

# Type and frequency of social contacts associated with low mood before and during the COVID-19 pandemic in older adults: I-CONNECT project

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## Abstract

**Background:** Social isolation is a risk factor for dementia, but the underlying mechanism is not well understood. It is possible that lack of social contacts negatively affects emotional well-being, which leads to cognitive decline. To shed light on this potential mediation mechanism, we examined changes in type and frequency of social contacts and their effects on mood using data collected before and during the COVID-19 pandemic among socially isolated older adults aged 75 and older.

**Method:** The data come from an ongoing randomized controlled trial, the Internet-Based Conversational Engagement Clinical Trial (I-CONNECT, ClinicalTrials.gov: NCT02871921). One hundred forty-six participants (age=81.0±4.5, 71.9% women) who were in the trial both before and during the pandemic and whose data were available as of November of 2020 were included in the current analysis. Weekly health questionnaires administered on all participants regardless of treatment assignments were collected before and during the COVID-19 pandemic. Low mood ("Blueness") was self-reported as feeling downhearted or blue for three or more days in the past week (YES/NO). Social contacts were self-reported by amount of time they had interacted, with whom (family; friends; others), and via which modalities (in-person; phone/video call; text/email).

**Result:** A total of 4,774 weeks of survey data were analyzed (3,047 before COVID 19). The weekly average time spent in-person, on phone/video call, and via text/email were 282, 113, and 44 minutes, respectively. During the COVID-19 pandemic, participants on average spent 82 minutes less in total social contact per week (in-person: reduced 123 minutes, video/call: increased 28 minutes, text/email: increased 13 minutes per week). Generalized estimating equation model revealed that in-person family contact was associated with less blueness regardless of the pandemic (OR=0.91, p=0.04). There was a COVID\*text/email time with friends interaction (OR=0.68, p=0.03), suggesting that during the COVID-19 pandemic, an increase of 1 hour of texting/emailing with friends per week was associated with 32% decrease in experiencing blueness three or more days per week.

**Conclusion:** In-person family time is beneficial for mental health. While in-person contacts become less frequent during the COVID-19 pandemic, increased text/email time with friends becomes an alternative to maintain mental health for socially isolated older adults.