

Developing and Using Social Embeddedness As an Explanatory Variable



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- **What social embeddedness is**
- **Social embeddedness in social science**
- **Dimensions and components of social embeddedness**
- **Some probable effects of social embeddedness**
- **Social embeddedness as an explanatory factor:
measuring its impact on health**
- **In progress:**
 - **Social Embeddedness, Civic Engagement,
and the Public Good**
 - **Serious Youth Violence and
Social Embeddedness**

Dimensions and Measures of Social Embeddedness

A. Social Connectivity (= links to one's social context)

- relationships and interactions with non-household family members
- knowledge of and relationships and interactions with close, and general, friends
- knowledge and relationships and interactions with neighbours, coworkers
- links and contacts with, and participation in, organizations and institutions
- feelings of attachment and identity towards the social and cultural context
- being married
- having young children
- being employed
[not only magnitude and frequency, but also whether within a network]
- following news and public affairs through the media

B. Social Anchoring (= values, beliefs, and life-ordering principles, especially when periodically affirmed with like-minded people)

- strength and importance of values and beliefs
- religious observation and participating in a religious or secular community of faith
- engaging in giving and volunteering

C. Social Continuity

- duration of marriage
- duration of employment
- duration of residence in current community
- duration of selected relationships and memberships
- mean duration of friendships, age-standardized

Some Probable Effects of Social Embeddedness

1. On Individuals:

Expressive and Sentient Aspects

- affirmation of individual's worth
- attachment

Instrumental Aspects

- reduces uncertainty and risk
- increases social and physical security
- enables coping by providing social, emotional, physical support
- lowers costs of interactions and transactions by increasing trust
- provides basis for norms and practice of reciprocity, mutual aid
- heightened sense of personal responsibility

2. On Groups, Communities and Collectivities

- provides basis for shared meanings and understandings
- fosters awareness of and support for the collective good
- increases likelihood of concerted action
- provides basis for concern about fairness and justness
- increases effectiveness of social reproduction
- greater adaptability to social change and societal heterogeneity
- more robust economic domain

Study on Social Embeddedness and Positive Health

Data Sources

National Population Health Survey 1996-97	62,887 respondents*
General Social Survey Cycle 12 Time Use Survey 1998	9,847 respondents*
Individuals, Institutions and the Social Contract 1997	1,929 respondents*
National Survey of Giving, Volunteering and Participating 1997	16,771 respondents*

* All analyses are based on respondents age 20 and over.

Dependent Variables for Embeddedness and Health

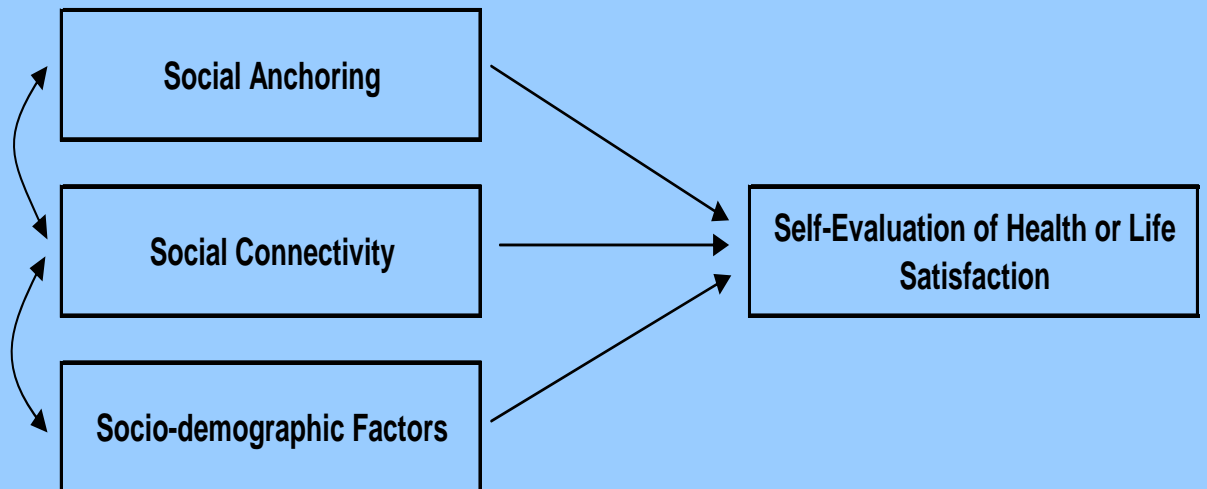
National Population Health Survey 1996-97	Objective Health rating Subjective Health rating
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General Social Survey Cycle 12 Time Use Survey 1998	Subjective Health rating Overall Satisfaction
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National Survey of Giving, Volunteering and Participating 1997	Subjective Health rating Overall Satisfaction
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Individuals, Institutions and the Social Contract 1997	Overall Satisfaction Trust in Others
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A Structural Model of the Impact of Embeddedness on Self-Evaluations of Health or Life Satisfaction



