• Motivation changes across the life span as a function of shrinking time horizons.
  o When time left is perceived as long and nebulous, individuals pursue learning goals to prepare for long lives.
  o When time left is limited, emotionally meaningful goals are prioritized (Carstensen 2006).
• Age-related narrowing of social networks is adaptive (English & Carstensen, 2014).
  o Across the life span the size of the peripheral social networks diminishes.
  o Older adults view members in their social networks as less negative.
  o Network negativity is associated with more negative daily emotional experience.
• However, life-span gains and losses involves trade-offs (Baltes, 1987).
  o Although narrowing of peripheral social networks is emotionally adaptive, such a social selection may adversely affect cognition. A familiar and predictable social environment is less cognitively stimulating.
  o Exposure to novel and stimulating environments is critical for cognitive health in old age (Park et al., 2014).

Hypotheses

- Hypothesis 1. Cross-sectionally, older adults’ social selection (i.e., low proportion of peripheral to close social partners in one’s social network) is associated with poor cognitive performance.
- Hypothesis 2. Older adults’ social selectivity is associated with poor long-term cognitive performance.

Participants

- Data were from the Longitudinal Emotional Experience Study (Carstensen et al., 2011).
  - Including 112 older adults aged 50 and older (M_{age} = 70.8; 51% men; 70% Caucasians);
  - 67 participants were followed up five years later (M_{age} = 69; 55% men; 76% Caucasians).
- Social selection. The Social Convoy Questionnaire (Kahn & Antonucci, 1980) was used to assess participants’ social networks. Social selection is operationalized in terms of the relative sizes of the member’s in the middle and outer circles to the total network size, respectively.
- Covariates. Age, SES, years of education, physical health, trait openness; Time 1 cognition was included when longitudinal relationships were examined.

Measures

- Cognition. Attention, working memory, and processing speed were assessed using digit forward, digit backward, digit symbol substitution tests, respectively (Weschler, 1981).
- Social selection. The Social Convoy Questionnaire (Kahn & Antonucci, 1980) was used to assess participants’ social networks. Social selection is operationalized in terms of the relative sizes of the members in the middle and outer circles to the total network size, respectively.
- Covariates. Age, SES, years of education, physical health, trait openness; Time 1 cognition was included when longitudinal relationships were examined.

Discussion and Future Directions

- Trade-offs between emotional well-being and cognitive health in old age. Findings from the current study suggest that the emotionally adaptive social selection in old age may entail long-term cognitive costs in the domain of working memory. Whether within-individual changes in social selection over time relate to the slope of cognitive declines warrants future research.
- Optimal social environments that support emotional and cognitive health. Identifying a sweet spot such as the best composition of social networks that offer both emotional comfort and cognitive stimulation is a critical next step.

Findings

- Cross-sectional findings from multiple regression analysis.
  - Digit forward performance was correlated with larger outer circle proportions (β = .23, p < .05) but not middle circle proportions (β = .18, p = .75; see Figure 1)
  - Digit symbol substitution performance was positively correlated with larger middle and outer circle proportions (Rs = .19, .25, p < .05, .01; see Figure 2 & 3).
  - Digit backward performance was unrelated to middle or outer circle proportions after the covariates were controlled (Rs = -.08, .16, ps = .45, .12).

- Longitudinally, smaller outer circle proportions are correlated with digit backward test assessed at T2 (Figure 4), controlling for the covariates and T1 digit backward performance.

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