Is Measuring Social Capital Culturally- And Group-Specific?

Psychometric Validation of the New South Wales Social Capital Questionnaire Across Distinct Population Groups in Cyprus.

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Structural component: extent and intensity of associational links or activity

Cognitive component: perceptions of support, reciprocity, sharing, and trust

Background

- Despite over a decade of research on **social capital**, there is no consensus or uniformity regarding its measurement.
- In the foreground of a continuing debate on whether a collective **ecological** and/or an **individual** attribute, [1] studies commonly make opportunistic use of survey data. [2]
- While a number of purpose tools for the assessment of *an individual's social capital* have been developed (such as the **Onyx & Bullen's Social Capital Questionnaire** [3]), validation of the same tool in different settings and across population groups has been rare. [4-5]

Objectives

This study assessed the metric properties (**construct validity**, **internal consistency**, and **known-group validity**) of the Greek-version of the Social Capital Questionnaire, originally developed in New South Wales, Australia (2000)

- across three distinct population groups in Cyprus, largely different in terms of age, gender, occupational status and life circumstances
- in the pooled sample

and contrasted the observed dimensionality of the tool **between sample groups** and **cross-culturally** with the original Australian [3], USA [4] and Greek [5] populations.

Methods

- Secondary analysis of data collected in three distinct studies which utilised the SCQ, each for their own purposes –
  - a sample of Alzheimer's' **caregivers** and their age-matched neighbours (N=225),
  - **mothers** of children with cancer and age-matched hospital controls (N=260) and
  - a national sample of 10% of all professional **nurses** in Cyprus (N= 362)
- Previously translated Greek-version of the SCQ [6]: 36-items, 4-point Likert scale (e.g. never-very frequently) tapping on both **structural** (e.g. contact with friends) and **cognitive** aspects (e.g. feelings of trust) of social capital
- **Original Australian study**: N~1200, 5 communities (2 rural, 2 outer metropolitan, 1 inner-city) identified 8 factors, 49% of total variance).
  USA study: N=496, 1 community, 8 factors (68% of the total variance)
  Greek study: N=521, 3 urban areas, 6 factors (41% of total variance)
- Exploratory factor analysis (EFA) using principal components with orthogonal (varimax with Kaiser normalization) and oblique rotation for the extraction of factors with factor loading cut-off set to >0.40
  - Excluding (N=609) and including (N=847)

  5 items on "work connections" completed only by those in paid employment.

Items 1-36	Australia – original study, 5 communities, N~1200,	Participation in local community (LC)	Family & Friends connections (FF)	Neighborhood connections (NC)	Feelings of trust and Feelings of safety (T/S)	Proactivity social context /Social Agency (SA)	Acceptance of diversity (AD, original tolerance)	Value of life (VL)/ Sense of belonging (SB)	Work connections (WC)	Cyprus – Nurses	Cyprus – Mothers caregiver/controls	Cyprus – Alzheimer's Caregivers/Elderly	USA, 1 community, N=496	Greece, 3 urban, N=521
On local management committee (23)	LC	0.763								LC	LC	LC	LC	LC
Active member of local organization (14)	LC	0.756								LC	LC	LC	LC	LC
Taken part in community project (25)	LC	0.755								LC	LC	LC		LC
Help local group as volunteer (5)	LC	0.668								LC	LC	LC	LC	LC
Joined local emergency action (24)	LC	0.632								LC	LC	LC	LC	LC
Helped organize new local service (26)	LC	0.628								LC	SB	LC	LC	LC
Phone conversations with friends (16)	FF		0.718							FF	FF	FF	FF	VL SA
Dines socially with friends (18)	FF		0.623							FF	FF	FF	FF	FF
Talked to people yesterday (17)	FF		0.547							FF	FF	FF	FF	FF
Get help from friends when needed (9)	NC		0.533							T/S	T	FF	VL	VL SA
Visit family outside area (19)	SA		0.495					0.360		FF	FF	FF		VL SA
Information when needed (friends?) (21)	SA		0.456			0.366				FF	SB	FF	T/S	VL SA
Visited neighbour (12)	NC			0.717						NC		NC	NC	LC
Ask neighbour help care for child (11)	NC			0.627						NC	S	NC	NC	LC
Friends when shopping in local area (20)	NC			0.489						FF	FF	NC		VL SA
Favour for sick neighbour (22)	NC	0.402		0.442						NC	LC		NC	LC
Invite stranger in if car breaks down (8)	T/S			0.439	0.365					T/S	S	AD	T/S	
Attended local community event (13)	LC			0.428						LC	LC	NC	LC	LC
Area reputed safe (10)	T/S				0.770					T/S	SB	S	T/S	T/S
Safe in street after dark (6)	T/S				0.762					T/S	SB	S	T/S	T/S
Most people can be trusted (7)	T/S				0.476					T/S	T	VL	T/S	LC
Seeks mediation for dispute (28)	SA					0.676				VL	SA	AD	VL	VL SA
Free to speak out (27)	SA					0.665				VL	SA	AD		VL SA
By helping other, help yourself (4)						0.527				VL	SA	VL	VL	VL SA
Picked up others' rubbish in public (3)	SA					0.370					SA		SA	LC
Enjoy different lifestyles (30)	AD						0.841			AD	AD	AD	AD	AD
Multiculturalism makes life better (29)	AD						0.810			AD	AD	VL	AD	AD
Stranger accepted in neighbourhood (31)							0.410			AD	AD	AD		
Satisfied with life (2)	VL							0.719		VL	SB	VL	VL	VL SA
Valued by society (1)	VL							0.581		VL	SB	VL	T/S	VL SA
Community feels like home (15)	T/S							0.436		T/S	SB		T/S	VL SA
Part of team at work (34)	WC								0.794	WC	WC		WC	WC
Workmates are also friends (33)	WC								0.779	WC	WC		WC	WC
Part of community at work (32)	WC								0.594	WC	WC	N/A	T/S	VL SA
Takes initiative at work (35)	SA								0.451	WC	WC		SA	WC
Helped workmate (36)	SA								N/A	FF	WC		SA	WC
Eigenvalue		5.93	2.45	1.71	1.58	1.39	1.26	1.06	1.15					
% variance		19.1%	7.9%	5.5%	5.1%	4.5%	4.1%	3.4%	3.2%					
Total % variance								49.6%	51.1%					
Cronbach's alpha		0.79	0.69	0.65	0.68	0.50	0.66	0.49	0.73	Number of factors and items per factor				
	LC=7 FF=3 NC=5 T/S=5 SA=7 AD=2 VL=2 WC=3 Excl=2									LC=7 FF=5 NC=5 T/S=6 SA=5 AD=3 VL=5 WC=4 Excl=1	LC=7 FF=5 NC=0 T=2, SA=4 AD=3 SB=7 WC=5 Excl=1	LC=6 FF=5 NC=4 S=2 AD=5 VL=5 WC=2 Excl=3	LC=7 FF=3 NC=3 T/S=8 SA=3 AD=2 VL=4 WC=4 Excl=5	LC=12 FF=2 NC=0 T/S=2 VL&SA= AD=2 VL=0 WC=4 Excl=2
Number of items per factor		6	6	6	3	4	3	3	4					

