International Journal of Social Inquiry
Volume 4 Number 1 2011 pp. 113-131

Social Capital in Divided Societies: Development of a Social Capital Questionnaire in Northern Ireland

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ABSTRACT

The population of Northern Ireland is highly divided by religion across multiple aspects of social life including residence, education and employment. Increased understanding of the bonds between and across religious groups may shed light on the nature of group relations within this society. The social capital questionnaire (SCQ) was adapted for use in this religiously divided society. A 44 item pilot measure was assessed using exploratory and confirmatory factor analytic techniques with two independent samples (N_1 = 204, N_2 = 251). EFA identified nine factors while confirmatory factor analysis revealed an acceptable model fit of an eight factor solution. Social capital was lower among individuals from religiously segregated areas. Sex-differences in social capital suggest that females may play an important role in the development and maintenance of social capital stocks within and across the religious divide in Northern Ireland. Variations in the factor structure of the SCQ suggest that social capital may be structured differently in different cultures, and highlights the need to develop measures specific to the country or culture of interest.

Keywords: Social capital, factor analysis, Northern Ireland, segregation

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INTRODUCTION

Social capital represents the network and bonds which form between individuals within and across groups, and the norms, values and reciprocity that are central to the functioning of those networks. It is a group commodity which operates within spatially bounded communities primarily to benefit the overall group, but can also bring about rewards for the individual group members (Putnam, 1993, 1995, 2000). The term 'bonding' social capital is used to describe the tight, close bonds formed by individuals within groups which facilitate 'getting by' in life, while 'bridging' social capital refers to the somewhat weaker connections formed between individuals across group boundaries which can assist in 'getting on' in life (Putnam, 2002). Much research has suggested that social capital can be beneficial to both the group, and individuals, in multiple life domains. Social capital has been linked to increased community cohesion (Putnam, 2000), better psychological health, esteem and coping (Brown & Harris, 1978; Carlson, 1999: Drukker, Kaplan, Feron & van Os. 2003; Goldberg, Rollins & Lehman, 2003; Ziersch, Baum, MacDougall & Putland, 2005), lower crime (Salmi and Kivivuori, 2006; Wright, Cullen and Millar, 2001), and lower neighbourhood disorganisation (Ross, Mirowky and Pribesh, 2001). Conversely some research has also linked high levels of social capital, particularly bonding capital, to negative outcomes such as exclusion and social isolation (Harper and Kelly, 2003; Shirlow and Murtagh, 2006).

Northern Ireland presents a somewhat unique environment for the study of social capital due to the educational, social, cultural and spatial division that exists between the two major religious groups – Catholics and Protestants (Gallagher, 1989; Gallagher & Dunn, 1991; McClenaghan, 1996; Niens, Cairns and Hewstone, 2003). Given the potential for social capital to contribute to community cohesion and neighbourhood stability, contrasted with the capacity to exacerbate social exclusion and isolation, the measurement of social capital would appear to be a highly important element of inter- and intra-group relations particularly in societies divided by religion or political ideology.

However despite the high level of interest in social capital no consensus exists on how to most effectively measure social capital has as yet been reached. There is an abundance of potential measures addressing different conceptual aspects of social capital, often specifically designed for particular contexts or situations. These measures range from proxy items assessing a single, or combinations of particular aspects of social capital such as trust, network density or participation (e.g. Carlson, 2004; Daly, 2002; Harpham

Grant and Rodriguez, 2004; Veenstra, 2005; Ziersch, Baum, MacDougall and Putland, 2005), to comprehensive measurement tools allowing for fuller assessment of social capital and its consequences (e.g. Grootaert, Narayan, Nyhan Jones and Woolcock, 2004; Harper and Kelly, 2003).