Social Embeddedness and Positive Health — Initial Findings

1. Logistic regression modelling of the impact of a large array of social, economic and demographic variables, from four national surveys showed social connectivity and social anchoring to be consequential — i.e., to produce a significant increase in R^2 — of up to 36%.
2. The impact of the social connectivity and anchoring measures varies considerably across the different surveys.
3. Social connectivity has stronger effects than social anchoring.
4. Social connectivity and social anchoring variables are statistically significant in the models.
5. Social connectivity and social anchoring variables better account for positive life satisfaction than for positive health evaluation(s).
6. In 2 survey datasets (NPHS, NSGVP) religiosity has a negative effect on positive health, and in 2 datasets (NSGVP and IISC) a negative effect on life satisfaction. The implication is that religious individuals are less embedded.
7. Embeddedness variables exert a significant effect on actual (objectively measured) health status as well.

Social Embeddedness Study: Selected Findings

1. Wide variation in results from different data sources, ranging from very strong to weak. Social embeddedness accounted for the following maximum proportions of the explained variation:
 - 20% --- Subjective Health
 - 36% --- Overall satisfaction
 - 14% --- Objective health
2. The relative influence of social embeddedness is:
 - on a par with that of language, gender, urban-rural location, marital status and immigrant status
 - less than that of age and occupation
3. Social connectivity is a slightly more important component than social anchoring, as an influence on actual health.
4. Regarding social capital: Trust is a statistically important influence on overall satisfaction, but (Robert Putnam notwithstanding) social embeddedness does not affect levels of trust.

Explained Variance in models of health and satisfaction

	R ²			Effect of Connectivity and anchoring	
	Model 1	Model 2	Model 3	% of Total variation	% of Explained variation
NPHS					
Actual Health	0.160	0.125	0.143	1.8	12.6
Self-Evaluation of Health	0.100	0.287	0.292	0.5	1.7
GSS 12					
Self-Evaluation of Health	0.047	0.187	0.197	1.0	5.1
Overall Satisfaction	0.023	0.163	0.169	0.6	3.6
NSGVP					
Self-Evaluation of Health	0.109	0.121	0.154	3.3	21.4
Overall Satisfaction	0.098	0.090	0.138	4.8	34.8
IISC					
Overall Satisfaction	0.142	0.173	0.272	9.9	36.4

