האם אפשר לסכם את הסביבה בין אישית במדד אחד?çois

פרופ' הوارד ליטווין

סדנה מתודולוגית בנושאים
سكرי אוכלוסייה: מה ניטן ל投资额 אוטפל

ירשלים
27 דצמבר, 2015
Social network

The collection of interpersonal ties that people maintain and which provide them with a range of supports, resources and services.
- Link to relevant information
- Provide cognitive feedback
- Provide emotional support
Structure
Size
Composition
Density
Structure
  Size
  Composition
  Density

Interaction
  Contact frequency
  Duration
  Reciprocity

Quality
  How people rate them
  The support they receive
Social support

- Affirmative support
- Emotional support
- Tangible support

There is less agreement as to how social networks are best measured for analytical purposes.
Each circle (node) represents one person in the data set (N= 2200). Circles with red borders denote women, blue borders denote men. The size of each circle is proportional to the person’s BMI: yellow denotes an obese person, green denotes a nonobese person. The colors of the ties between the nodes indicate the relationship between them: purple denotes a friendship or marital tie and orange denotes a familial tie.
❖ Analysis of whole networks is time consuming and costly

❖ Consequently, large population studies that aim to address social networks generally do so by means of personal or egocentric networks

❖ These efforts rely on the egos to provide information about the identities of alters
Two main thrusts can be discerned in the analysis of personal networks:

- the indirect (or inferred) approach
- the direct (or derived) approach
Indirect measurement of personal social networks is exemplified by the role-relational orientation which records the collection of social ties that one has, by category, also termed socio-demographic proxies.

In this line of inquiry, the very existence of a social relationship is assumed to constitute sufficient evidence for comprising part of one's network.

This approach has been the principal basis for the collection of social network data in such major surveys as the HRS, ELSA and the first two waves of SHARE.
In contrast, the direct approach sees the social network as a subjective phenomenon.

The analyst derives the network by querying specifically who is important to a given respondent, most usually through the use of name generators.

Name generators for network identification have been applied in the American GSS, in LASA (Amsterdam) and in NSHAP.
✓ individual network characteristics

✓ cumulative network scores
## PERSONAL NETWORK MEASUREMENT PARAMETERS

<table>
<thead>
<tr>
<th>APPROACH</th>
<th>INFERRED (INDIRECT)</th>
<th>DERIVED (DIRECT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATURE SINGLE</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>COMPOSITE</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
The new SN Module in SHARE

- Based upon a name generator
- Introduced in Wave 4
- Data available since 11/2012
- \( N > 60,000 \)
SN Module in Wave 4 (2010)

Wave 4

Follow-up Questions
- Geographical Proximity
- Frequency of Contact
- Emotional Closeness
- Overall Satisfaction with Network
Why use a name-generator?

• List of most meaningful people self identified by older adults participating in SHARE survey
  – For example, this may or may not include a person’s spouse or child

• Identification of socially isolated older Europeans
Figure 1: Social network size

Weighted observations (n=56,755)

Table 1: Bivariate analysis of social network measures: Pearson correlations

<table>
<thead>
<tr>
<th></th>
<th>Network Size</th>
<th>% Spouse or Partner</th>
<th>% Children</th>
<th>% Friends</th>
<th>% 5 km or less</th>
<th>% Daily Contact</th>
<th>% Very to Extremely Close</th>
<th>Network Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Size</td>
<td>1</td>
<td>-0.436***</td>
<td>0.159***</td>
<td>0.169***</td>
<td>-0.314***</td>
<td>-0.409***</td>
<td>-0.082***</td>
<td>0.030***</td>
</tr>
<tr>
<td>% Spouse / Partner</td>
<td>1</td>
<td>-0.395***</td>
<td>-0.350***</td>
<td>0.467***</td>
<td>0.621***</td>
<td>0.214***</td>
<td>0.053***</td>
<td></td>
</tr>
<tr>
<td>% Children</td>
<td>1</td>
<td>-0.304***</td>
<td>-0.181***</td>
<td>-0.076***</td>
<td>0.138***</td>
<td>0.099***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Friends</td>
<td>1</td>
<td>-0.172***</td>
<td>-0.381***</td>
<td>-0.225***</td>
<td>-0.085***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Within 5 km</td>
<td>1</td>
<td></td>
<td></td>
<td>0.557***</td>
<td>0.101***</td>
<td>0.036***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Daily Contact</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.268***</td>
<td>0.134***</td>
<td></td>
</tr>
<tr>
<td>% Very / Extremely Close</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.303***</td>
</tr>
</tbody>
</table>