One of the most significant additions to the social capital literature has been the Social Capital Questionnaire (SCQ; Onyx and Bullen, 2000). The SCQ is a 36-item measure, developed and piloted across 5 communities in Australia to address 8 areas of social capital - *Value of life*; *Tolerance of diversity*; *Neighbourhood Connections*; *Family and Friend Connections*; *Work Connections*; *Community Participation*; *Feelings of Trust and Safety*; and *Proactivity*. While there has been little reference in the literature to the psychometric properties of social capital measures (DeSilva, 2006), Onyx and Bullen (2000) have reported a high level of reliability and acceptable model fit using confirmatory factor analysis. Additionally the measure has been validated internationally with American samples (O'Brien, Burdsal and Molgaard, 2004), and more recently in Greece (Kritsotakis, Koutis, Alegakis and Philalithis, 2008). Partial sub-scales and individual items from the SCQ have also been included in composite measures of social capital in various countries including Australia (Phongsavan, Chey, Bauman, Brooks and Silove, 2006), Mexico (Ferguson, 2006) and the United States (Siahpush, Borland, Taylor, Singh, Ansarai, and Serraglio, 2006). While the evidence presented in the literature supports the use of the SCQ as a cross-culturally stable measurement tool, cultural differences and sensitivities have also been identified. O'Brien, Burdsal and Molgaard (2004) noted that some items of the SCQ were less appropriate for US samples than for the Australian samples with which is was piloted, and suggested that cultural context was an important consideration in social capital measurement. Similarly Kritsotakis et al (2008) identified cultural specificity in their validation of the Greek version of the SCQ, and suggested that such measures require validation to examine how they perform in a cultural context. In Northern Ireland measurement of social capital has been constrained by the use of proxy and composite proxy measures (e.g. Cairns, van Til and Williamson, 2003; Morrissey, Harbison, Healy, McDonnell and Kelly, 2005) and the SCQ presents an interesting, viable alternative to the use of such proxies. However, one potential area of social capital which is not addressed by the SCQ is that of political trust and engagement. Putnam's analysis focused on political participation as an indicator of social capital, while Veenstra has studied the role of political trust as an indicator of social capital. This political aspect of social capital may be of particular importance in contexts such as Northern Ireland where the social and cultural communities are heavily influenced by religion and politics, and for this reason a number of items addressing political trust were included in this analysis.

This paper is concerned with the adaptation and validation of the SCQ for use in Northern Ireland, SCQ NI. The development and validation of a suitable measurement tool to assess social capital in Northern Ireland may serve to increase our understanding of how these two communities are maintained and supported both at an intra- and inter-group level, and provide a mechanism by which the consequences of this segregated culture may be examined in future research. Two studies were undertaken and are described in this paper. In the first an adapted version of the SCQ was developed, with 6 additional items addressing political trust, and a series of exploratory factor analyses performed to identify an appropriate measure for use in Northern Ireland. The second study involved a confirmatory factor analysis of this measure was conducted using a second, independent sample.

Study One: Exploratory Factor Analysis

Method

Participants: 204 individuals (79.9% female, 20.1% male) participated in this study ranging in age from 17 to 44 years (mean = 20.93, s.d. = 3.63). The sample was evenly distributed across the two main religious groups (47.1% Catholic, 48.0% Protestant), and the majority (82.2%) resided in religiously segregated residential areas (i.e. over 60% of the population of one religious denomination).

Measures: In addition to biographical information participants were asked to supply their postcode. This information was entered into the Northern Ireland Neighbourhood Information Statistic database (NINIS; Northern Ireland Statistical Research Agency) which utilises census information to provide demographic and descriptive information at electoral ward level. Using the NINIS database information on participant's residential status as integrated or segregated was determined, and community level information on deprivation, economic activity and unemployment was recorded.

Social Capital - Participants were asked to complete a 44 item social capital questionnaire. This questionnaire was made up of the 36 items from the Social Capital Questionnaire (Onyx and Bullen, 2000), 6 political trust items (Veenstra, 2005) and 2 items identified through comparison of the SCQ with the relevant modules of a range of established longitudinal survey questionnaires (General Household Survey, 2001; Continuous Household Survey, 2003, 2004; Northern Ireland Household Panel Survey, ongoing; Community Attitudes Survey, 2002). The 36 item SCQ has a high reported

reliability of .84 (Onyx and Bullen, 2000) and Veenstra (2005) reports a high reliability of the political trust items (.78).

Procedure: Participants were recruited from the undergraduate student group enrolled at the University of Ulster in the 2004 - 2005 academic year. Questionnaire completion was undertaken during lecture sessions under the supervision of the researchers.

Results

Analyses was undertaken in two stages, firstly an exploratory factor analysis was performed on the original 36 SCQ items and comparisons made with previous validation studies from Australia and the US. Secondly an exploratory factor analysis was performed on the 44 items included in the study to identify the items best suited to measuring social capital in Northern Ireland.

