

A Critical Review of Scales Used in Social Capital Research

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Abstract: *This paper reviewed some of the most commonly used scales of social capital researches. Depending on the context, among these scales, some of them were found to be used more frequently than others. This paper discusses some of these scales for future researches. These are, name generator, position generator, resource generator, Social capital assessment tool (SCAT), Adapted Social Capital Assessment Tool (A-SCAT), Personal Social Capital Scale. After critical assessment, Personal Social Capital Scale scales were found to be the best scales in assessing individual social capital as they possess best psychometric properties. Since Therefore, it is imperative for future study to use the best scales in measuring their research constructs. This paper suggests that there is the need for researchers to consider the current methodological strength of any given measurement from stream of literature before adapting or adopting. Doing so will certainly provide more meaningful result for inferences.*

I. Introduction

It has been argued that, the more individual possesses social capital the greater the chance of achieving higher desired outcome (Chen et al., 2015). Consequently, a comprehensive review of studies on social capital revealed that the construct received considerable attention from both researchers and policy makers (Agénor&Dinh, 2015; Barker, & Thomson, 2015; Obikili, 2015; Park, Nunkoo, & Yoon, 2015), cutting across majority of academic disciplines such as sociology, anthropology, economics, political science, management and entrepreneurship (Andrews, & Brewer, 2015; Strzelecka, & Wicks, 2015) in both developed and less developing economy (Roberts, & Gannon, 2014). For its wider acceptability and applicability, van Deth, (2003) argued it “has become a minor industry in the social sciences” (p. 79). The concept is rooted in sociology (Unni, 2014; Kiani, 2012; Dehkordi, Hossieni, Naqipourfar, &Torkamani, 2012) and was first studied by Durkheim in 1897 when examining how social influence relates to suicide (Durkheim, 1951), but Hanifan was the first to introduce the term social capital in academic arena (Ritchie & Robison, 2012).

Definitions of Social Capital

There are a lot of contentions among scholars over what constitutes the term social capital, its wider applicability in almost all human endeavours (Lee, Park, & Lee, 2015; Murayama et al., 2015; makes it more difficult to have a unified and widely acceptable definition, thus defining it has been a subject of debate among scholars (Bellamy, 2015; Lee et al., 2015; Kobayashi, Kawachi, Iwase, Suzuki, & Takao, 2013). Yet, there is no satisfying consensus on how it should be defined (Agampodi, Agampodi, Glozier, &Siribaddana, 2015). In attempt to define it, every field of study moulds it to suit its context (Villalonga-Olives&Kawachi, 2015a, 2015b).

Although there are various definitions of the concept, Neves and Fonseca (2015), Woolcock (2010) argued that social capital is a polysemic construct having different but related definitions with one central idea “our social ties matter and bring us benefits” (Neves, & Fonseca, 2015, p. 15) thus, “the manner in which networks and their emergent properties (e.g. trust and norms) can constitute a resource for their members” (Crossley, 2008, p. 477). Nevertheless, different scholars defined it for instance, as a tangible and intangible resources individuals and groups acquire through network relationship that aid in enhancing varied outcomes such as performance, success, and sustaining competitive advantage (Andrikopoulos, &Economou, 2015; Bellamy, 2015; Lancee, 2015; Liang, Huang, Lu, & Wang, 2015; Ou, Hsu, & Ou, 2015; Villalonga-Olives, &Kawachi, 2015a) For instance, Villalonga-Olives and Kawachi (2015b, p.47) defined social capital that capture both individual and group approaches as “the resources available to individuals and groups through membership in social networks”. According to Ritchie and Robison (2012, p.16), “Social capital is a person’s or group’s sympathy for another person or group” Likewise, Chen, et al., (2015), Archuleta and Teasley (2013) and Chen, Stanton, Gong, Fang and Li, (2009) maintained that social capital is a part of the general network connections amassed by individuals in their lifetime that consist of four core features: reciprocity, resource-rich, trustworthiness and durability. From most of the definitions suggested by different scholars, one could easily

deduced that most of them share four things in common; network, trust, norms and resource. Also, Ellison, Gray, Lampe, and Fiore, (2014) buttress that majority of these definitions share focus on illustrating the connections between social relationships and different outcomes. Hence (Ooi, Laing, &Mair, 2014) defined it as social norms such as reciprocity, trust, network of relationship and resources accessed that enable teamwork and mutual action at both group and individual level. Furthermore, Chen et al., (2009, p. 306) argued “without network connections, there is no social capital”.Also, Van Staveren and Knorringa, (2007, p. 107) buttress that the most comprehensive definition of the concept is “relations matter”.

