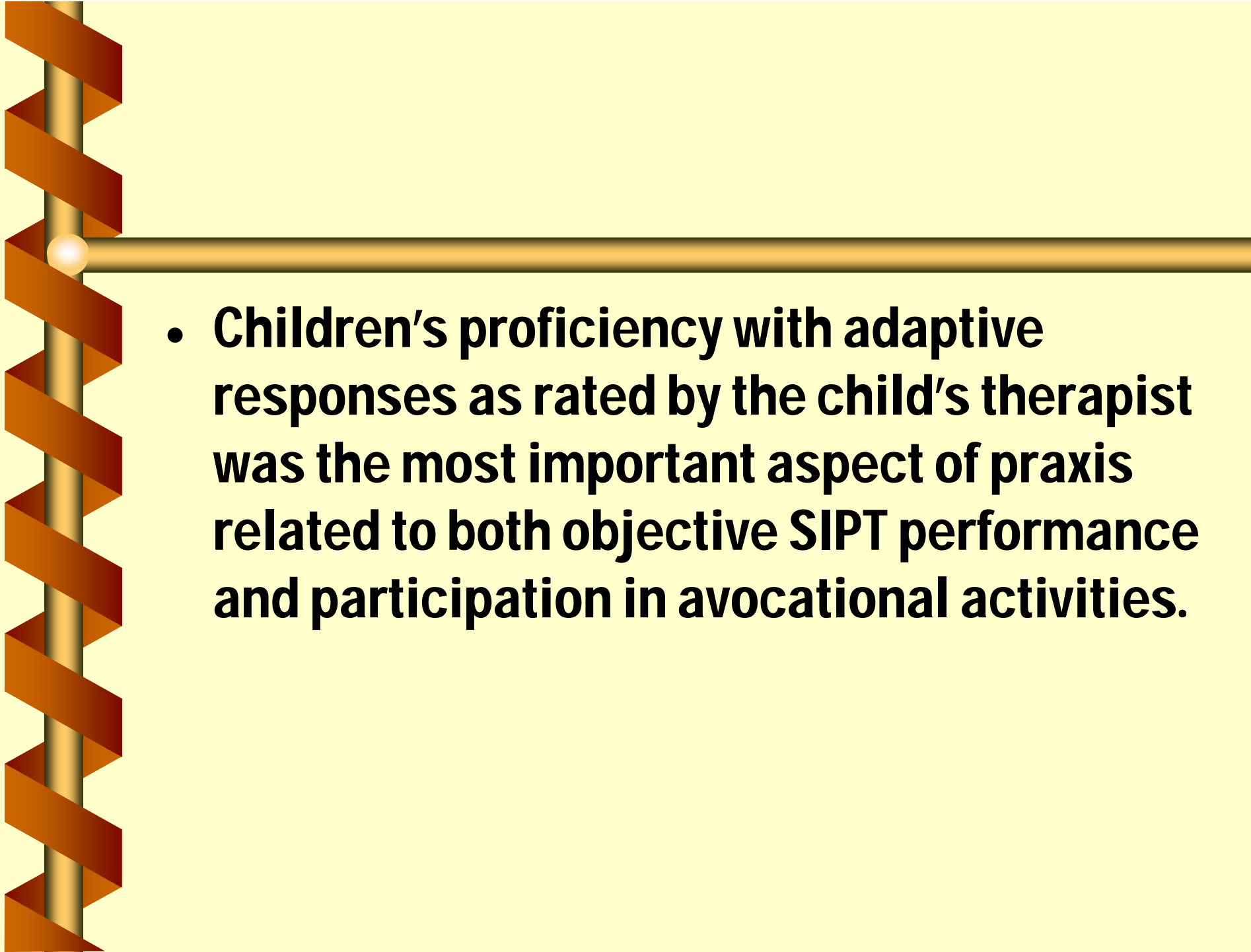
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- **Relationship between praxis and avocational skills**
 - **CACT and SIPT**
 - $r = .50, p = .02, n = 19$
 - **CACT and Praxis Inventory**
 - $r = .48, p = .01, n = 26$
 - Adaptive Responses, $r = .38, p = .05, n = 26$
 - **CACT and Motor section of SXHX**
 - $r = .30, p = .16, n = 22$



Conclusions

- **There is a significant relationship between the SIPT as an objective measure of praxis and both parent - report and therapist judgement ratings of praxis.**
- **There is no significant relationship between parent - report and therapist judgement ratings of praxis.**

