Self-management and social support of diabetes patients : a survey study in 6 European countries

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Outline

- Background
- Study aims
- Methods
- Results
- Discussion

Background

Support from social networks

- **Types of support**: information, emotional, practical
- **Providers of support**: spouse, family, friends, healthcare professionals, community organisations
- **Social network:** total of individuals and organisations, and their connections
- **Mechanisms of social support**:
  - *Navigation*: individual network is social capital
  - *Negotation*: network structure facilitates negotation
  - *Contagion*: network facilitates contagion of behaviours and ideas

Deprivation and social support

- Low income and low education are associated with lowered health outcomes;
- Social support may reduce this negative impact

Study aims

- **To determine which characteristics of social support networks are related to patient reported health status and health behaviours**
- **To explore whether this relation is different for high and low income and education groups**

in type 2 diabetes patients across Europe

Study design

- **Setting**
  - 6 European countries: Bulgaria, Greece, the Netherlands, Norway, Spain, and the UK
  - 3 Regions in each country: deprived urban, affluent urban, and deprived rural

- **Sampling through health professionals**
  - 100 Patients with type 2 diabetes in each region
  - 1800 Patients in 6 countries

- **Observational study**
  - Questionnaires
  - Interviews

Measures

- **Outcome measures**
  - Patient-reported health status (SF-12)
  - Patient reported self-management behaviours: exercise, diet, smoking

- **Social environment measures**
  - Social support individuals (informational, practical, emotional)
    - Name generator method
  - Health professionals in wider network
    - Position generator method
  - Attendance of community organisations
  - Neighbourhood

- **Individual characteristics** (age, sex, income, chronic diseases)

Data-analysis

Random coefficient linear regression analysis

- Patients nested in areas (as fixed factor)
- Areas nested in countries (as fixed factor)

Results

Study population

Background

- n= 1692 respondents completed both questionnaire and interview
- Average age: 66.2 year
- 61% low income (relative to country)

Social support

- Average 3.2 supportive network members (n= 5422 connections)
- 48.3% mentioned a health professional
- 34.6% attended activities of community organisations

Self-management

- 35.3% is physically active
- 50.8% eats healthy
- 85.8% does not smoke

Sample characteristics

	Bulgaria	Greece	Netherl.	Norway	Spain	UK
Female (%)	61	57	44	39	56	40
Mean age (y)	65	69	68	60	69	66
Low income (%)	69	56	48	46	81	66
>2 comorbidities %	40	32	25	34	21	14
Spouse (%)	62	71	75	66	81	71
Mean network	2.7	2.2	4.1	3.3	3.0	4.1
Health professional in network (%)	55	58	48	50	31	48
Attends community organisation (%)	38	25	44	24	41	38

Physical health status (SF-12)

Social support (B)	Overall	Low income group	High income group
Spouse	1·01**	0·76	2·45**
Household members	-0·09	-0·04	-0·44
Support network members (N)	0·01	0·16	-0·02
Network members providing:			
Information support	0·03	0·04	0·00
Practical support	-0·46**	-0·36*	-0·70**
Emotional support	0·13	0·04	0·14
Health professional in wider network	0·47	0·56	0·28
Attending community organisations	1·39**	1·32**	1·63**
Neighbourhood (urban affluent = ref.)			
Urban deprived	-0·51	-0·49	-0·38
Rural deprived	0·17	0·36	0·83

Mental health status (SF-12)

Social support (B)	Overall	Low income group	High income group
Spouse	0.88*	0.48	1.95
Household members	0.14	0.16	0.02
Support network members (N)	0.10	0.26	-0.14
Network members providing:			
Information support	0.12	0.10	0.21
Practical support	-0.27*	-0.25	-0.39*
Emotional support	-0.05	-0.08	0.05
Health professional in wider network	0.67*	0.76*	0.43
Attending community organisations	1.22*	1.38*	1.06*
Neighbourhood (urban affluent = ref.)			
Urban deprived	-0.84*	-1.29*	-.011
Rural deprived	0.08	-0.09	0.69

Summary in words

Better health status:

- Attending community organisations (consistently)
- Having a spouse, but not for physical health status in people with low income
- Health professional in wider network, but only for mental health status in people with low income
- Urban affluent area, for mental health status in people with low income
- Number of supporting individuals not related (except for practice support)

Physical exercise (RAPA)

Social support (Odds Ratio)	Overall	Low income group	High income group
Spouse	1·07	1·09	1·19
Household members	1·00	1·04	0·92
Support network members (N)	0·92	1·04	0·77**
Network members providing:			
Information support	1·09*	1·01	1·20*
Practical support	0·90*	1·00	0·72**
Emotional support	1·10*	1·01	1·30**
Health professional in wider network	1·11	0·90	1·44*
Attending community organisations	1·18	1·53**	0·79
Neighbourhood (urban affluent = ref.)			
Urban deprived	0·94	0·74	1·11
Rural deprived	0·82	0·78	0·87

Summary in words

Healthy physical exercise:

- More network members who provide information and emotional support, but only in people with high income
- Fewer network members who provide practical support – this association is likely to be confounded by physical impairment
- Attending community organisations, but only in low income groups

Self-management capabilities

- Extensive informational networks, emotional networks, and attendance of community organisations were linked to better self-management capabilities.

- The association of self-management capabilities with informational support was especially strong in the low education group, whereas the association with emotional support was stronger in the high education group.

(Koetsenruijter et al., Pat Educ Couns 2015)

Discussion

- Behaviors, networks and health outcomes co-evoluate over time; this cross-sectional study could not unravel the complexities of this process
- Attending community organisations may reflect several mechanisms of contagion and negotiation
- Physical exercise (not smoking or diet) may have a role in the impact of social support on outcomes
- Role of support networks may differ between people with low and high income and education

Policy implications

- Community organisations provide a clear target for health policy
- Expectations of individual support networks need to be realistic, particularly in people with low income
- Equity needs more attention in the context of self-management of people with long-term health problems
- Generaliziability across populations is unclear, e.g. mental health patients

Community organisations

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