Inflammation, Cognition and Psychosis: Untangling Shared Pathways

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Introduction

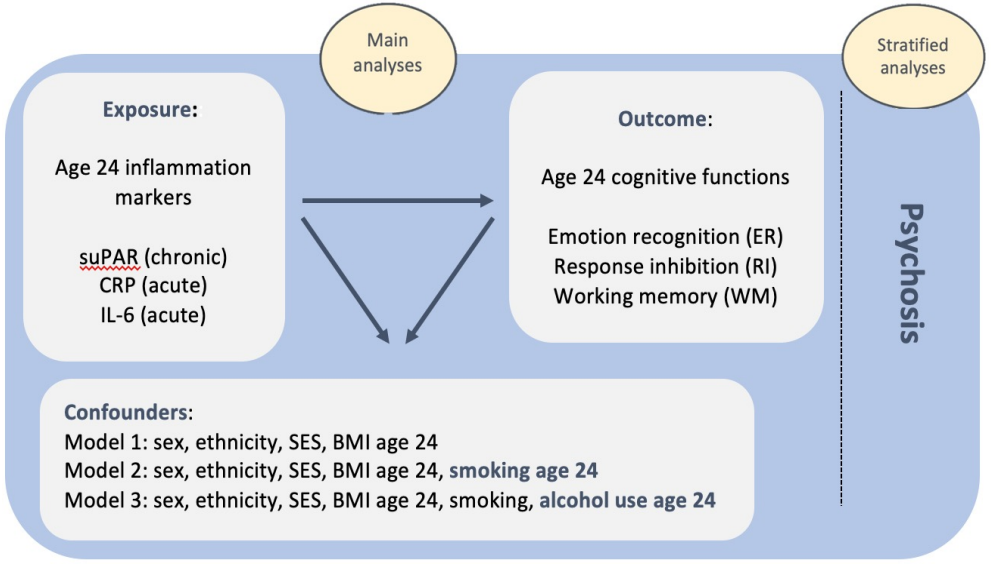
Deficits in cognitive functioning have often been reported in those with schizophrenia.[1] Interestingly, worse cognitive performance in schizophrenia has recently been linked to increasing levels of inflammatory markers.[2] Using 2969 British-born participants drawn from the **Avon Longitudinal Study of Parents and Children** (ALSPAC),[3] this study aimed to assess if:

1) The novel marker of chronic inflammation suPAR and acute markers CRP & IL-6 are associated with three cognitive functions at age 24.

2) This relationship is observed in people with psychotic disorder.

Methods

Figure 1. Map of research questions



Statistical analyses

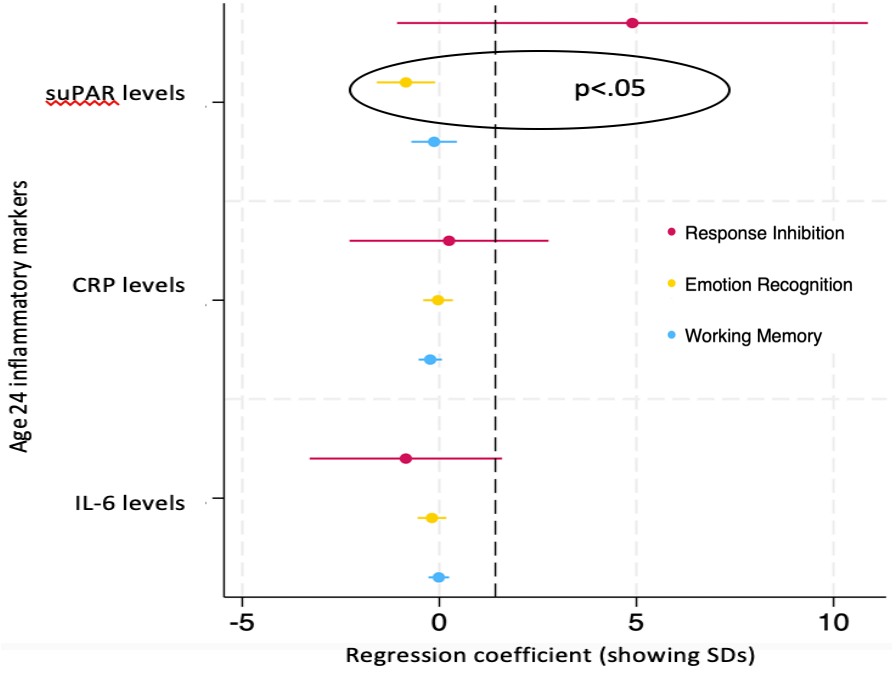
Linear regressions assessed relationship between inflammatory markers & cognitive functions.

LPA identified 3 classes of inflammatory burden & linear regressions identified associations between these profiles and cognitive measures.

Stratified analyses: Repeated analyses to identify a relationship in those with psychotic disorder (age 24).

Main findings

Figure 2. Associations between inflammatory markers and cognitive functions at age 24 adjusting for all confounders



Minor findings

Inflammatory profiles:
Little evidence found for inflammatory profiles & cognitive functioning at age 24.

Stratified analyses:
Relationship found between IL-6 & WM in people with psychotic disorder age 24.

Conclusion

This study showed a **novel** relationship between **chronic inflammation & emotion recognition in a cohort of young adults**.

ER deficits could be linked to sustained inflammation rather than the transient changes captured by the other acute markers.[4] suPAR also could be a more effective indicator of cognitive change in early adulthood, compared to CRP or IL-6 alone.

Future well-powered longitudinal analyses are warranted to develop a better understanding of these relationships in psychotic disorder.

References

1 Lesh et al. (2011). doi: 10.1038/npp.2010.156.
2 Misiak et al. (2018). https://doi.org/10.1016/j.schres.2017.04.015
3 Boyd et al. (2013). https://doi.org/10.1093/ije/dys064
4 Moriarty et al. (2023). https://doi.org/10.1016/j.neubiorev.2023.105162