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To cite this article: Tom Forsell, John Tower & Remco Polman (2018): Development of a Scale to Measure Social Capital in Recreation and Sport Clubs, Leisure Sciences, DOI: 10.1080/01490400.2018.1442268

To link to this article: https://doi.org/10.1080/01490400.2018.1442268

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Published online: 20 Mar 2018.

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Development of a Scale to Measure Social Capital in Recreation and Sport Clubs

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\textbf{ABSTRACT}
Social capital's measurement has been limited and an effective scale is needed. This research employed focus groups and interviews and a panel of experts to provide understanding and items for a social capital scale in sport and recreation setting. After a pilot study the Club Social Capital Scale (CSCS) was completed by 1,079 members of sport and recreation clubs. This 42-item scale included the factors trust, friendship, acceptance, reciprocity, norms, and governance. Exploratory factor analysis resulted in a 20-item four component (governance, norms, friendship-acceptance, and trust-reciprocity) CSCS. Confirmatory factor analysis confirmed the potential four or five factor model and the hierarchical structure. The CSCS is the first psychometrically developed instrument to measure the factors underlying social capital rather than its outcomes. It can inform policy makers or sport and recreation administrators to establish baseline social capital in their organization and the efficacy of interventions or changes in policy.

\textbf{Introduction}
Social capital is one of the most popular concepts to emerge from sociology over the past years and has been proposed as being able to make an important contribution to societal and individual health, wellbeing, and understanding of relationships (Enfield & Nathaniel, 2013; Ferland, 2007; Nicholson & Hoye, 2008; Putnam, 2000). Social capital has been the focus of much research but there has been limited development of a scale to assess it (Siegel, 2014) in terms of its dimensions and across different contexts or fields (Franke, 2005; Putnam, 2001). The importance of social capital and its scope to have an impact in the community has been listed in seven different fields (Woolcock, 2001). The purpose of this research was to identify the social capital dimensions and items that could be used in a scale to measure social capital in recreation and sport club settings by conducting interviews, focus groups and surveys with club players, coaches, volunteers and administrators.

Social capital as a social construct is a relatively recent phenomenon with its origins dating to the late 20th century based on the works of Bourdieu (1986) and Coleman (1988). At this time there is not even a universally accepted definition of social capital but there is recognition that it includes both positive and negative outcomes (Lee, Dunlap, & Edwards,
Some aspects of social capital highlight exclusivity and status while recognizing the potential of accessing resources in networks (Bourdieu & Wacquant, 1992). Characteristics of social capital relate to access to resources and group goods (Bourdieu, 1986), the social structures people use to achieve their interests (Coleman, 1990), and the social networks that bring people together and enables the development of norms, reciprocity, and trust (Putnam, 1995). For the purpose of this article, social capital is defined as the ability of individuals and groups to gain access to resources and the benefits accrued from these resources through their involvement and membership in club social networks (Forsell, 2014; Rosso & McGrath, 2012; Siegler, 2014).

**Background of social capital**

Social capital theory is derived from the terms “social,” referring to the importance of positive human interactions based on relationships, and “capital,” which refers to influence and information which has value (Field, 2008; Pope, 2003). Several economists have noted the existence and importance of economic (financial) capital (Field, 2017). In the 1960s, people(7,9),(992,989) and their abilities (skills and knowledge) were noted as human capital (Becker, 1964; Schultz, 1961). Bourdieu and Wacquant (1992) noted the importance of human, cultural, and social capital.

Social capital has emerged with an emphasis on social relationships as providing access to important assets for communities and individuals (Bourdieu, 1986; Field, 2008). Social capital is an investment in social relations with expectations returned when required or stored to be used sometime in the future (Coleman, 1988; Lin, 1999). Social capital is generated, developed, or created through social interactions and the literature often refers to harnessing the power of associations and their networks for good work in the community. This supports the idea that “Social networks are valuable,” allowing people to build things, develop trust, and knit the social fabric in free associations (Field, 2008; Kankainen, 2009; Tocqueville, 1990). Attention has been paid to the formal networks in the community and formal forms of social engagement, such as that occurring through civic associations, sport clubs, and local organized networks. Social capital is seen as both a theoretical and an applied concept by many in its research and multidisciplinary makeup across sociology and the social sciences (Adam, & Roncevic, 2003; Field, 2017).