36 Item EFA

A principle axis factor analysis (Kaiser normalised) was conducted and extractions with direct oblimin rotation resulted in a preferred 8 factor solution which was comparable to that identified in two of the previous studies (Onyx and Bullen, 2000; O'Brien, Burdsall and Molgaard, 2004). Subsequently the factor labels originally identified by Onyx and Bullen (2000) were retained. Notably, only 10 factor loadings differed in this analysis from those reported in the original study. A higher order factor analysis revealed 2 second order factors, which were moderately correlated (.35). The first factor consisted of feelings of trust and safety (.65), formal participation in the community (.41), neighbourhood connection (.43), tolerance of diversity (.65) and value of life (.40). Work connections, family and friend connections, and proactivity were represented by the second factor (loadings .52, .46, .43 respectively). The 36-item SCQ showed a high internal consistency with the sample, comparable to that reported by the original authors (alpha = .84).

44 Item EFA

A second principle axis factor analysis (Kaiser normalised) was performed on all 44 social capital items included in the questionnaire. Nine factors were identified for extraction and direct oblimin rotation. While the nine factor structure identified was similar to that of the original structure, in this analysis the original feelings of trust and safety factor was represented by

two factors - neighbourhood safety and trust and politics, with the political trust items adapted from Veenstra (2005) loading onto the trust and politics factor. Table 1 reports the factor loadings of the individual items for the 44 item measure. A higher order factor analysis again revealed two second order factors, however the pattern of factors differed. Neighbourhood connections, work connections, tolerance of diversity, proactivity, formal community participation, and family and friend connections were represented by the first higher order factor (loadings .57, .27, .41, .49, .37, .44 respectively). Neighbourhood safety, trust and politics, and value of life were represented by the second higher order factor (loadings .60, .57, .40 respectively). The inclusion of eight additional items also had a positive influence on the scale reliability, which increased marginally to 0.85.

Table 1. Factor Loadings of 44 item EFA

Item	1	2	3	4	5	6	7	8	9	10
Does your area have a reputation for being a safe place	-.60									
Does you local community feel like home	-.44									
Do you feel safe walking down your street after dark	-.68									
Do you agree most people can be trusted										.38
Are you on management committee or organizing committee for any local group or organization		.69								
Have you ever been part of a project to organize a new service in your area		.41								
Are you an active member of a local organization or club?		.67								
In the past 3 years, have you ever joined a local community action to deal with an emergency		.28								
In the past 3 years have you ever taken part in a local community project		.56								
How often would you say you have attended a local community event in the past 6 months		.51								
How often do you help out a local group as a volunteer		.65								
Do you feel part of a team at work			-.96							
Are your workmates also your friends			-.94							
Do you enjoy living among people of different lifestyles				-.84						
Do you think multiculturalism makes life in your area better				-.73						
Have you visited a neighbour in the past week					.51					
If you were caring for a child and needed to go out for a while, would you ask a neighbour for help					.45					
In the past 6 months, have you done a favour for a sick neighbour					.65					
Some say that by helping others you are helping yourself in the long run. Do you agree			-.25							
If you were to die tomorrow, would you be satisfied with what your life has meant						-.63				

Can you get help from friends when you need it						.43			
If you have a dispute with your neighbours are you willing to seek mediation			-.34						
In the past week, how many phone conversations have you had with friends					.54				
How many people did you talk to yesterday					.28				
Over the weekend do you have lunch/dinner with other people outside your household					.55				
In the past week at work have you helped a workmate even though it was not in your job description		-.85							
At work do you take initiative to do what needs to be done even if no one asks you to		-.97							
Have you ever picked up other people's garbage in a public place				.32					
If you need information to make a life decision, do you know where to find that information						.58			
Do you feel valued by society					-.53				
If you disagree with what everyone else agrees on, would you feel free to speak out							.55		
If someone's car breaks down outside your house, do you invite them into your home to use the phone						.41			
When you go shopping in your local area are you likely to run into friends and acquaintances					.51				
Do you feel part of the local geographic community where you work		-.86							
Do you go outside your local community to visit your family					.27				
If a stranger, someone different, moves into your street, would they be accepted by the neighbours			-.39						
Do you feel safe walking down your street in daylight	-.58								
In the past 6 months, has a neighbour done a favour for you				.68					
Do you think politicians can be trusted to serve the interests of the public									.71
Do you agree that politicians are generally good people									.70
How much do you agree with the following statement: 'We have community leaders here we can trust'									.67
Do you feel capable of influencing political decisions in your community									.39
Do you agree that money is the most important factor in influencing political policies and decisions	.21								
Do you think politicians care very much about what people like you think									.51