Model 1 Social Embeddedness variables alone

Model 2 Socio-demographic variables alone

Model 3 Socio-demographic variables and embeddedness variables

Actual Health Regressions from NPHS¹

	Model 1		Model 2		Model 3	
	R ² =0.106 p< 0.000		R ² =0.125 p< 0.000		R ² =0.143 p< 0.000	
	b	Sig.	b	Sig.	b	Sig.
Social Anchoring						
* Education in years	0.093	0.000			0.046	0.000
Spirituality	0.004	0.414			0.010	0.406
* Religiosity	-0.061	0.000			-0.038	0.000
Social Connectivity						
* Social contacts index	0.066	0.000			0.075	0.000
* Social support index	0.113	0.000			0.088	0.000
* Frquency of Association attendance	0.004	0.278			0.019	0.000
* Frequency of church attendance	0.026	0.000			0.038	0.000
* Number of months employed	0.233	0.000			0.059	0.000
Demographics						
Ages 25-34			0.009	0.577	-0.017	0.279
Ages 35-44			-0.106	0.000	-0.122	0.000
Ages 45-54			-0.358	0.000	-0.363	0.000
Ages 55-64			-0.370	0.000	-0.381	0.000
Ages 65 plus			-0.261	0.000	-0.282	0.000
Single			-0.004	0.721	0.014	0.250
Divorced			-0.124	0.000	-0.093	0.000
Atlantic			0.035	0.026	-0.001	0.954
Quebec			0.161	0.000	0.193	0.000
Prairies			-0.013	0.293	-0.017	0.181
B.C.			-0.041	0.001	-0.045	0.000
* Children 5 and under			0.035	0.000	0.029	0.000
* Children 6 to 11			0.024	0.000	0.023	0.000
Professional			0.234	0.000	0.172	0.000
White Collar			0.293	0.000	0.263	0.000
Farmer			0.385	0.000	0.335	0.000
Blue Collar			0.274	0.000	0.269	0.000
Not in the Labour Force			-0.125	0.000	-0.005	0.844
* Household income in '000s			0.107	0.000	0.077	0.000
Language			-0.065	0.003	-0.061	0.007
Immigrant			0.078	0.000	0.086	0.000
Gender			0.007	0.434	-0.023	0.010
Rural			0.043	0.000	0.036	0.001
	N=	58296		49033		46940

*Dependent and continuous independent variables are standardized

1. Dependent variable is cubed.

Self-Evaluation of Health, NPHS

	Model 1		Model 2		Model 3	
	R² =0.100	p< 0.000	R² =0.287	p< 0.000	R² =0.292	p< 0.000
	b	Sig.	b	Sig.	b	Sig.
Social Anchoring						
* Education in years	0.171	0.000			0.092	0.000
Spirituality	0.006	0.212			0.029	0.007
* Religiosity	-0.033	0.000			0.002	0.683
Social Connectivity						
* Social contacts index	0.039	0.000			0.005	0.193
* Social support index	0.073	0.000			0.004	0.366
* Frquency of Association attendance	0.024	0.000			0.021	0.000
* Frequency of church attendance	-0.002	0.634			-0.016	0.001
* Number of months employed	0.194	0.000			0.025	0.002
Demographics						
Ages 25-34			-0.018	0.210	-0.051	0.001
Ages 35-44			-0.094	0.000	-0.126	0.000
Ages 45-54			-0.124	0.000	-0.146	0.000
Ages 55-64			-0.253	0.000	-0.257	0.000
Ages 65 plus			-0.275	0.000	-0.266	0.000
Single			0.069	0.000	0.054	0.000
Divorced			0.067	0.000	0.057	0.000
Atlantic			0.042	0.003	0.042	0.004
Quebec			0.077	0.000	0.079	0.000
Prairies			-0.008	0.475	-0.015	0.215
B.C.			0.037	0.001	0.030	0.011
* Children 5 and under			0.027	0.000	0.025	0.000
* Children 6 to 11			-0.016	0.000	-0.015	0.000
Professional			0.223	0.000	0.132	0.000
White Collar			0.104	0.000	0.077	0.000
Farmer			0.034	0.450	0.041	0.379
Blue Collar			0.026	0.097	0.050	0.002
Not in the Labour Force			-0.078	0.000	-0.038	0.091
* Household income in '000s			0.094	0.000	0.069	0.000
Language			0.051	0.014	0.056	0.007
Immigrant			-0.013	0.203	-0.018	0.085
Gender			0.061	0.000	0.061	0.000
Rural			-0.003	0.785	0.007	0.509
* Actual health index			0.348	0.000	0.343	0.000
* Mental health index			0.173	0.000	0.168	0.000
* Physical activity index			0.089	0.000	0.083	0.000
N=						
	58391		47763		46648	