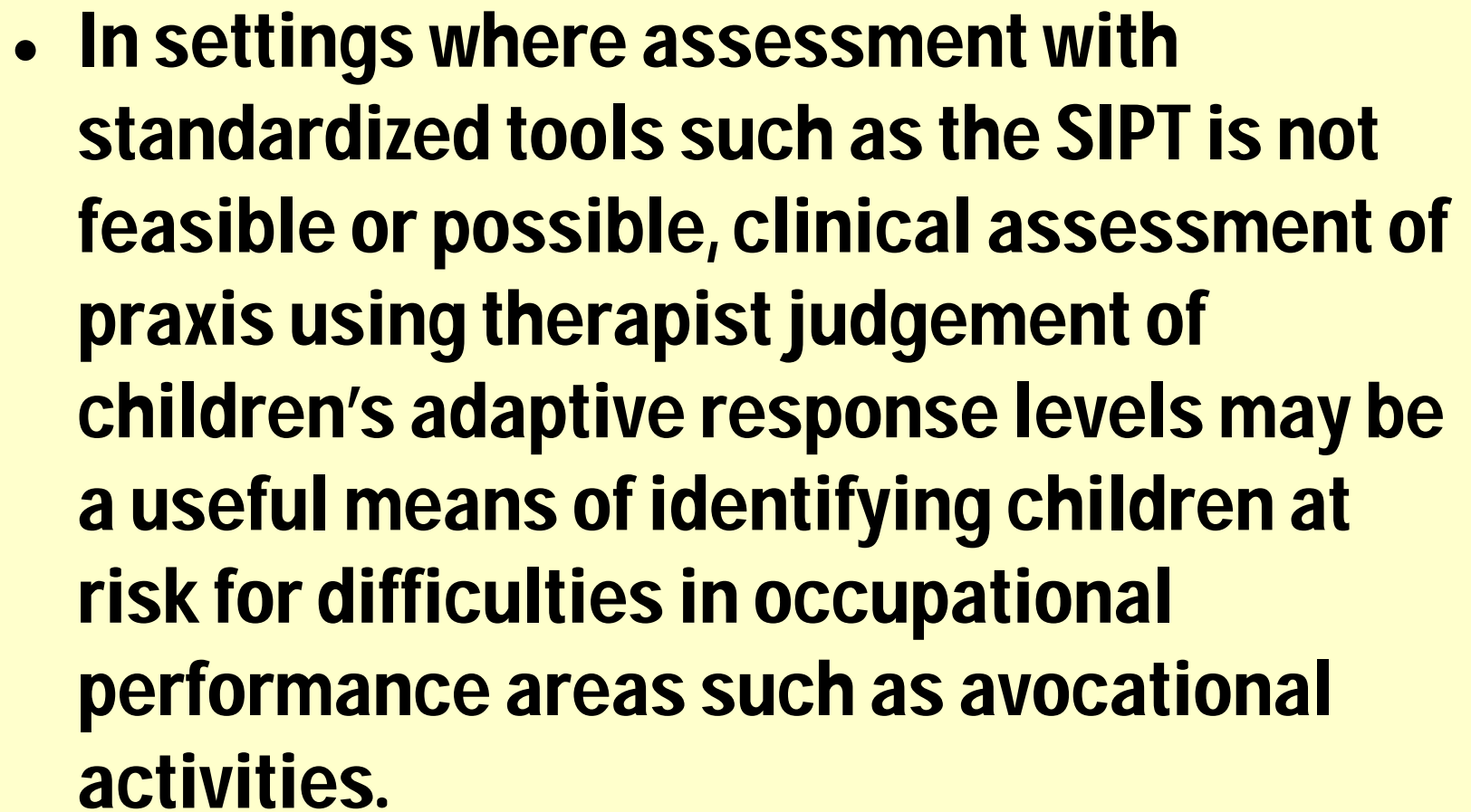
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- **There is a significant relationship between objective and therapist judgement ratings of praxis and parent ratings of children's avocational skills.**
 - **There is a marginal relationship between parent-report ratings of praxis and parent ratings of children's avocational skills.**

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- A decorative vertical bar on the left side of the slide features a spiral ribbon in shades of orange and red. A horizontal gold-colored line with a small white sphere at its left end extends from the bar across the top of the slide.
- **Children's proficiency with adaptive responses as rated by the child's therapist was the most important aspect of praxis related to both objective SIPT performance and participation in avocational activities.**



Implications for OT Practice

- **With increased emphasis on relating component skills to occupational performance in activities and social participation, this study provides evidence that dysfunction in the component skill of praxis is related to decreased skills and/ or participation in avocational activities.**

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- **In settings where assessment with standardized tools such as the SIPT is not feasible or possible, clinical assessment of praxis using therapist judgement of children's adaptive response levels may be a useful means of identifying children at risk for difficulties in occupational performance areas such as avocational activities.**