A Manuscript Microscope 'Sentence Audit' of:

Structural Covariance Networks in Post-Traumatic Stress Disorder: A Multisite ENIGMA-PGC Study

What is the Manuscript Microscope Sentence Audit?

The Manuscript Microscope Sentence Audit is a research paper introspection system that parses the text of your manuscript into minimal sentence components for faster, more accurate, enhanced proofreading.

Why use a Sentence Audit to proofread your manuscript?

- Accelerated Proofreading: Examine long technical texts in a fraction of the usual time.
- Superior Proofreading: Detect subtle errors that are invisible to traditional methods.
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- Reliable Proofreading: Ensure every single word of your manuscript is correct.
- Easier Proofreading: Take the hardship out of crafting academic papers.

Bonus 1: Improved Productivity: Rapidly refine rough drafts to polished papers.
Bonus 2: Improved Authorship: Cultivate a clear, concise, consistent, writing style.
Bonus 3: Improved Reputation: Become known for rigorously precise publications.

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Features of the Sentence Audit:

The Sentence Audit combines two complementary proofreading approaches:

1. Each sentence of your text is parsed and displayed in isolation for focused inspection.
2. Each individual sentence is further parsed into Minimal Sentence Components for a deeper review of the clarity, composition and consistency of the language you used.

The Minimal Sentence Components shown are the smallest coherent elements of each sentence of your text as derived from it's conjunctions, prepositions and selected punctuation symbols (i.e. commas, semicolons, round and square brackets).

The combined approaches ensure easier, faster, more effective proofreading.

Comments and Caveats:

• The sentence parsing is achieved using a prototype natural language processing pipeline written in Python and may include occasional errors in sentence segmentation.

• Depending on the source of the input text, the Sentence Audit may contain occasional html artefacts that are parsed as sentences (E.g. "Download figure. Open in new tab").

• Always consult the original research paper as the true reference source for the text.

Contact Information:

To get a Manuscript Microscope Sentence Audit of any other research paper, simply forward any copy of the text to John.James@OxfordResearchServices.com.

All queries, feedback or suggestions are also very welcome.

Research Paper Sections:

The sections of the research paper input text parsed in this audit.

Section No.	Headings	Sentences
Section: 1	Abstract	17
Section: 2	1. INTRODUCTION	10
N/A	--- --- --- --- --- --- ---	0
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The Sentence Audit Of The Research Paper

Title # Structural Covariance Networks in Post-Traumatic Stress Disorder: A Multisite ENIGMA-PGC Study

S1 [001] Abstract

S1 [002] Introduction

Introduction

S1 [003] Cortical thickness (CT) and surface area (SA) are established biomarkers of brain pathology in posttraumatic stress disorder (PTSD).

Cortical thickness ...
... (CT) ...
... and surface area ...
... (SA) ...
... are established biomarkers ...
... of brain pathology ...
... in posttraumatic stress disorder ...
... (PTSD).

S1 [004] Structural covariance networks (SCN) constructed from CT and SA may represent developmental associations, or unique interactions between brain regions, possibly influenced by a common causal antecedent.

Structural covariance networks ...
... (SCN) ...
... constructed ...
... from CT ...
... and SA ...
... may represent developmental associations, ...
... or unique interactions ...
... between brain regions, ...
... possibly influenced ...
... by a common causal antecedent.

S1 [005] The ENIGMA-PGC PTSD Working Group aggregated PTSD and control subjects' data from 29 cohorts in five countries (n=3439).

The ENIGMA-PGC PTSD Working Group aggregated PTSD ...
... and control subjects' data ...
... from 29 cohorts ...
... in five countries ...
... (n=3439).

S1 [006] Methods

Methods

S1 [007] Using Destrieux Atlas, we built SCNs and compared centrality measures between PTSD subjects and controls.

Using Destrieux Atlas, ...
... we built SCNs ...
... and compared centrality measures ...
... between PTSD subjects ...
... and controls.

S1 [008] Centrality is a graph theory measure derived using SCN.

Centrality is a graph theory measure derived ...
... using SCN.

S1 [009] Results

Results

S1 [010] Notable nodes with higher CT-based centrality in PTSD compared to controls were left fusiform gyrus, left superior temporal gyrus, and right inferior temporal gyrus.