Significance: *** = 1%
Notes: Unweighted observations = 53,990; excluding respondents aged < 50 and without a social network
Relationship status and depressive symptoms among older co-resident caregivers

- We examined whether the type and closeness of the relationship among co-resident caregiver dyads in 16 SHARE countries lessen the extent of depressive symptoms of caregivers, controlling for other factors associated with depression.

- We also explored if the association between relationship closeness and depressive symptoms is moderated differentially by the type of relationship.

Figure 1: Depressive symptoms among European co-resident caregivers aged 50+ by relationship type and status: Beta coefficients

N=3,280; Reference categories: Relationship type—parent or other; Status—not a confidant
Adjusted for country, age, gender, marital status, # of children, education, income adequacy, cognition, physical symptoms, mobility limitations and IADL; *** p < .001

Figure 1: Depressive symptoms among European co-resident caregivers aged 50+ by relationship type and status: Beta coefficients

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Conclusion

- Caregivers who had a confidant relationship with the care-recipient reported fewer depressive symptoms than those caring for non-confidant members of their household.

- This supports the hypothesis that relationship closeness (social network) moderates negative caregiver outcomes.
Social Network Scale

– Reflects several components of interpersonal social relationships in one measure

  • **Size of Social Network**
  
  • **Availability of Support**
    – Geographical Proximity of Social Network
    – Frequency of Contact with Social Network
  
  • **Relationship Quality**
    – Emotional Connection with Social Network

  • **Scoring for each of these variables:**
    ⚫ 0 = 0 SN members
    ⚫ 1 = 1 SN member
    ⚫ 2 = 2-3 SN members
    ⚫ 3 = 4-5 SN members
    ⚫ 4 = 6-7 SN members

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    – Emotional Connection with Social Network
  
  • **Breadth of Support**
    – Diversity of Social Network (i.e. children, friend)

**Total scale score = 0 – 20**

## Psychometric Evaluation:
### Orthogonal Varimax Rotated Factor Analysis

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenvalue</th>
<th>Difference</th>
<th>Proportion</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>3.97</td>
<td>3.58</td>
<td>0.79</td>
<td>0.80</td>
</tr>
<tr>
<td>Factor 2</td>
<td>0.40</td>
<td>0.08</td>
<td>0.08</td>
<td>0.87</td>
</tr>
<tr>
<td>Factor 3</td>
<td>0.32</td>
<td>0.12</td>
<td>0.06</td>
<td>0.94</td>
</tr>
<tr>
<td>Factor 4</td>
<td>0.19</td>
<td>0.08</td>
<td>0.03</td>
<td>0.98</td>
</tr>
<tr>
<td>Factor 5</td>
<td>0.12</td>
<td>.</td>
<td>0.02</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Number of observations: 56,309. Prob>chi2 = 0.000

### Factor Loading (pattern matrix) and unique variances

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1</th>
<th>Uniqueness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Size</td>
<td>0.95</td>
<td>0.09</td>
</tr>
<tr>
<td>Network Diversity</td>
<td>0.83</td>
<td>0.31</td>
</tr>
<tr>
<td>Network Proximity</td>
<td>0.88</td>
<td>0.23</td>
</tr>
<tr>
<td>Network Contact</td>
<td>0.92</td>
<td>0.16</td>
</tr>
<tr>
<td>Network Emotional Closeness</td>
<td>0.87</td>
<td>0.23</td>
</tr>
</tbody>
</table>
## Psychometric Evaluation