1=neighbourhood safety; 2=formal participation in community, 3=work connections, 4=tolerance of diversity, 5= neighbourhood connections, 6=value of life, 7= family and friends connections, 8= proactivity in social context, 9= informal community participation, 10= trust and politics

The three highest loading items for each factor, with the exception of value of life which only had two loading items, were selected for inclusion in the Social Capital Questionnaire Northern Ireland version (SCQ-NI). Subsequently a 26 item, 9 factor measure was selected, with an acceptably high reliability of .77 (Appendix 1).

Relationships

The shortened social capital scale was examined in relation to the various biographical and demographic data collected. Age was positively associated with formal participation in the community ($r=.28$, $p<.001$, $N=200$), and negatively correlated with work connections ($r=-.19$, $p<.01$, $N=200$). Several gender differences were identified - females reported significantly higher levels of neighbourhood connections, work connections, proactivity, family and friend connections and overall social capital (table 3). Religion was unrelated to social capital as was individual status as a minority or majority group member at local level, but experiences of religious residential segregation were. Mean levels of tolerance of diversity varied significantly by religious residential segregation $F_{(4,150)}=3.43$, $p<.05$, with higher segregation associated with lower tolerance of diversity. Post hoc tests (Tukey's HSD) identified significant differences in tolerance of diversity between individuals residing in mildly segregated areas (60 - 69% of the population of one religion) and those in highly segregated areas (70 - 79% of the population of one religion).

Table 2. Gender differences in social capital

	Mean score (s.d)		T	d.f
	Males	**Females**		
Total Social Capital	62.51 (9.56)	68.90 (10.39)	-3.55***	192
Value of Life	4.78 (1.46)	1.78 (1.72)	.04	200
Trust and Politics	4.10 (1.58)	4.00 (1.20)	.46	200
Neighbourhood Safety	4.49 (1.31)	5.76 (1.49)	2.87**	201
Formal community participation	3.88 (1.52)	3.71 (1.87)	.55	202
Proactivity	8.61 (1.97)	9.43 (1.88)	-2.48***	201
Neighbourhood Connections	5.54 (0.39)	6.83 (2.94)	-2.61**	201
Family and Friend Connections	8.73 (1.78)	10.44 (3.90)	-2.73***	202
Tolerance of Diversity	5.56 (1.75)	5.94 (1.67)	-1.28	202
Work Connections	5.71 (4.24)	7.73 (4.77)	-2.38**	202

*= p<0.05, **= p<0.01, ***=p<0.001

Discussion

The results are supportive of the social capital measure devised by Onyx and Bullen (2000). Initial analysis of the 36 item measure revealed an 8 factor structure comparable to that identified in the original study. Previous analysis of American samples (O'Brien at al, 2004) identified poor comparability of the Value of Life factor – this was not the case in this analysis, both items identified in the original study loaded similarly here, with lower loadings, and a third item 'Do you agree that most people can be trusted?' also loaded on this factor. In this analysis, however, there was poor comparability of the Proactivity factor, with only two out of an expected seven items loading significantly. Also of interest, all items relating to work place relations and activities loaded onto the work connections factor, which was not the case in the American, Australian or Greek analyses. Ten items did not load as predicted by the original Australian analysis, which is similar to the findings of O'Brien, Burdsal and Molgaard (2004) who reported eleven such items in their analysis, of which six were common to both studies. One explanation posited for these loading differences is that these items have a reduced relevancy in different cultures (O'Brien, Burdsal and Molgaard, 2004). The findings here lend support to this suggestion, and it would appear that particular items on the social capital scale are more suited to specific populations and cultures than others.

The addition of eight items in the second analysis had a marked effect on the factor structure, increasing it to a nine-factor measure, with separate factors of neighbourhood safety and trust. The presence of a single factor which displayed poorly loading items (informal community participation) not unlike the Proactivity factor in the previous analysis, alongside the presence of several items loading below the 0.4 level, supports the previous suggestion that some of the items may be of less relevance to the community under study. Of particular note, the political trust items included all had significant loadings above (0.46), with a single exception, which may be indicative of a facet of social capital particularly important in Northern Ireland given the highly political nature of the conflict experienced in this country.