Social capital research often emphasizes the benefits people get through networks, for example, a friend helping you get a job or helping you buy a car (Field, 2017). Information of this nature is good and powerful, and helps people with access to these services or goods. However, social capital also can come from a negative perspective where club or network members become very closely bonded together. Some groups bond and become inward such that they do not accept outsiders (Tonts, 2005; Walseth, 2008). This negative aspect of “bonding” social capital may encourage exclusivity within a group with examples including groups such as fraternities and the mafia (Fields, 2008; Fukuyama, 1995; Sciarrone, 2002).

Whereas bonding can have positive (e.g., information sharing, enforcing common norms) and negative impact on social capital the same is true for “bridging.” For example, bridging can link individuals to groups or people outside of their networks “generating broader identities and reciprocity” (Putnam, 2000). Alternatively, bridging might result in clique formation of dissatisfied individuals thereby undermining current organizational structures (Portes, 1998). Bourdeau noted the ability of networks to reinforce inequality where some members obtain a greater share of the “goods” than others (Bourdeau, 1986). Social capital is a resource that can be used for good or in a negative way; however, its image today is often seen in a positive manner and a theoretical and practical focus for social science (Adam & Roncevic, 2003; Field, 2017).
The value of social capital is well recognized as a key element of community recreation, sport, and leisure service delivery. Recreation and sport researchers have noted and highlighted the relationship between social capital and leisure (Arai, 2000; Arai & Pedlar, 2003; Blackshaw & Long, 2005; Coalter, 2007; Glover, 2004; Glover & Hemingway, 2005; Graham & Glover, 2014; Hemingway, 1999; Jarvie, 2003; Nicholson & Hoye, 2008; Rojek, 2000). The recent review of the social impacts of sport and culture indicate that the evidence of social capital impacts in sport were clear because of its capacity to increase social connectedness and sense of belonging (Nicholson, Brown, & Hoye, 2013; Taylor, Davies, Wells, Gilbertson, & Tayleur, 2015). The capacity of recreation and sport through an individual’s leisure choices provides a unique opportunity to meet both individual leisure needs and address wider social goals.

Local community sport organizations are usually managed by volunteer committees of management and the programs are also delivered by volunteers (Doherty & Misener, 2008) with only a few experts employed in a coaching role. While there has been an increasing role for the professional sport administrator at the state association level, these professional positions disappear at the local community and club level (Shilbury & Kellett, 2011). The importance of volunteers in community recreation and sport is highlighted by over 2.3 million Australians who volunteer in sport, the largest sector of Australian volunteers. This compares to just less than 100,000 people whose main job is in the sport and physical recreation sector reflecting a ratio of 22 volunteers to each paid staff member (ABS, 2012). Our research involved paid professionals, club volunteers, and participants to fully understand the dimensions and items to be included in the social capital scale.

Community recreation and sport clubs play a key role in developing recreation and sport, delivering local programs and services, and meeting community expectations regarding the provision of opportunities for physical activity and competitions (Tower, Jago, & Deery, 2006). Volunteer involvement in recreation and sport clubs provides opportunities for the creation of social capital. Although some would suggest the involvement of volunteers is an indicator of social capital, this participation alone does not necessarily create social capital (Doherty & Misener, 2008).

Recreation and sport are often associated with contributing to social capital; however, as indicated, there is a lack of understanding how this can be operationalized and measured (Zakus, Skinner, & Edwards, 2009). Studies have attempted to address the existence and measurement of social capital in recreation and sport clubs. Findings have indicated that community integration as an outcome of sport club social capital was not always present (Tonts, 2005; Walseth, 2008). There were positive and negative aspects of social capital such that bonding created cohesion among some groups but contributed little to bridge disadvantaged community groups to be part of the wider community (Tonts, 2005). Australian governments recognized and note how sport and recreation participation can build positive social capital outcomes supporting research in Western Australia (Atherly, 2006a) and the Australian Sport Commission (2012).

**Measurement of social capital**

The measurement of social capital in recreation and sport clubs remains contentious due to the lack of agreement and clear understanding of its nature and context and purpose of its measurement (Caveye, 2004; Coalter, 2011; Franke, 2005). As a result, the relationship between sport and recreation clubs and social capital has had limited empirical testing, and the need for research in this area has been highlighted over the years (Hemingway, 1999;
Putnam, 1995; Siegler, 2014; Zakus et al., 2009). The lack of a reliable and valid instrument to measure social capital in sport and recreation clubs has resulted in a limited understanding of its role and community impact(s).