Social capital: "*…features of social relationships that facilitate collective action for mutual benefit".*

Results

- Kaiser–Meyer–Olkin (KMO) coefficient for sampling adequacy was 0.85 and Barlett's test of sphericity was statistically significant (p-value < 0.001), supporting that the data are appropriate for factor analysis.
- A very clear dimensionality of the tool with minimal cross-loading was revealed with **7 factors** without and **8 factors** with the workplace-related items (SC32-SC36), explaining **49.6% and 51.1% of the variance** respectively.
- These were: **Participation in the local community** (6 items), **Family & Friends connections** (6 items), **Neighborhood connections** (6 items), **Feelings of trust and safety** (3 items), **Social agency** (4 items), **Acceptance of diversity** (3 items), **Value of life and Sense of belonging** (3 items) and **Work connections** (4 items).
- The factor configuration in the pooled sample was very similar to the postulated structure in the original Australian study and much closer than previous US (1 community) and Greek (urban, mainly working force) studies; **only 8 of 36 items did not load on the "original" factor**.
- "*Participation in the local community*" was the **most robust** factor across samples and cross-nationally while, similarly to Greece and the USA, "*social agency*" was the **most controversial** as this did not reflect a generalised "pro-activity in a social context" as intended by culturally sensitive items such as "resolving disputes" and "picking up other people's garbage".
- "***Trust***" (e.g. most people can be trusted) and "***safety***" (e.g. safe walking down your street after dark) were not always captured together. Finally, "*neighbourhood*" appears to take a different meaning (geographical construct Vs safe environment/ **sense of belonging**) among an elderly and a younger population.
- Further supporting the discriminant validity of the tool, **tenancy status** (home owners: 2.45 SD 0.36 Vs renters: 2.25 SD 0.34; p-value<0.001) and **length of residence** in the neighborhood (>10 years: 2.50 0.37 Vs <1 year: 2.26 SD 0.36; p-value<0.001) were associated with overall Social Capital as well as all components of SC, but Acceptance of Diversity and Work Connections.

Conclusions

- ***SCQ appeared to perform well*** in a different language, culture and setting and across distinct population groups; promising tool for assessing individual-level social capital in cross-national epidemiological studies.
- Inferences are limited by the fact that this study was not purposefully designed for the stated objectives; offers some first clues with respect to "problematic" items. Some items appear culturally-sensitive, and perhaps of not of generic value across all population groups.
- Cross-validation studies are needed to confirm postulated dimensionality, alongside concept analyses and cognitive validation studies **using qualitative methods** for developing new cross culturally-relevant tools or adapting and strengthening existing tools.

[1] Poortinga W. Social capital: An individual or collective resource for health? *Social Science & Medicine 2006;* 62(2) : 292-302, **[2]** Harpham T et al. Measuring social capital within health surveys: key issues. *Health Policy Planning* 2002; 17:106-111, **[3]** Onyx J and Bullen P. Measuring social capital in five communities. *Journal of Applied Behavioral Science* 2000; 36(1): 23–42 , **[4]** O'Brien MS, Burdsal CA and Molgaard CA Further development of an Australian-based measure of social capital in a U. S. sample. *Social Science & Medicine* 2004; 59: 1207-1217, **[5]** Kritsotakis G, Koutis AD, Alegakis AK, Philalithis AE. Development of the social capital questionnaire in Greece. *Research in Nursing and Health* 2008; 31: 217-225.