Social isolation and loneliness

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Loneliness and Isolation Evidence Review

Is Social Exclusion still important for Older People?

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Social isolation

- Objective measure
- Relates to aspects of social network and diversity, frequency of contact, participation in social activities, social engagement
- Measured using one of these dimensions or by an index

Loneliness

- Subjective measure
- Relates to (dis)satisfaction with existing relationships
- Measured using standard questionnaires
Measuring isolation

Social isolation was measured as an index incorporating

-- Marital status

-- At least monthly contact with family, friends and children (face-to-face, telephone or email)

-- Participation in religious activities, clubs, political groups, etc.
Measuring loneliness

**Loneliness** was measured using the Revised UCLA loneliness scale

The next questions are about how you feel about different aspects of your life. For each one, please say how often you feel that way.

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<th>Hardly ever or never</th>
<th>Some of the time</th>
<th>Often</th>
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<tr>
<td>How often do you feel you lack companionship?</td>
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<tr>
<td>How often do you feel left out?</td>
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<tr>
<td>How often do you feel isolated from others?</td>
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Social isolation and loneliness in ELSA

• At the latest wave of ELSA, 5% of participants were very isolated, while just under a quarter of participants reported very high levels of integration

• Just over 2% of participants reported the highest possible scores on loneliness, while about half of the participants reported never feeling lonely
Relationship between isolation and loneliness

- Studies typically report a weak to moderate association

- For example, in ELSA wave 5 over a quarter of participants who reported the highest possible scores on loneliness were among the least isolated
Work at UCL has focussed on

- Examining effects of isolation and loneliness on physical and cognitive function, individually as well as simultaneously

- Examining pathways through which isolation and loneliness affect health
Cognitive function
Association with cognitive function

- Previous findings on the effects of social isolation and loneliness on cognitive function are mixed.

- We examined the effects of isolation and loneliness on change in cognitive function in ELSA over a 4-year period.
Methods

• Baseline data from wave 2 (2004/5), follow-up from wave 4 (2008/9)

• Isolation and loneliness measured at wave 2

• Cognitive function measured at baseline and follow-up
  -- Verbal fluency: animal naming
  -- Immediate recall and delayed recall: 10-word list
Loneliness, isolation and change in cognitive function

- Social isolation was associated with poor scores on all measures of cognitive function at follow-up, irrespective of baseline scores.

- Loneliness was associated with poorer recall scores at follow-up, irrespective of baseline scores.
Social isolation, loneliness and change in recall

Immediate recall at follow-up

Delayed recall at follow-up

Loneliness at baseline

- Low isolation
- Medium isolation
- High isolation
Mortality

![Graph showing period expectation of life at age 65 for males and females from 1911 to 2001.](image)
Associations with mortality

• Previous studies show that isolation and loneliness are associated with a higher risk of mortality

• Most studies, however, fail to consider both measures simultaneously

• We examined the relationship between isolation, loneliness and mortality over a mean follow-up period of 7.25 years (+ 2.8 months).
Social isolation and mortality

Age + gender
HR(95%CI): 1.41 (1.23 – 1.60)

Age + gender + demographic factors
HR (95%CI): 1.32 (1.16 – 1.51)

Age + gender + demographic factors + health indicators
HR (95%CI): 1.23 (1.07 – 1.41)

Age + gender + demographic factors + health indicators + loneliness
HR (95%CI): 1.23 (1.08 -1.41)
Loneliness and mortality

Age + gender
HR(95%CI): 1.34 (1.17 – 1.53)

Age + gender + demographic factors
HR (95%CI): 1.23 (1.08 – 1.42)

Age + gender + demographic factors + health indicators
HR (95%CI): 1.05 (0.91 – 1.21)

Age + gender + demographic factors + health indicators + isolation
HR (95%CI): 1.04 (0.90 -1.19)
Pathways to health
Mechanisms

• Behavioural mechanisms, through social support or cues for behavioural choices
  -- *Studies show some support for the effect of isolation on health behaviours, but the evidence for loneliness is mixed.*

• Biological mechanisms, through susceptibility and reactivity to stress
  -- *Some evidence for effects on blood pressure and blood cholesterol*
  -- *Mixed findings on association with inflammatory markers*
Methods

• Data from wave 2 of ELSA (2004/5)

• Health behaviours: smoking, physical activity

• Blood pressure, cholesterol

• Inflammatory markers: C-reactive protein, fibrinogen
Risky health behaviours and social isolation

• One standard deviation increase in social isolation was associated with
  -- 32% increase in the odds of being a smoker
  -- 23% increase in the odds of being inactive and
  -- 56% increase in odds of reporting both low levels of activity and smoking

• Analyses were adjusted for age, gender, wealth, health indicators, depression and loneliness
Risky health behaviours and loneliness

- One standard deviation increase in the loneliness score was associated with
  - 10% increase in the odds of being a smoker
  - 13% increase in the odds of being inactive and
  - 16% increase in odds of reporting both low levels of activity and smoking

- Analyses were adjusted for age, gender, wealth, health indicators, depression and isolation.
Blood pressure and social isolation

- Higher levels of social isolation were associated with increases in both systolic and diastolic blood pressure.
- Effects persisted after adjustment for age, gender, wealth, health indicators, depression and loneliness.
Blood pressure and loneliness

- Levels of loneliness showed no significant association with either systolic or diastolic blood pressure.
Cholesterol and isolation

- Levels of isolation showed no significant association with total cholesterol levels or the total cholesterol: HDL cholesterol ratio.
Levels of loneliness showed no significant association with total cholesterol levels or the total cholesterol: HDL cholesterol ratio.
Increased social isolation was associated with higher levels of C-reactive protein.

Isolation showed a significant association with levels fibrinogen, such that greater isolation was associated with increased levels of fibrinogen.

Effects persisted after adjustment for age, gender, wealth, health indicators, depression and loneliness.
Inflammatory markers and loneliness

- Loneliness showed no significant associations with either C-reactive protein or fibrinogen.
Conclusions

• Social isolation and loneliness are distinct, though related, concepts

• Health effects of isolation and loneliness differ and mechanisms of action may also differ

• Need to develop interventions to support older adults who are isolated or lonely