*Dependent and continuous independent variables are standardized

Self-Evaluation of Health, GSS 12

	Model 1		Model 2a		Model 3		Model 4	
	R² =0.047	p< 0.000	R² =0.187	p< 0.000	R² =0.197	p< 0.000	R² =0.254	p< 0.000
	b	Sig.	b	Sig.	b	Sig.	b	Sig.
Social Anchoring								
* Education in years	0.131	0.000			0.106	0.000	0.103	0.000
Social Connectivity								
* Social contacts index	0.045	0.000			0.033	0.005	0.026	0.020
* Hours volunteered	0.042	0.000			0.032	0.004	0.028	0.009
* Frequency of church attendance	0.032	0.003			0.019	0.090	0.013	0.224
* Paid hours worked last week	0.117	0.000			0.024	0.160	0.035	0.034
Demographics								
Ages 25-34			-0.063	0.072	-0.099	0.008	-0.069	0.053
Ages 35-44			-0.026	0.482	-0.063	0.110	-0.035	0.361
Ages 45-54			0.063	0.106	0.050	0.230	0.061	0.127
Ages 55-64			0.208	0.000	0.198	0.000	0.151	0.001
Ages 65 plus			0.351	0.000	0.374	0.000	0.249	0.000
Single			0.077	0.014	0.032	0.313	0.084	0.007
Divorced			0.021	0.558	-0.003	0.941	0.054	0.129
Atlantic			0.099	0.015	0.077	0.060	0.052	0.185
Quebec			0.042	0.385	0.035	0.469	0.041	0.380
Prairies			0.041	0.194	0.035	0.286	0.016	0.618
B.C.			0.067	0.051	0.065	0.062	0.043	0.199
* Children 4 and under			0.008	0.485	0.008	0.510	0.007	0.544
* Children 5-12			0.006	0.610	0.009	0.448	0.012	0.309
* Children 13-14			0.006	0.602	0.006	0.573	0.011	0.311
* Children 15-18			0.018	0.113	0.019	0.097	0.018	0.096
Professional			0.120	0.004	0.035	0.409	0.008	0.843
White Collar			0.114	0.001	0.105	0.003	0.065	0.058
Blue Collar			0.082	0.032	0.122	0.002	0.064	0.089
Not in the Labour Force			-0.110	0.014	-0.054	0.292	-0.098	0.046
* Household income in '000s			0.088	0.000	0.055	0.000	0.027	0.037
Language			-0.003	0.943	0.020	0.678	0.029	0.528
Immigrant			0.026	0.360	0.016	0.588	0.040	0.147
Gender			0.033	0.149	0.039	0.100	0.070	0.002
Actual health limitation			-1.134	0.000	-1.121	0.000	-1.004	0.000
* Positivity index							0.255	0.000
	N=	8603	7227		7029		7021	