Inter-Item Correlations and Cronbach’s $\alpha$

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-test correlation</th>
<th>Item-rest correlation</th>
<th>Average inter-item correlation</th>
<th>Alpha if item removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SN size</td>
<td>0.950</td>
<td>0.917</td>
<td>0.697</td>
<td>0.902</td>
</tr>
<tr>
<td>SN Proximity</td>
<td>0.879</td>
<td>0.809</td>
<td>0.749</td>
<td>0.923</td>
</tr>
<tr>
<td>SN Contact</td>
<td>0.916</td>
<td>0.865</td>
<td>0.722</td>
<td>0.912</td>
</tr>
<tr>
<td>SN Emotional</td>
<td>0.872</td>
<td>0.797</td>
<td>0.755</td>
<td>0.925</td>
</tr>
<tr>
<td>Closeness</td>
<td>0.835</td>
<td>0.741</td>
<td>0.783</td>
<td>0.935</td>
</tr>
<tr>
<td>Test scale</td>
<td></td>
<td></td>
<td>0.741</td>
<td>0.935</td>
</tr>
</tbody>
</table>
Total scores (0–20), were collapsed for purposes of parsimony:
0=0; 1=1-5; 2=6-10; 3=11-15; 4=16-20

Social Network Scale, Activity Participation and Well-Being

- **Social network ties and activity participation**
  - Two components of active aging
  - Associations with well-being and quality of life

- **“Doing” vs. “Doing With”**
  - What is the interrelationship of social network ties and activity?

- **Multivariate OLS Regressions:**
  - Dependent Variables
    - **Quality of Life** (CASP): Range 12-48
    - **Life Satisfaction**: Range 0 - 10
  - Key Independent Variables
    - **Social Network Scale**
    - **Count of Activities** (leisure activities and physical activities)
    - **Interaction**: Social Network x Activity Count
  - Control Variables
    - Sociodemographic characteristics, country, health, cognition

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Standardized β

Network, Activity and Well-Being  N=52,233

- Social Network Scale
- Number of Activities
- Age
- Marital Status
- ADL Limitations
- Cognition

[CASP] [Life Satisfaction]
Social Network Scale and Activities Interaction Associations with Quality of Life (CASP) and Life Satisfaction

CONCLUSION:

For those with no social network, social activity was indeed a significant correlate of well being.

However, for those who were socially connected, the added value of activity to well-being was less.
The Association between Activity Participation and Subjective Self-Rated Memory – by Social Network Scale

Thus being engaged in a large variety of activities was primarily beneficial for self-rated memory among persons with limited or no social ties.

This supports the assertion that it is the social component of activity participation that has a major benefit in later life, particularly within the realm of self-rating of memory.

Therefore, public policy that seeks to promote “active and healthy aging” should not only encourage participation in a range of activities among all older adults, but should focus specifically on those who appear to be more socially isolated.
לסיכום:

❖ ניתן לאסוף נתונים על הסביבה בינוני-אישיית המשמעויות (SOCIAL NETWORK) של משיבים באמצעות SHARE. סקר אוכלוסייני,رد ו>List.

❖ נטןالفיעיל מחלולים שמות (NAME GENERATOR) למטרות זו, אכブラック אוכלוסייני.

❖ נטןלחשב معدل מרודי של "רישוט חברתי" (SOCIAL CONNECTEDNESS) כדי לסכם את המאפשרות של הסביבה בין-אישית האוכלוסיון,eddar וה련א את חלקו של משתנה זה הבוסבר מתחום אוזן שמעניינים אתנו.
תודה

יום העיון מתכים במסגרת שיתוף פעולה בין המשרד לשוויון חברתי
למרכזי העיון לחקר הdeenנות האוכלוסיות בישראל