Higher order factor analysis in both cases, revealed a two factor solution, this is contrary to the findings of Onyx and Bullen (2000), but concurs with those of O'Brien, Burdsal and Molgaard (2004), who also identified a two factor structure. However, O'Brien, Burdsal and Molgaard (2004) reported only one factor, Work Connections, loading on the second higher order factor, while the current analyses indicated a somewhat more equal

distribution of the factors across the two higher order factors. The findings here are supportive of the view taken by Brown and Ferris (2004); Onyx and Bullen (2000); and Leonard and Onyx (2004) who report two types of social capital based on networks, or arenas of action, and capacity building blocks or attributes.

The original analysis by Onyx and Bullen (2000) and subsequent analysis by O'Brien, Burdsal and Molgaard (2004) identified few relationships with other variables. However, in addition to a high level of reliability, the 26 item SCQ-NI was significantly related to both age and gender with females reporting higher levels across several domains of social capital. This is a particularly interesting finding within the context of intergroup peace initiatives within Northern Ireland, where it is primarily males who are involved in intergroup 'peace talks'. The results presented here suggest that the absence of females from such 'negotiations' may reduce the potential for forging new bridging capital links and entrench existing bonding links, consequently preventing progress. The Hunt Alternative Fund (2006) makes note of the importance of females in the Good Friday Agreement negotiations - 'In several instances during the peace talks that lead to the Good Friday Agreement in Northern Ireland, male negotiators walked out of sessions, leaving a small number of women, ..., at the table. These women focused on mutual concerns and shared vision, enabling the dialogue to continue and trust to be rekindled.'

Religion was not found to be related to levels of social capital, supporting past research by Cairns, Van Til and Williamson (2003), but contrary to the findings of Morrissey, Harbison, Healy, McDonnell and Kelly (2005) who reported significantly lower social capital among Protestants in Northern Ireland. The findings regarding level of segregation indicate that those areas subject to higher levels of residential segregation, report lower levels of tolerance of diversity social capital. This is particularly interesting in view of the apparent unimportance of the individuals' status as a minority or majority group member within the segregated community. Therefore, the findings suggest that residing in highly segregated areas has a detriment effect on social capital regardless of group status. Of particular note here are the possible implications for bridging social capital. Tolerance of diversity is a central aspect of bridging social capital, therefore the findings would indicate that the impact of residential segregation, may affect an individual or group's ability to 'get on' in life.

Study 2: Confirmatory Factor Analysis

Method

Participants: 251 individuals (73.3% female, 26.7% male) ranging in age from17 to 47 years (mean = 19.58, s.d.=4.04) participated in this study. As in the first study the sample was evenly distributed across religious groups (47.8% Catholic, 48.2% Protestant).

Measures: Participants were asked to complete the 26 item social capital measure in addition to providing biographical information.

Procedure: Participants were recruited from the 2005 - 2006 first year undergraduate intake at the University of Ulster. Questionnaire completion was undertaken during lecture sessions and under the supervision of the researchers. Data were analysed using LISREL 8.7 (Jöreskog and Sörbom, 2006) and PRELIS 2.7 (Jöreskog and Sörbom, 2004). A number of fit indices were examined to provide indicators of the appropriateness of the factor structure: the Chi-squared statistic (χ^2); Goodness of Fit Index (GFI; Jöreskog and Sörbom, 1981); and Comparative Fit Index (CFI; Bentler, 1990). Acceptable model fit is indicated by a non-significant chi-square value, and GFI and CFI in excess of .95. Byrne, Shavelson and Muthén (1989) report that model fit should not be judged solely on the basis of chi squared value, but on multiple criteria. The Root Mean Square Error of Approximation (RMSEA; Steiger, 1990) has been proposed as a useful tool in assessing model fit, and is reported here alongside 90% confidence intervals (90%CI). RMSEA values under 0.08 are indicative of an acceptable fit, and values under 0.05 a good model fit (Jöreskog and Sörbom, 1993). Hu and Bentler (1999) recommend the use of the Standardised Root Mean Square Residual (SRMR) which is presented here also, values less than 0.08 indicate good model fit.