Measuring Social Capital

As contentious as the conceptualization and operationalization of the social capital, it is also difficult to measure (Agampodi et al., 2015; Hällsten, Edling, &Rydgren, 2015; Villalonga-Olives, &Kawachi, 2015a; Appel et al., 2014; Ritchie, & Robison, 2012; Sabatini, 2009) and suffer methodological vagueness (Neves, 2013). Social science researchers are being criticized for absence of consensus on how social capital should be measured (Murphy, 2013; Ferri et al., 2009). Lack of appropriate measure that capture the construct deter from getting and understanding its clear nature, value and effect. Therefore, researchers need to weigh the pros and cons of each measure carefully before using, taking into cognisance the nature, context and objective of their study (Veerle et al., 2012). Furthermore, Lin and Erickson (2008) argued that, for social capital to be a tool for development, there is the need to have appropriate measure that will represent the true nature of it. But, multidimensionality and ever changing nature of the concept compound its measurement problem overtime as getting accurate and uniform measures (across all levels and contexts) is an impossibility.

To trigger social capital research, so many researchers validated scales for assessing social capital both at group and individual level (Veerle et al., 2012) most of which were emanated from developed countries (Agampodi, et al., 2015), scholars have debated extensively as to which measurement is the best. Although there is no consensus on one best measure, but some of them are preferred more than the others as they possess better psychometric properties. Some lists of the available measures are presented in table 1, but the most prominent and frequently used ones are hereby discussed.

Table 1

Social Capital Instruments		
SN	Authors and Year	Instruments
1	Chen et al., 2015	Social Capital Investment Scale – SCIS
2	Story, Taleb, Ahasan, & Ali, 2015	Short Version Of Adapted Social Capital Assessment Tool B - SASCAT-B
3	Muskett, 2014	WRSCIM
4	Wang, Chen, Gong, & Jacques-Tiura., 2014	Personal Social Capital Scale 16 and Personal Social Capital Scale 8
5	Thuy& Berry, 2013	Australian Community Participation Questionnaire (ACPQ)
6	Friche et al., 2013	Neighborhood scale
7	Carr, Cole, Ring, &Blettner, 2011	Internal Social Capital Among Family Business -ISC-FB
8	Borges, Campos, Vargas, Ferreira, &Kawachi, 2010	Integrated Questionnaire on Social Capital -SCIQ
9	Zimet, Dahlem, Zimet, & Farley, 1988	Multidimensional Scale of Perceived Social Support - MSPSS
10	Moscardino et al., 2010	Sense Of Community Index
11	Modie-Moroka, 2009, Borges et al., 2010	Perceived Social Capital Scale
12	Looman&Farrag, 2009	Arabic Social Capital Scale
13	Chen et al., 2009	Personal Social Capital Scale – PCSC
14	Mattoo et al., 2008	Social Support Questionnaire
15	De Silva &Harpham, 2007, De Silva et al. 2006	SASCAT
17	Williams, 2006	Internet Social Capital Scales – ISCS
18	Inclan, C., Hajar, M., Tovar, V., 2005; Krishna &Shrader 2000	Social Capital Assessment Tool – SCAT
19	Harpham, Grant, & Thomas, 2002	Adapted Social Capital Assessment Tool –ASCAT
20	Grootaert, Narayan, Jones, &Woolcock, 2003	Integrated Questionnaire for the Measurement of Social Capital - SC-IQ
21	Narayan, & Cassidy, 2001	Social Capital Inventory
22	Webber & Huxley 2007; Van Der Gaag&Snijders 2005	The Resource Generator
23	Van Der Gaag& Webber 2008; Lin& Fu. 2001; Lin &Dumin 1986	Position Generator
24	McCallister& Fischer 1978	Name Generator

Name Generator

This instrument is the oldest tool for measuring individual social capital stem from 1970s researches on social network. It consists of general social network inventory accomplished with the blend of name generator and interpreter questions. Initially, it was aimed for the assessment of social network size and the recognition of its content and structure. In collecting data using this instrument, three sequences of data collection is being

carried out. Firstly, an organized lists of questions requesting the respondents to enumerate names of individuals they know, Secondly, name interpreter, gather facts about members in one's personal network enumerated. Thirdly, though non-compulsory, the assessment of the connections among alters (Van der Gaag & Webber, 2008).

