A psychoneuroimmunological underpinnings of the relationship between childhood trauma, loneliness, and mental health in older adults

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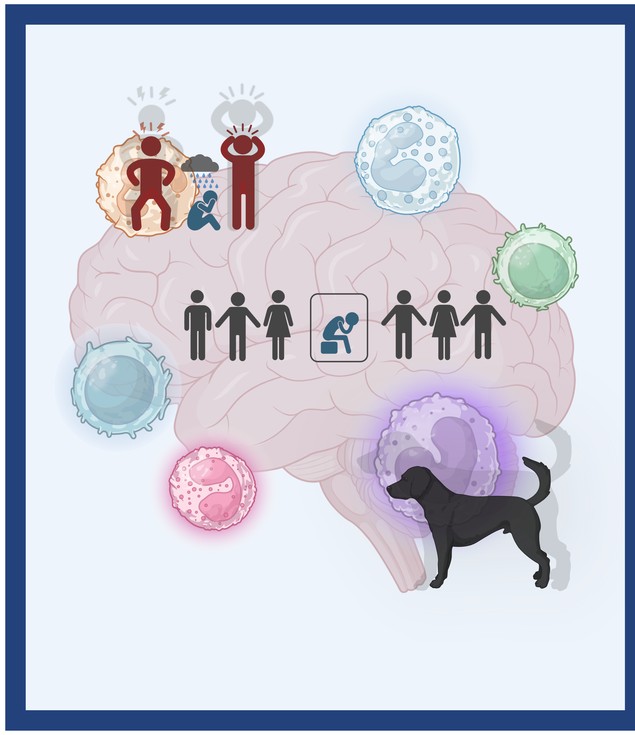

INTRODUCTION

- Late-life depression is common in older adults (Horackova et al., 2019)
- Childhood trauma and loneliness are significant risk factors (Comijs et al., 2013; Jeuring et al., 2018)
- Default mode network plays a pivotal role in affective disorders (Sheline et al., 2009)
- Age-related changes in immune system complicate the situation (Ferrucci & Fabbri, 2018)

AIM

- To examine relationships among childhood trauma, loneliness, and leukocyte distribution, and severity of depression and anxiety in older adults

METHODS

- Participants: 112 healthy adult participants were recruited, including 49 men between 60 and 92 taken from the project entitled "Integrating Systematic Data of Geriatric Medicine" (No. 201900702A3)
- Haematology: Complete blood count (CBC), neutrophil-to-lymphocyte ratio
- Psychological Inventories: Childhood Trauma Questionnaire, UCLA Loneliness Scale, Hamilton Depression Rating Scale and Hamilton Anxiety Rating Scale (Bernstein et al., 1994; Hamilton, 1959, 1960; Russell, 1996)
- Grey matter density: Quantified with T1-weighted MRI within the default mode network and its key regions (Yeo et al., 2011)

IMPLICATIONS

- Enriches understanding of biopsychosocial model of mental health
- Inspires future interventions targeting loneliness, immune system and brain ageing to promote mental well-being

METHODS

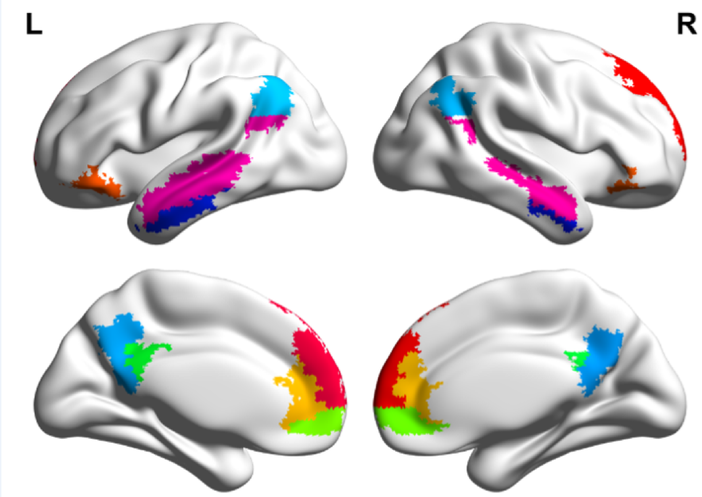

Figure 1 Overlapping regions between default mode network mask (Yeo et al., 2011) and 10 identified regions of interest in the automated anatomical atlas (AAL)

RESULTS

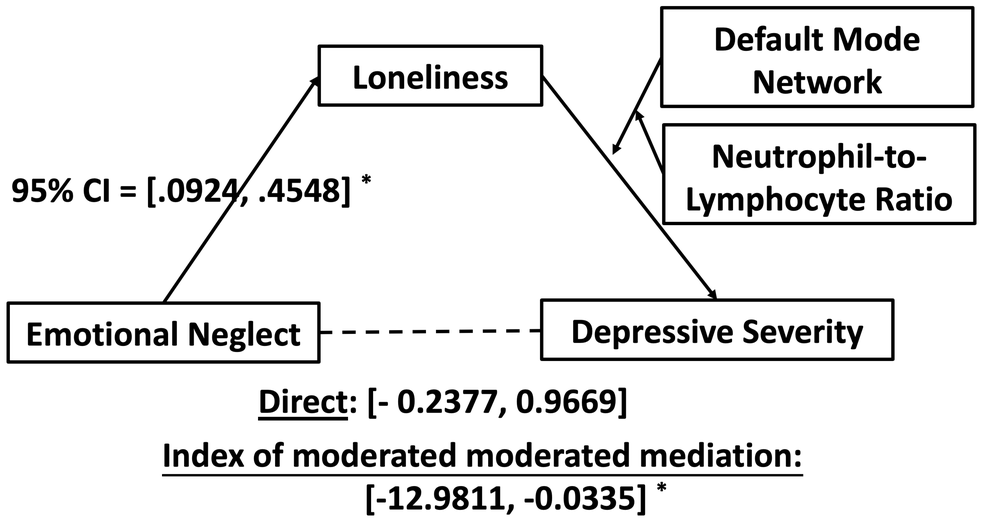

Figure 2 The conditional indirect effect indicating that childhood emotional neglect is associated with severity of depression in older people through loneliness, particularly those with a high neutrophil-to-lymphocyte ratio and with low grey matter density within the default mode network

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