Some studies have measured social capital in a generic sense by using indirect proxy measures not designed for social capital measurement such as high crime rates reflecting low social capital (OECD, 2001; Van Deth, 2003). Others have used questions that are outcome focused rather than those that assess the underlying factors associated with social capital (Stone & Hughes, 2002). This has included the assessment of safe streets and benefits based statements, such as strengthening families or community spirit as representing social capital (Atherly, 2006b; Collins, 2003; Tonts, 2005; Winter, 2000). As such, these previous studies assessed potential outcomes of social capital rather than components of social capital itself. Portes (1998), for example, was critical of presumed measures of social capital as actually being social capital and used in its measurement without controlling for the effects of other factors affecting social capital. The separation of social capital sources which are dependent on relationships between people and its benefits (resources) is needed (Dika & Singh, 2002). While social capital has been examined for some time, there is no agreement in the literature to date regarding its factors or indicators. Existing scales use a variety of different measures ranging from 14 items (Putnam, 2001), to 34 items (Onyx & Bullen, 2000) and over 200 items (Sabatini, 2009). A framework based on four aspects of social capital—personal relationships, social network support, civic engagement, and trust and cooperative norms—included 19 items (Siegler, 2014). There is limited agreement about what items to include in the scales, and there has been limited testing of the validity and reliability of the scales. Without a rigorous approach, the bridge between our understanding of what social capital is and its measurement in empirical research will continue (Enfield & Nathaniel, 2013; Forsell, 2014; Stone & Hughes, 2002).

The need for social capital measurement with a scale was supported by researchers because few instruments used to measure social capital have been tested for reliability and validity (De Silva, McKenzie, Harpham, & Huttly, 2005; Stone & Hughes, 2002). For example, a study measured social capital components of trust, networks, and reciprocity based on assumed empirical benefits of social capital (Okayasu, Kawahara, & Nogawa, 2010), but there was no empirical tests to determine scale reliability and validity. Research in rural New South Wales, Australia, examined social capital in local rural communities to investigate the impact of social capital in the community, family life, and work but not for recreation and sport clubs (Onyx & Bullen, 1997, 2000). A mixed method approach developed an empirical scale from statements from local residents and used factor analysis to develop clusters of questions identifying the nature of social capital. However, while they developed a scale of measurement it did not examine underlying factors of social capital but looked for relationships. They explored elements of social capital such as “are volunteers likely to attend community events” and other building blocks, for example, “proactive social connections” (Onyx & Bullen, 2000). This provided measurement of social capital actions and its aspects about “feelings of value of life” in small communities but did not measure social capital in sport and recreation clubs. According to Uslander (2001), there is a need to provide social capital measurement in the specific area or sector it occurs.

There has been a recognized need for a scale to measure social capital (De Silva et al., 2005; Stone & Hughes, 2002), and research has identified a range of components likely to contribute to such a scale (see Table 1). Trust, reciprocity, norms, tolerance and acceptance, governance, friendships, and networks provide the foundation components to explore the items that could be included in a social capital scale. This study aimed to address the need for a scale measuring
Table 1. Components of social capital and its definition identified in the literature.

| Component               | Definition                                                | References                              |
|-------------------------|-----------------------------------------------------------|-----------------------------------------|
| Trust                   | Trust the basis on which social capital is created        | (Fukuyama, 95)                         |
| Reciprocity             | I can do this now and hope it may be returned             | (Onyx & Bullen, 1999)                  |
| Norms                   | Unwritten rules of expectations of behaviour              | (Onyx & Bullen, 2000)                  |
| Tolerance / Acceptance  | If a stranger someone different moves into your street would he or she be accepted | (Koutra, et al., 2012)                 |
| Governance              | Overall, how effective is the group's leadership.         | Grootaert, Narayan, Jones, & Woolcock, 2004 |
| Friendships / networks  | Social networks have value                                | Putnam, 2000                           |

social capital and its factors in sport and recreation clubs (Club Social Capital Scale, or CSCS) by employing a mixed methods approach that was applied in local recreation and sport clubs.

Methods

The research adopted a two-phase process incorporating a qualitative–quantitative mixed method approach to scale development (Creswell, 2009). The qualitative phase analyzed the literature and then used focus groups and interviews to identify and develop components and items for the CSCS (Skulmoski, Hartman, & Krahn, 2007). This was followed by a panel of experts to provide advice on content and face validity and to systematically reduce items.