This instrument was the best method of evaluating social capital till the mid-90s, it is still being used in social network structure studies as the blend of generator and interpreter can offer vary comprehensive facts about social capital and network. Although important, it was challenged for being costly, interviews can be very long and repetitive in study involving diverse network, it is difficult to interpret and compare the outcome of the studies (Van der Gaag & Webber, 2008), time consuming (Verhaeghe, Van de Putte, & Roose 2013) and it neglects other part of the social capital as it measures only some aspect of social capital (the number of alters), therefore no longer in use (Wang et al., 2014).

Position Generator

This instrument concentrates rather more on the existence of social resources than the connections within the network (Lin, Fu, & Hsung, 2001). It is meant to consider the social capital in the holistic individuals' life. It usually ask from the list of ten to thirty different occupations whether respondents know and can identify anyone that engage in the listed type of occupation (Verhaeghe et al., 2013) and whether they are family members, colleagues and friends. The data gathered from this instrument are based on the notion that the occupation of the members in the network denote collections of social resources that can be measured quantitatively with job prestige measures. The fundamental assumptions of this instrument are that getting access to individuals with high prestige occupation provides access to enormous amount of resource and such peoples may apply crucial effect on their social network (Van der Gaag & Webber, 2008).

For its 'easy to administer' feature, position generator has been regularly used since its development and has gain popularity especially when measuring social capital at individual level (Verhaeghe et al., 2013). Nevertheless, it suffer validity and reliability challenges (Verhaeghe et al., 2013; Van der Gaag, & Webber, 2008). The listing method used to measure social capital is an approach, which is complicated for data collection, hard to produce measurement scores as it uses open-ended answers. Furthermore, there is absence of standard list of occupation to be included (Wang et al., 2014).

Resource Generator

One of the measurements of social capital that received great attention in the social capital literature is developed by Van der Gaag and Snijders (2005). Its reliability and validity across different cultural settings makes it transferable to diverse cultural context and therefore most applicable scale then other scales such as position generator and name generator (Häuberer, 2014, 2011; Webber, & Huxley, 2007) which were both developed to measure individual social capital (Lin & Erickson 2008; van der Gaag & Snijders, 2005). It deals with resources in different facets of life that satiates the desires of individuals in the contemporary society (van der Gaag & Snijders, 2005). Consequent to the notion that resources are the ingredients necessary for the achievement of economic and social mobility which differ from culture to culture, hence, the need for it to be considered and therefore the idea behind the construction of resource generator. The distinguishing factor between resource generation and other scales is the emphasis on particular critical resources for social capital generation in a particular settings (Foster & Maas, 2014). The scale measures people access to social wealth inherent in their social network (Webber & Huxley, 2007) as such, its items are directly asking about some particular resources available in the social network (Verhaeghe et al., 2013). It presents a novel way of measuring the construct using a checklist where by access is ticked against an arranged list of crucial and concrete resources (Van Der Gaag & Webber, 2008).

Although, it is more robust and economical then the other generators, its findings are strictly restricted to the resource items used (Verhaeghe et al., 2013). Also, the scale suffers some methodological issues. For instance, some of its items lack validity, inserting items for actual resource in the scale is hard to attain with any academic and statistical rigor (Van Der Gaag & Webber 2008). More so, there is high items popularity which is very easy for the respondents to check yes answer on question whether it is simple to access benefit from their network; this also shows vulnerability for socially desirable response (Van der Gaag & Snijders, 2005).

Social capital assessment tool (SCAT)

SCAT was advanced by Krishna and Shrader (2000). It is a lengthy questionnaires (more than 60 questions) that was intended to assess social capital in developing nations (Harpham, Grant & Thomas, 2002). It is established set of questions and approaches that evaluate the micro structural and cognitive levels of social capital in the communities that benefitted from development projects of the World Bank (Krishna & Shrader, 2000). Although, the SCAT has robust operational significance (Krishna & Shrader, 2000), some of the shortcomings of this scale is that it has not been subjected to statistical rigors (neither test of validity nor

reliability). Also, some of its questions are overlapping, nonetheless, it offers important questions from which other measurement developers/users from different field of studies (e.g. Rastogi, Thapliyal, & Hickey, 2014; Brune&Bossert, 2009; Morgan, 2007) used (Agampodi et al., 2015).