Results

Maximum likelihood estimation of the nine factor, 26-item model initially proposed, was not possible as the LISREL output indicated a 'non-positive definite' solution. Examination of the data did not reveal any outliers or anomalies and the suggested modification indices posed no appropriate solution. Examination of inter-item and factor correlations revealed erroneously high correlation co-efficient values (>1.0) between the proactivity factor and the remaining eight factors, suggesting collinearity between the proactivity and remaining factors. Subsequent examination of

the proactivity factor again revealed no anomalies or data entry errors. Brown (2006) suggests that in such situations removing such problematic elements or combining them with other items may result in a positive definite solution. The three items represented by the proactivity factor were systematically removed, singly and in combination, to attempt to identify an acceptable solution. This resulted in the removal of all three items, leaving a 23-item, eight factor solution. Despite a significant Chi Squared value (χ^2 =354.93, df=202, p<0.01), the model indicated an acceptable fit, as the RMSEA was below the accepted level of .08, and approached good fit (RMSEA = .06) and 90% CI = .05 - .06, and the SRMR indicated a good fit also (SRMR = .07), although GFI and CFI values were below the accepted value of .95, (.89 and .90 respectively). Examination of the modification indices revealed a potential secondary of neighbourhood connection item '*Have you visited a neighbour in the past week?*' on the family and friend connections factors, however inclusion of this parameter in the model did not substantially improve the fit, and it was not included. All factors correlated moderately (table 3).

Table 3. Factor Correlations of eight factor social capital scale

	1	2	3	4	5	6	7	8
1	1.00							
2	0.50	1.00						
	(0.09)							
3	0.52	0.31	1.00					
	(0.10)	(0.10)						
4	0.34	0.32	0.16	1.00				
	(0.09)	(0.08)	(0.10)					
5	0.49	0.33	0.30	0.32	1.00			
	(0.08)	(0.08)	(0.09)	(0.08)				
6	0.67	0.39	0.72	0.43	0.52	1.00		
	(0.14)	(0.13)	(0.14)	(0.12)	(0.12)			
7	0.54	0.34	0.56	0.15	0.41	0.71	1.00	
	(0.08)	(0.08)	(0.080	(0.08)	(0.07)	(0.12)		
8	0.41	0.33	0.52	0.15	0.30	0.70	0.60	1.00
	(0.09)	(0.09)	(0.09)	(0.09)	(0.08)	(0.14)	(0.07)	

1, Value of life; 2, trust; 3, Neighbourhood safety; 4, Formal participation; 5, Neighbourhood connection; 6, Family connections; 7, Tolerance of diversity; 8, Work connections

Discussion

Overall the results of the confirmatory factor analysis support the structure of the 26 item SCQ-NI, and lend partial support for the SCQ (Onyx and Bullen, 2000) on which this scale is based. Onyx and Bullen (2000) reported a Chi Squared ratio of 4:6, RMSEA = .07, GFI= .76 and NNFI=.65. The fit presented here is comparable, although Onyx and Bullen reported on the full eight factor structure, while the fit statistics here do not include the proactivity factor in the structure. It is unclear why the initial solution presented as non-positive definite, however the removal of the proactivity factor and associated items, posed an acceptable alternative. The overly high correlation co-efficients between proactivity and the remaining factors suggests a degree of collinearity or linear dependencies between these elements (Brown, 2006), or possible abnormality in the proactivity data. The problematic nature of the proactivity factor in the confirmatory factor analysis is interesting as in the previously reported exploratory factor analysis the proactivity factor had poor comparability of item loadings with the Australian (Onyx and Bullen, 2000) and American analyses (O'Brien, Burdsal and Molgaard, 2004) and did not emerge as a factor at all in the Greek analysis (Kritsotakis et al, 2008). Only one item which loaded on the proactivity factor in the exploratory factor analysis, loaded similarly in previous research. The other two items which were represented by the proactivity factor in this analysis were identified as elements of neighbourhood connections, and trust and safety by Onyx and Bullen (2000).

All remaining items loaded well on their respective factors, with few exceptions. The inclusion of the trust and politics and neighbourhood safety factors appears to be well supported by the loadings of each of the items, supporting the addition of these items into the original measure, with a Northern Ireland sample. The results of the confirmatory factor analysis indicate the structure of the 26 item SCQ-NI, with the exception of the proactivity factor, to be acceptable as indicated by the fit indices, and support the use of this measure in the assessment of social capital in Northern Ireland, and potentially in similarly divided cultures.