The quantitative phase of the research included a pilot study in which exploratory factor analysis (EFA) was conducted for item removal and test of scale reliability (Devilles, 2003; Harman, 1976). This was followed by the main study in which EFA was initially conducted to test the factor structure of the CSCS followed by confirmatory factor analysis (CFA) on a smaller sample to analyze its psychometric properties.

Phase 1: Qualitative phase

Procedure item generation

The researchers conducted two focus groups of eight participants each and then conducted four interviews with club members. The sample, drawn from a directory of state sport and recreation associations, provided a balance of sport and recreation clubs, gender, age, mixture of club roles, e.g., volunteers, administrators, participants and coaches, and length of membership to ensure a well-developed and broad view on the topic (Minichiello, Aroni, Timewell, & Alexander, 1995) and ensure richness of data (Patton, 2002). The focus groups and interviews both used a semi-structured approach. This ensured a focus on the concept of social capital in sport and recreation clubs but also allowed for flexibility in questioning (Miller & Crabtree, 1999).

Further representativeness, comprehensiveness and clarity of content and items was achieved through a panel of 10 experts comprising academics, consultants, and research staff (American Educational Research Association, 1985). All were experienced in social capital research and scale design and could provide objective input on content and clarity of the draft SCSC (Grant & Davis, 1997). Two panel groups with five members in each group were emailed the draft scale with a series of directions. One group classified items as being positive or negative, written from attitudinal or behavioral perspectives, and on item clarity. The second group rated item strength (from 1–3) in measuring social capital, relationship to components, and
simple clarity. Items crucial to the scale (strong) were rated 3 and retained, items ranked 1 were removed, and those rated 2 were examined further before re-development or removal.

**Analysis**

All responses for the focus groups and interviews were recorded and transcribed verbatim. In addition, responses were recorded on index cards, edited, and linked to a component. Initially the items were written using open coding in Excel, refined further noting similarities which resulted in an initial number of items and components. Axial coding was employed to examine themes exploring key concepts linking items (Neuman, 2012) in the second and third review of the data. Three researchers discussed and agreed on the items noting patterns and exploring themes (Miles & Huberman, 1994).

**Qualitative results**

The focus groups and interview results provided 486 statements that were examined as potential questions for the scale. Each statement was classified under open coding providing a large number of components. Reduction was achieved by examining commonality or similarity in meaning. Axial coding was used to identify new categories. For example, bonding/loyalty/support/equal and tolerance were discussed and became the component acceptance. This reduced the item pool to 161 and six components (trust, reciprocity, networks, tolerance of diversity, norms of behavior, and civic responsibility).

Further reduction of items was addressed by two expert panels (10 people in two groups). Panel one provided feedback on the scale regarding positive or negative worded questions, attitudinal, or behavioral perspective and on item clarity. Panel two ranked each item from 1–3, with 3 being high and retained, items ranked 2 were discussed and usually removed and the items labeled 1 were removed. Panel two also allocated each item to a component and provided feedback on clarity and wording of the statements. The panels reduced the number of items from 161 to 99.

The final reduction of the items was achieved by the research team's review of the items duplication, wording, and potential for the statements to be used in the Likert scale questions (Dillman, 2000). This final reduction provided a scale with 76 items with six components (trust, friendship, tolerance becoming acceptance, reciprocity, norms, and civic representation becoming governance). The six components were listed with 12 or more items each. This scale resulting from Phase 1 was used in the pilot study in Phase 2.

**Phase 2: Quantitative method**

**Pilot study procedure and sample**

First, the scale was sampled orally with two members of a club not in the research for feedback on clarity, and use of a 5-point Likert response scale. Their feedback on scale administration suggested a slight modification of two items. The scale was piloted with a purposive sample of 100 members (38 female and 62 male) of sport and recreation clubs not a part of the main sample. Ages ranged from 18–70, with a mean age of 46. An attempt to provide a balance between gender and members of sport and members of recreation clubs was made.
**Pilot study analysis**

EFA was conducted using the Statistical Package for the Social Sciences (SPSS) version 21 on the 76-item CSCS. EFA was conducted using principle component extraction and Oblimin rotation because of expected correlations between factors. Factor extraction was based on Eigen values > 1 and inspection of the Scree plot to check for abnormality. Items were retained if they loaded > .50 (Tabachnick & Fidell, 2001) on a factor and considered to be contributing to factor strength nor showed cross-loading with a difference of less than .1. The Kaiser-Meyer-Olkin value was checked if it exceeded the recommended .6 value (Kaiser, 1974) and the Bartlett’s Test of Sphericity (Bartlett, 1954). Reliability analysis was employed to assess reliability of the factors and scale as a whole.