Adapted Social Capital Assessment Tool (A-SCAT)

To remedy the problems inherent in the use of SCAT, A-SCAT was developed (Harpham et al., 2002). It is a concise scale that has two dimension of social capital, cognitive (eleven indicators) and structural (seven indicators) (Kim, Mancuso, Huang, &Erkan, 2015). Like SCAT, A-SCAT is developed to be used in low-income developing economies which is characterized by high level of illiteracy (Harpham et al., 2002). The scale has been validated and found to have content, face and construct validity, but reliability has not been ascertained (Verduin, Smid, Wind, &Scholte, 2014). It has been validated and employed in Columbia (Harpham, Grant, & Rodriguez, 2004), Peru, Vietnam, and Rwanda (Verduin et al., 2014), in Bangladesh (Story, Taleb, Ahasan, & Ali, 2015) and in sub-Saharan Africa (Thomas, 2004). It has also been adapted by Young Lives (YL) in four less developed nations of Ethiopia, Vietnam, Peru and India (De Silva et al., 2006). For its good psychometric properties, several studies recommend it to be used especially in developing countries, (e.g. Agampodi et al., 2015).

The success of A-SCAT resulted in several adaption and modification which sees the emergence of other measurements such as Short version of adapted social capital assessment tool (SASCAT, SASCAT – B), personal social capital scale (PSCS) for health and behavioural science (Chen et al., 2009; Archuleta, & Miller, 2011) and subsequently PSCS 16 and PSCS 8 (Wang et al., 2014).

Personal Social Capital Scale (PCSC)

Motivated by the outstanding performance of A-SCAT on the measurement of individual social capital, Chen et al., (2009) developed social capital scale - Personal Social Capital Scale (PSCS) to provide reliable instrument of individual social capital in health and behavioral science researches aimed at remedying the shortcomings inherent in the A-SCAT by plainly delineating what social capital is and what it does (Wang, Chen, Gong, & Jacques-Tiura, 2014). This measure is based on the fact that social capital is part and parcel of individual's network connections that are characterized by reciprocity, trustworthiness and resource rich (De Silva, McKenzie, Harpham, &Huttly, 2005; Harpham, 2002). It was first developed in Chinese version which contained Forty two items that measure ten statements (Cap1 – Cap10) with each five measuring bonding and bridging social capital respectively - thirty two items measuring bonding and ten measuring bridging, (Wang et al., 2014). Archuleta and Miller (2011) translated the Chinese version to English and tested its reliability and validity in two different countries including China and United States of America (USA). They found the instrument to be psychometrically fit (excellent validity and reliability) to measure individual social capital. The scale offers a valuable and practical instrument for health and behavioural researchers. It is capable of measuring the personally owned social capital, both its bridging and bonding aspect. It is also effective in acquiring required information from different respondents concerning their network connections. More importantly, it is simples and user friendly (Archuleta & Miller, 2011).

Personal Social Capital Scale 16 and 8

The PCSC is challenged of being too large and content loaded and can be used for small sample survey. Therefore, there is the need to develop a scale that could be used for larger sample. Hence, (Wang et al., 2014) used PCSC item to develop two short versions, which they believe to be capable of catering for the larger sample survey. They termed them 'Personal Social Capital Scale 16 (PCSC 16)' consisting sixteen items, eight measuring bonding and bridging each, and 'Personal Social Capital Scale 8 (PCSC 8)' consisting eight items, four measuring bonding and bridging each. These two scales were tested for validity and reliability which they were found to have good psychometric properties (Cronbach's alpha of .90 and .83 respectively).

II. Conclusion

Although van Deth (2003) suggested that, evaluating the validity and reliability of social capital measures in different methods both longitudinally as well as cross-sectional should be a standard norm among social capital researchers and each facet of the construct should possess multiple indicators and rigorous statistical techniques for data reductions and normalization, unfortunately, this plea has not been heeded. For instance, De Silva et al. (2006) review of twenty-eight social capital empirical studies has exposed that only four has performed test of validity. He also found so many methodological flaws such as; measure not congruent to the definition, questions are not initially meant to measure social capital, questions do not measure intending social capital aspect, conglomerating aspects of social capital that are meant to be different into one score and absence of information on measurement validity. In line with Harpham, (2008), we suggest that there is the need for researchers to consider the current methodological strength of any given measurement from stream of literature before adapting or adopting.

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