Gender Influence on Cognition and Structure in People with Schizophrenia

Nadia Quyyum, Sarah Clark, Aral Ahmadi, Jessica A. Turner
Psychology, Georgia State University, Atlanta, GA

INTRODUCTION

- Previous studies have found gender differences in both cognition and brain structure.
- Cognitive gender differences are consistent across species, and this pattern is thought to be universal.
- Gender differences in cognitive performance can also be found in children, and there is evidence that these differences may persist into adulthood.
- There are well-documented sex differences in schizophrenia and a growing body of studies examining cognitive gender differences in patients with schizophrenia.
- Studies on gender differences in schizophrenia often lack a direct comparison of male and female patients.
- By looking into cognitive and structural differences between men and women with schizophrenia, clinicians may obtain a better understanding of expression of the illness and provide a suitable treatment plan for each group.

METHOD

Participants
- 67 healthy controls (HC) and 67 patients with schizophrenia (SZ)
- 102 men and 32 women

Cognitive Measures
- Verbal Learning & Memory: Hopkins Verbal Learning Test (HVLT)
- Spatial Reasoning: Neuropsychological Assessment Battery (NAB) Mazes
- Attention: Conners Continuous Performance Test—Adult Version (CTP-IP)
- Cognition: Women tend to excel on cognitive tests compared to men in all areas except for spatial reasoning; cognitive gender differences apply to schizophrenia patients, with patients performing worse than controls due to their deficit.

Cognition x Structure: Male HC vs Male SZ

Statistical Analyses
- SPSS was used to create partial correlations between each cognitive measure and CT of the IPL as well as calculate MANCOVA and MANOVA.

RESULTS

Group Differences in Cognition

- 項目
- Left IPL CT & attention score were positively correlated, r(100)=.30, p<.05.
- Right IPL CT & spatial reasoning score were positively correlated, r(100)=.36, p<.05.
- Left IPL CT & attention score were positively correlated, r(100)=.41, p<.05.

- 項目
- Women overall scored higher on verbal memory (M=41.22, SD=12.14) than men (M=38.17, SD=11.24).
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RESULTS CONT'D

Cognition x Structure: Male HC vs Male SZ

- 項目
- In male HC...
  - Left IPL CT & spatial reasoning score were negatively correlated, r(45)=−.30, p<.05.
  - Right IPL CT and attention score were positively correlated, r(45)=.35, p<.05.

CONCLUSION

- Our results revealed that there are differences in cortical thickness in not only men, but also women; therefore, our results were not consistent with Frederikse et al.'s (2000) results.
- There were no significant gender differences regarding the effect of diagnosis on structure and cognition; however, diagnosis plays a key role in cortical thickness and cognitive measures, which is consistent with previous research.
- There is a relationship present between cognition and structure across diagnosis and gender.
- By looking into cognitive and structural differences between men and women with schizophrenia, clinicians may obtain a better understanding of expression of the illness and provide a suitable treatment plan for each group.

REFERENCES


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