

# Maladaptive Psychological Functioning and Language Impairment in Adolescence

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## Background

Clinic and community-based studies have shown that a large portion of children with psychiatric disorders have a structural language impairment (LI) with estimates ranging from 50% to 80%. Structural LI has been shown to be associated with both externalizing problems (e.g., Conduct Disorder) and internalizing problems (e.g., Anxiety Disorder). In adolescence, the demands on language for both social and academic adjustment increase dramatically. In particular, the ability to understand the non-literal meaning in language, represented by higher order or figurative language, becomes essential in adolescence. Higher order language (HOL) has not been studied in youth presenting for psychiatric service.

## Present Study

The present study examines structural language and HOL, as well as cognition and achievement in youth referred for psychiatric assessment and treatment and non-referred comparison youth. This poster presents preliminary findings of this study.

## Hypotheses

- Psychiatrically referred youth will differ significantly from non-referred comparison youth in exhibiting more cognitive and language problems including HOL problems.
- Psychiatrically referred youth with HOL problems will exhibit both more internalizing and externalizing problems than non-clinic comparison youth.
- There will be an association between the severity of HOL problems and psychiatric symptoms.

## Sample Description

|                | Clinic                 | Non-Clinic             |
|----------------|------------------------|------------------------|
|                | <b>N = 62</b>          | <b>N = 65</b>          |
| <b>Age</b>     | <b>14 years 7 mos.</b> | <b>14 years 8 mos.</b> |
| <b>(range)</b> | <b>(12-17)</b>         | <b>(12-18)</b>         |
| <b>Sex</b>     |                        |                        |
| <b>Boys</b>    | <b>68%</b>             | <b>65%</b>             |
| <b>Girls</b>   | <b>32%</b>             | <b>35%</b>             |

## Measures

|                                   |                                                  |
|-----------------------------------|--------------------------------------------------|
| <b>Intelligence</b>               | Wechsler Abbreviated Scale of Intelligence       |
| <b>Working Memory</b>             | Digit Span and Letter-Number Sequencing subtests |
| <b>Structural Language</b>        | The Clinical Evaluation of Language Fundamentals |
| <b>Higher Order Language</b>      | Test of Language Competence-Expanded             |
| <b>Psychiatric Symptomatology</b> | Child Behavior Checklist                         |

## Outcome Variables

- Internalizing behavior problems
- Externalizing behavior problems

## Independent Variables

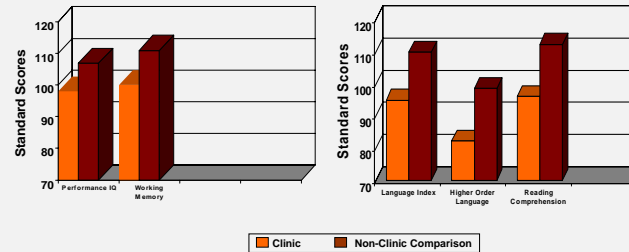
- Nonverbal IQ
- Working Memory
- Structural Language
- Higher Order Language

### Two sets of univariate analysis of covariance were used to:

- compare groups on structural and higher order language and cognitive, and socio-emotional characteristics.
- co-vary the effects of cognitive abilities that differed between the two groups (nonverbal IQ and working memory).

### Hierarchical Regression Analysis was used to examine the study hypotheses.

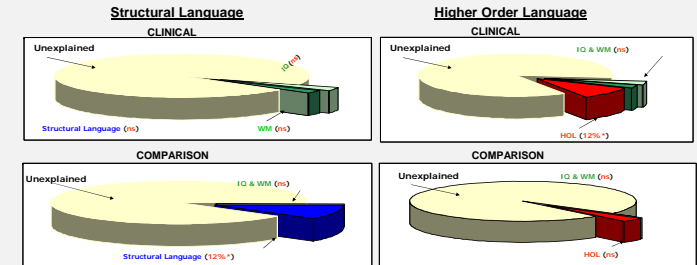
## Group Difference in Cognitive and Language Variables



Of all subscales of the Child Behavior Checklist only two subscales: Anxious/Depressed and Social Problems were significantly associated with structural language competence and HOL. Therefore, we only report the results for these two subscales.

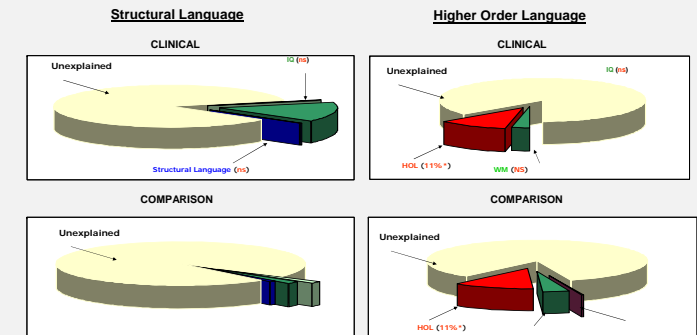
## Results: Anxious/Depressed

Youth in the comparison group were less likely than the clinic group to be anxious/depressed. Differences in Anxious/Depressed behavior in the comparison group were explained by structural language competence. In the Clinical group, however, HOL impairment is associated with elevated rates of anxiety/depression ( $r = -.41, p < .01$ ).



## Results: Social Problems

Comparison youth were less likely than the clinic youth to have social problems. However, differences in HOL contributed equally to Social Problem scores in both groups. A high positive correlation between working memory and structural language in the Clinical group ( $r = .74, p \leq .01$ ) indicates that difficulties with cognitive processing skills are also associated with social relationships. Better cognitive abilities and efficient processing skills enable youth to use their language skills as a tool not only for engaging in social interaction, but also as a means to understand others' behaviors, emotions, and thought processes.



## Discussion

It is likely that there is a reciprocal relationship between anxiety/depression and social problems with HOL skills in the clinically-referred youth. Youth with weaker HOL are likely to find it difficult to process ambiguous information or figurative language both in achievement and social situations. Verbal social interaction in adolescents relies on figurative language. For instance, problems with figurative language may interfere with participation in teasing, and banter with peers. These youth, therefore, are less likely to be accepted by their peers or come into conflict with them. Difficulty in social adjustment may accelerate anxiety and depression. In turn, anxiety and depression further impedes social adjustment.

## Conclusion

- For children presenting for psychiatric service HOL is related to both Anxiety/Depression and Social Problems.
- It is important to acknowledge that this is a correlational study and does not address issues of causality.
- However, it is reasonable to argue that there is a reciprocal relationship between social and emotional adjustment difficulties and HOL.