*The dependent and all continuous independent variables are standardized

Overall Evaluation of Satisfaction, GSS 12

	Model 1		Model 2		Model 3	
	R² =0.023	p< 0.000	R² =0.163	p< 0.000	R² =0.169	p< 0.000
	b	Sig.	b	Sig.	b	Sig.
Social Anchoring						
* Education in years	0.071	0.000			0.049	0.000
Social Connectivity						
* Social contacts index	0.026	0.019			0.049	0.000
* Hours volunteered	0.041	0.000			0.022	0.042
* Frequency of church attendance	0.064	0.000			0.044	0.000
* Paid hours worked last week	0.077	0.000			0.031	0.058
Demographics						
Ages 25-34			-0.087	0.011	-0.127	0.000
Ages 35-44			-0.023	0.527	-0.057	0.138
Ages 45-54			0.039	0.309	0.010	0.805
Ages 55-64			0.280	0.000	0.250	0.000
Ages 65 plus			0.512	0.000	0.494	0.000
Single			-0.082	0.007	-0.119	0.000
Divorced			-0.173	0.000	-0.188	0.000
Atlantic			0.160	0.000	0.127	0.002
Quebec			-0.063	0.180	-0.076	0.110
Prairies			0.114	0.000	0.099	0.002
B.C.			0.112	0.001	0.114	0.001
* Children 4 and under			-0.001	0.949	0.002	0.882
* Children 5-12			-0.011	0.329	-0.010	0.410
* Children 13-14			-0.009	0.392	-0.008	0.470
* Children 15-18			-0.011	0.343	-0.010	0.352
Professional			0.155	0.000	0.128	0.002
White Collar			0.128	0.000	0.145	0.000
Blue Collar			0.108	0.004	0.136	0.000
Not in the Labour Force			0.085	0.052	0.165	0.001
* Household income in '000s			0.190	0.000	0.170	0.000
Language			-0.060	0.190	-0.050	0.277
Immigrant			-0.098	0.000	-0.104	0.000
Gender			-0.011	0.617	-0.018	0.435
Actual health limitation			-0.818	0.000	-0.807	0.000
	N=	8736		7234		7037

* The dependent and all continuous independent variables are standardized

Self-Evaluation of Health, NSGVP

	Model 1		Model 2		Model 3	
	$R^2 = 0.109$	$p < 0.000$	$R^2 = 0.121$	$p < 0.000$	$R^2 = 0.154$	$p < 0.000$
	b	Sig.	b	Sig.	b	Sig.
Social Anchoring						
* Education in years	0.180	0.000			0.127	0.000
* Religiosity	-0.055	0.000			-0.032	0.000
Social Connectivity						
* Social contacts index	0.145	0.000			0.109	0.000
* Association membership index	0.038	0.000			0.033	0.000
* Hours volunteered	0.008	0.275			0.019	0.010
* Frequency of church attendance	0.019	0.030			0.042	0.000
Employed full time	0.139	0.000			0.086	0.000
* Years resident	-0.044	0.000			-0.022	0.007
* Number of informal helping	0.027	0.001			0.012	0.163
Demographics						
Ages 25-34			0.093	0.000	-0.006	0.814
Ages 35-44			-0.046	0.065	-0.126	0.000
Ages 45-54			-0.206	0.000	-0.239	0.000
Ages 55-64			-0.167	0.000	-0.198	0.000
Ages 65 plus			-0.318	0.000	-0.284	0.000
Single			0.114	0.000	0.043	0.054
Divorced			-0.052	0.025	-0.032	0.158
Atlantic			0.104	0.000	0.088	0.003
Quebec			0.209	0.000	0.239	0.000
Prairies			0.009	0.668	-0.033	0.129
B.C.			0.068	0.003	0.015	0.528
* Children 5 and under			0.041	0.000	0.029	0.000
* Children 6 to 12			0.031	0.000	0.015	0.057
* Children 13 to 17			0.022	0.006	0.015	0.058
Professional			0.242	0.000	0.128	0.000
White Collar			0.113	0.000	0.102	0.000
Farmer			0.164	0.003	0.185	0.001
Blue Collar			0.114	0.000	0.130	0.000
Not in the Labour Force			-0.199	0.000	-0.122	0.000
* Household income in '000s			0.130	0.000	0.084	0.000
Language			-0.055	0.150	-0.034	0.373
Immigrant			-0.045	0.025	-0.024	0.247
Gender			0.034	0.029	0.038	0.016
* Community size			-0.008	0.319	-0.011	0.161
	N=	16150		16410		16134

