Schizophrenic patients have been found to have altered brain structures with many regions having reduced volumes when compared to their healthy counterparts. Recent research suggests that schizophrenic individuals have reduced grey matter volumes in the frontal lobes, subcortical and limbic region (Birur et al., 2017). However, the hippocampal responsibility for memory and spatial recognition make it the current focus for schizophrenia research. Present research suggests a negative correlation between hippocampal volume and severity of negative symptoms as well as a significant overall decrease in hippocampal volume in individuals with schizophrenia (Bartholomew et al., 2017; Birur et al., 2017; Kalmdy et al., 2017; Walter et al., 2016).

It has been measured that there are regional differences in hippocampal reductions because each region projects to various other neuroanatomical structures, suggesting different functionality (Kalmdy et al., 2017).

**Results**

- **Initial findings indicate a significant difference of size between groups in the Hippocampus Amygdala Transition Area (HATA) (p = 0.04)** as well as a left side increase in the HATA region (p = 0.002).
- **A significant main effect of sex difference in the CA2/CA3 region was observed (p = 0.037).**
- **These findings are consistent with current literature (Haukvik et al., 2015; Ho et al., 2017; Mathew et al., 2014; Ota et al., 2017).**

However, normative men compared to men with schizophrenia and normative women compared to women with schizophrenia were both non-significant (p = 0.055, p = 0.482).

Weak to moderate correlations (r = 0.30) were found between CA2/CA3 region and some aspects of WCST (r = 0.32 (p = 0.04) and HATA and RBANS Attention (r = 0.44) and CA2/CA3 RBANS visuospatial memory (r = 0.42).

**Conclusions**

- The results suggest there are volume changes in anterior regions of the hippocampus in individuals with schizophrenia as is reflected in the literature.
- The results also suggest these changes are due to the disease rather than an effect of medication.
- Further work is needed understand how these regional volume differences relate to symptoms experienced by individuals with schizophrenia.

**References**

- Steinmetz May 11, 2018