Notable nodes ...
... with higher CT-based centrality ...
... in PTSD compared ...
... to controls were left fusiform gyrus, ...
... left superior temporal gyrus, ...
... and right inferior temporal gyrus.

S1 [011] We found sex-based centrality differences in bilateral frontal lobe regions, left anterior cingulate, left superior occipital cortex and right ventromedial prefrontal cortex (vmPFC).

We found sex-based centrality differences ...
... in bilateral frontal lobe regions, ...
... left anterior cingulate, ...
... left superior occipital cortex ...
... and right ventromedial prefrontal cortex ...
... (vmPFC).

S1 [012] Comorbid PTSD and MDD showed higher CT-based centrality in the right anterior cingulate gyrus, right parahippocampal gyrus and lower SA-based centrality in left insular gyrus.

Comorbid PTSD ...
... and MDD showed higher CT-based centrality ...
... in the right anterior cingulate gyrus, ...
... right parahippocampal gyrus ...
... and lower SA-based centrality ...
... in left insular gyrus.

S1 [013] Conclusion

Conclusion

S1 [014] Unlike previous studies with smaller sample sizes (≤318), our study found differences in centrality measures using a sample size of 3439 subjects.

Unlike previous studies ...
... with smaller sample sizes ...
... (≤318), ...
... our study found differences ...
... in centrality measures ...
... using a sample size ...
... of 3439 subjects.

S1 [015] This is the first cross-sectional study to examine SCN interactions with age, sex, and comorbid MDD.

This is the first cross-sectional study ...
... to examine SCN interactions ...
... with age, ...
... sex, ...
... and comorbid MDD.

S1 [016] Although limited to group level inferences, centrality measures offer insights into a node's relationship to the entire functional connectome unlike approaches like seed-based connectivity or independent component analysis.

Although limited ...
... to group level inferences, ...
... centrality measures offer insights ...
... into a node's relationship ...
... to the entire functional connectome unlike approaches ...
... like seed-based connectivity ...
... or independent component analysis.

S1 [017] Nodes having higher centrality have greater structural or functional connections, lending them invaluable for translational treatments like neuromodulation.

Nodes having higher centrality have greater structural ...
... or functional connections, ...
... lending them invaluable ...
... for translational treatments ...
... like neuromodulation.

S2 [018] 1. INTRODUCTION

S2 [019] Post-traumatic stress disorder (PTSD) has a lifetime prevalence of 9.4% among adults in the US (Kessler et al., 2005) and 4% globally (Liu et al., 2017).

Post-traumatic stress disorder ...
... (PTSD) ...
... has a lifetime prevalence ...
... of 9.4% ...
... among adults ...

... in the US ...

... (Kessler et al., 2005) ...

... and 4% globally ...

... (Liu et al., 2017).

S2 [020] Cross-sectional and longitudinal studies show structural changes to specific brain regions and structural and functional connectivity differences between regions in PTSD (Akiki, Averill, & Abdallah, 2017; Hughes & Shin, 2011; Mueller et al., 2015; Philip, Carpenter, & Sweet, 2014; Tursich et al., 2015).

Cross-sectional ...

... and longitudinal studies show structural changes ...

... to specific brain regions ...

... and structural ...

... and functional connectivity differences ...

... between regions ...

... in PTSD ...

... (Akiki, ...

... Averill, ...

... & Abdallah, 2017; ...

... Hughes & Shin, 2011; ...

... Mueller et al., 2015; ...

... Philip, ...

... Carpenter, ...

... & Sweet, 2014; ...

... Tursich et al., 2015).

S2 [021] Cortical thickness (CT) and surface area (SA) are reliable biomarkers of pathology across psychiatric illnesses including PTSD.

Cortical thickness ...

... (CT) ...

... and surface area ...

... (SA) ...

... are reliable biomarkers ...

... of pathology ...

... across psychiatric illnesses including PTSD.

S2 [022] Interregional relationships in cortical thickness (Yun et al., 2020) are referred to as structural covariance networks (SCN).

Interregional relationships ...

... in cortical thickness ...

... (Yun et al., 2020) ...

... are referred ...

... to as structural covariance networks ...

... (SCN).

S2 [023] Features of a SCN, such as centrality, may be used to characterize regional and network pathology associated with neuropsychiatric disorders.

Features ...

... of a SCN, ...

... such as centrality, ...

End of Sample Audit

This is a truncated Manuscript Microscope Sample Audit.

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