Conclusion

The current analysis has several implications with regard to Northern Ireland. Females have a higher capacity for and stock of social capital, supporting previous research in this area (Bolin, Lindgren, Lindström, and Nystedt, 2003). This may be indicative of the different stereotyped gender roles, and greater use of informal and casual networking techniques. This

finding, while expected, may indicate a neglected area of community relations processes in Northern Ireland which tend to largely involve male figures from both communities and exclude women representatives.

Perhaps more unexpected has been the lack of relationship between social capital and religious group membership, rather there is the suggestion that segregation influences individual and group stocks of social capital, and the establishment of trust between groups, regardless of actual group membership or status within the community. High levels of segregation were associated with decreased tolerance of diversity indicating low stocks of bridging capital and high bonding capital, suggesting that segregation contributes to good quality intra-group support networks but may restrict the participation in inter-group interactions. This finding is supported by previous research (Morrissey et al, 2005). While the forging of bonding capital within these segregated communities supplies individuals with a dense network of ties which can be relied upon to provide sources of support for the individual, the reduced levels and availability of bridging networks – looser ties cross-cutting community and religious groups; may impede the individual's ability to forge relationships with individuals outside of their initial network, and ultimately influence intergroup relations. De Souza Briggs (2003) also noted these potentially detrimental effects which segregated residential areas pose for the development of bridging capital between ethnic groups. The implications that segregated societies may have for both bonding and bridging capital warrants further examination within the context of Northern Ireland.

This study has provided some insight into the measurement of social capital and its relevance to research in Northern Ireland. However, there were several apparent limitations to this study. While the sample covered a reasonably large age range, the majority of individuals fell within the lower end of that range. A fuller examination may be achieved by employing a more comprehensive and representative sample.

In general this study has yielded interesting and useful results. The results support the use of the SCQ (Onyx and Bullen, 2000) as a useful starting point in the measurement of social capital in different cultures and communities. The divergence in item loadings demonstrated here and in previous studies (Kritsotakis et al, 2008; O'Brien, Burdsal and Molgaard, 2004) advocates the adaptation of the measure to ensure relevance to the values and constructs of the society under study. The SCQ-NI measure developed here has been shown to have a good level of reliability, demonstrating a cultural relevance

appropriate for study in Northern Ireland, whilst retaining comparability with the findings of studies conducted in other cultures.

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Appendix One

Social Capital Questionnaire- Northern Ireland version

Subscales and Items	EFA	CFA
Trust and politics		
Do you think politicians can be trusted to serve the interests of the public?	0.71	.65
Do you agree that politicians are generally good people?	0.70	.68
How much do you agree with the statement 'We have Community Leaders here we can trust' ?	0.69	.72
Formal participation in community		
Are you an active member of a local organisation or club (eg sport, craft, social club)?	0.67	.47
Are you on a management committee or organising committee for any local group or organisation?	0.69	.79
How often do you help out a local group as a volunteer?	0.65	075
Work connections		
Do you feel part of a team at work?	-0.96	.71
At work do you take the initiative to do what needs to be done even if no one asks you to?	-0.97	.51
Are your workmates also your friends?	-0.94	.90
Tolerance of diversity		
Do you think multiculturalism makes life in your area better?	-0.73	.72
Do you enjoy living among people of different lifestyles?	-0.84	.80
If a stranger, someone different moves into your street, would they be accepted by the neighbours?	-0.39	.53
Neighbourhood connections		
In the past 6 months, have you done a favour for a sick neighbour?	0.65	.79
In the past 6 months, has a neighbour done a favour for you?	0.68	.75
Have you visited a neighbour in the past week?	0.51	.54
Value of life		
If you were to die tomorrow, would you be satisfied with what your life has meant?	-0.63	.66
Do you feel valued by society?	-0.53	.56
Family and friends connections		
Over the weekend do you have lunch/dinner with other people outside your household?	0.55	.44
In the past week, how many phone conversations have you had with friends?	0.54	.61
When you go shopping in your local area are you likely to run into friends and acquaintances?	0.51	.53
Proactivity		
Can you get help from friends when you need it?	0.425	-
If you need information to make a life decision, do you know where to find that information?	0.579	-
If someone's car breaks down outside your home, do you invite them into your home to use the phone?	0.413	-
Neighbourhood safety		
Do you feel safe walking down your street after dark?	-0.61	.62
Do you feel safe walking down your street in daylight?	-0.58	.55
Does your area have a reputation for being a safe place?	-0.60	.36