* Dependent and continuous independent variables are standardized

Overall satisfaction Regressions from NSGVP

	Model 1		Model 2		Model 3	
	R² =0.098 p< 0.000		R² =0.090 p< 0.000		R² =0.138 p< 0.000	
	b	Sig.	b	Sig.	b	Sig.
Social Anchoring						
* Education in years	0.175	0.000			0.147	0.000
* Religiosity	-0.038	0.000			-0.022	0.010
Social Connectivity						
* Social contacts index	0.147	0.000			0.134	0.000
* Association membership index	0.049	0.000			0.028	0.001
* Hours volunteered	0.030	0.000			0.039	0.000
* Frequency of church attendance	0.059	0.000			0.068	0.000
Employed full time	0.106	0.000			0.086	0.000
* Years resident	-0.007	0.371			-0.018	0.023
* Number of informal helping	0.010	0.210			0.004	0.592
Demographics						
Ages 25-34			0.088	0.000	-0.011	0.682
Ages 35-44			-0.050	0.050	-0.136	0.000
Ages 45-54			-0.179	0.000	-0.211	0.000
Ages 55-64			0.007	0.811	-0.034	0.301
Ages 65 plus			-0.014	0.665	0.014	0.692
Single			0.043	0.052	-0.039	0.084
Divorced			-0.100	0.000	-0.076	0.001
Atlantic			0.110	0.000	0.090	0.003
Quebec			0.177	0.000	0.221	0.000
Prairies			0.028	0.217	-0.020	0.369
B.C.			0.099	0.000	0.052	0.026
* Children 5 and under			0.027	0.002	0.014	0.090
* Children 6 to 12			0.029	0.000	0.009	0.267
* Children 13 to 17			0.016	0.048	0.007	0.392
Professional			0.179	0.000	0.053	0.077
White Collar			0.057	0.026	0.045	0.076
Farmer			0.079	0.164	0.102	0.065
Blue Collar			-0.017	0.533	0.013	0.649
Not in the Labour Force			-0.261	0.000	-0.180	0.000
* Household income in '000s			0.166	0.000	0.113	0.000
Language			0.041	0.285	0.062	0.107
Immigrant			-0.080	0.000	-0.052	0.012
Gender			0.032	0.042	0.036	0.025
* Community size			-0.040	0.000	-0.040	0.000
	N=	16112	16345		16096	

* Dependent and continuous independent variables are standardized

Overall satisfaction from 2ISC

	Model 1		Model 2		Model 3	
	R² =0.142 p< 0.000		R² =0.173 p< 0.000		R² =0.272 p< 0.000	
	b	Sig.	b	Sig.	b	Sig.
Social Anchoring						
* Education in years	0.105	0.000			0.070	0.023
* Religiosity	-0.060	0.015			-0.073	0.005
* Trust	0.330	0.000			0.251	0.000
Social Connectivity						
* Frequency of volunteering	0.063	0.013			0.063	0.018
* Frequency of informal helping	-0.025	0.338			-0.005	0.862
Employed	0.057	0.080			0.333	0.000
Demographics						
Ages 25-34			0.078	0.332	-0.061	0.491
Ages 35-44			0.091	0.291	-0.110	0.242
Ages 45-54			0.027	0.771	-0.117	0.241
Ages 55-64			0.254	0.009	0.070	0.517
Ages 65 plus			0.615	0.000	0.392	0.001
Single			0.078	0.275	-0.051	0.500
Divorced			-0.137	0.037	-0.203	0.004
Atlantic			0.103	0.293	-0.027	0.792
Quebec			-0.040	0.762	-0.161	0.256
Prairies			0.290	0.000	0.199	0.007
B.C.			0.201	0.008	0.128	0.110
* Children under 18			-0.029	0.327	-0.016	0.610
Professional			-0.265	0.008	-0.162	0.140
White Collar			-0.344	0.000	-0.362	0.000
Blue Collar			-0.369	0.000	-0.280	0.003
Not in the Labour Force			-0.209	0.014	0.049	0.620
* Household income in '000s			0.345	0.000	0.252	0.000
Language			0.041	0.759	0.148	0.298
Immigrant			-0.079	0.254	-0.109	0.133
Gender			0.099	0.043	0.012	0.812
* Community size			-0.071	0.008	-0.036	0.207
	N=	1411	1493		1177	

*Dependent and continuous independent variables are standardized