# Validation of the Preschool Kitchen Task Assessment

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## INTRODUCTION

Executive functioning (EF) helps build a strong foundation for school readiness, play development, and social participation in children. EF includes attention, inhibitory control, working memory, emotional regulation, planning, and problem solving.

Few ecologically valid assessments examining preschool aged children and the development of EF exists. The Preschool Kitchen Task Assessment (PKTA) was adapted from the Adult's Kitchen Task Assessment and the Children's Kitchen Task Assessment.

The PKTA examines EF of preschool children using an age appropriate craft activity. This study aimed to validate the PKTA as an ecological assessment of EF by comparing PKTA scores with established neurological assessments of executive function.

## RESEARCH DESIGN & METHODS

- Exploratory research design.
- Twenty four typically developing children ages 3 to 5 and their parents from 3 preschools in Marin County, California.

### Validation Measures

**Preschool Kitchen Task Assessment (PKTA)**

The child follows multiple steps of a recipe to complete the craft activity. The score is based on the level of assistance needed to complete each step and based on a scale of 0 to 5 with 0 = no cues, 1 = verbal guidance, 2 = gesture guidance, 3 = direct verbal assistance, 4 = physical assistance, and 5 = do for participant. Cues are given after 10 seconds to allow time for processing and problem solving.

**Forward and Backward Digit Span (FDS & BDS)**

Measures working memory.

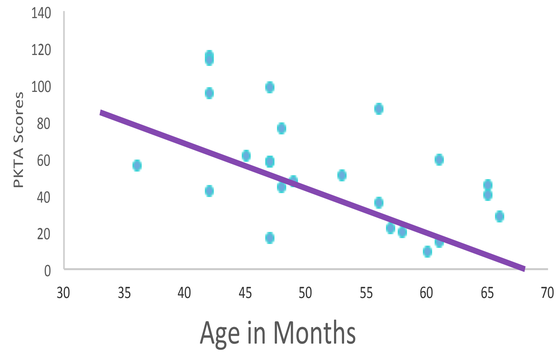
**The Behavior Rating Inventory of Executive Function-Preschool (Brief- P Parent Form)**

Measures inhibition, shifting, emotional control, working memory, and planning/organization.

**The Dimensional Change Card Sort (DCCS)**

Measures mental flexibility.

## RESULTS




There was a strong negative correlation between the PKTA score with the child's age in months. Pearson's $r$ = -.58, $p$ = .003

**Correlations between PKTA Total Score and Executive Function Assessment Scores**

| Test | r* |
|---|---|
| BRIEF-P | -.02 |
| DCCS | -.09 |
| FDS | .18 |
| BDS | -.25 |

*Pearson $r$ Correlation

Weak and non-significant correlations were found between the PKTA scores and DCCS, FDS, and BDS scores.

## CONCLUSIONS

The results do not support the PKTA as a measure of EF. Only weak correlations were found between scores on the PKTA and scores on the established EF assessments. Qualitative observation of children's performance did support the ecological validity of the PKTA as a measurement of EF.

PKTA was sensitive to age. Scores lowered as children aged. PKTA allows observation of crucial developmental skills in preschoolers such as fine motor, organization, visual-perception, and judgment and safety. Thus utilizing the PKTA to assess developmental milestones may possibly be more appropriate.

## REFERENCES

Davis, H.L., & Pratt, C. (1995). The development of children's theory of mind: The working memory explanation. *Australian Journal of Psychology*, 47, 25–31.doi: 10.1080/00049539508258765

Diamond, A., Carlson, S. M., & Beck, D. M. (2005). Preschool Children's Performance in Task Switching on the dimensional change card sort task: Separating the dimensions aids the ability to switch. *Developmental Neuropsychology*, *28*(2), 689-729. doi: 10.1207/s15326942dn2802_7

Gioa, G. A., Espy, K. A., & Isquith, P.K. (2003). *Behavior rating inventory of executive function-preschool version (pp. 1-105).* Lutz, FL: PAR.

Rocke, K., Hays, P., Edwards, D., & Berg, C. (2008, October). Development of a performance assessment executive function: The children's task kitchen assessment. *The American Journal of Occupational Therapy*, *62*(5), 528-537

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