**Pilot study results**

Thirty-four weak items not contributing to scale reliability were removed. The process reduced the survey instrument from 76 to 42 items, representing six social capital factors (trust, friendship, acceptance, reciprocity, norms, and governance). In the final refining, attention was given to wording and the factor of social capital addressed. The pilot study resulted in a scale (CSCS) with an internal reliability (Cronbach Alpha) of .96. Reliability scores for the individuals factors was trust = .81, reciprocity = .87, norms = .81, governance = .87, friendship = .81, and acceptance = .84.

**Main phase-sample**

The setting for the main quantitative study was organized Victorian recreational and sport clubs. This sample was chosen because it was a readily accessible number of recreation and sporting clubs and members that would be able to participate in the study. Each club was affiliated to its state level association. For example, lawn bowls clubs were affiliated with the state organization Bowls Victoria (VicSport, 2006). All state associations had elected executives, paid development staff, and an executive officer. This organized network of sport and recreation clubs enabled easy access to members as a purposive sample. The pilot study provided a succinct, robust scale of 42 items with 7 items for each factor (trust, friendship, acceptance, reciprocity, norms, and governance). The CSCS employed a 7-point Likert scale to provide a greater variation of item responses (1 = very strongly disagree; 2 = strongly disagree; 3 = disagree; 4 = agree nor disagree; 5 = agree; 6 = strongly agree; 7 = very strongly agree).

**Main phase procedure**

The CSCS was distributed to members of recreation and sport clubs through state development officers using random sampling. In all cases, every second club from each association was contacted for involvement in the research. After a club agreed to be part of the study, the club secretary received 30 questionnaires to equally distribute among members including volunteers, players, and coaches/administrators over 18 years of age. In total, 1,109 out of 1,400 questionnaires distributed were returned; however, 30 were not analyzed due to being incomplete or having completed fewer than 80% of items. Thus, 1,079 questionnaires from clubs were used for analysis, representing a 77% return rate from the total sample. Of this sample, 758 participants were used for the EFA and 339 for the CFA (randomly sampled).
Table 2. Descriptive characteristics of the participants in the EFA and CFA study.

| Gender | EFA | CFA |
|--------|-----|-----|
|        | Males | Females | All | Males | Females | All |
| Age    |       |       |     |       |       |     |
| 20 years of age or under | 11% | 8% | 10% | 10% | 8% | 10% |
| 21–30 years of age | 21% | 16% | 19% | 21% | 14% | 18% |
| 31–40 years of age | 15% | 13% | 14% | 13% | 15% | 14% |
| 41–50 years of age | 19% | 21% | 20% | 19% | 22% | 20% |
| 51–60 years of age | 15% | 20% | 17% | 18% | 16% | 17% |
| >60     | 19% | 22% | 20% | 19% | 25% | 21% |
| Income per year* |       |       |     |       |       |     |
| $0–30,000 | 13% | 15% | 14% | 13% | 13% | 14% |
| $31–60,000 | 31% | 32% | 31% | 34% | 36% | 34% |
| $61–80,000 | 18% | 17% | 18% | 18% | 18% | 18% |
| $81–100,000 | 14% | 12% | 13% | 11% | 11% | 11% |
| >$100,000 | 24% | 24% | 24% | 24% | 22% | 23% |
| Education* |       |       |     |       |       |     |
| High school or leaving | 37% | 42% | 38% | 35% | 45% | 39% |
| Bus/Trade certificate | 30% | 16% | 26% | 29% | 16% | 25% |
| Bachelor’s degree | 22% | 21% | 22% | 21% | 19% | 20% |
| Postgraduate degree | 11% | 21% | 14% | 15% | 21% | 16% |

*Not all provided this information.

There were no differences in the proportions of gender, age, income, and education between the EFA and CFA sample (all p > .05). All participants provided informed consent prior to completing the questionnaire pack.

**Exploratory factor analysis**

EFA and reliability analysis were conducted on the 42-item CSCS to provide the most parsimonious scale. EFA was similar to the pilot phase except we used maximum likelihood extraction. Careful regard was given to normality and outliers, with checks made for normality of distribution following each iteration. Reliability analysis was employed to assess the quality of the scale as a whole and to identify items which did not contribute to scale reliability using Cronbach Alpha. Reliability analysis was conducted each time the scale and subscales were reduced.

**Participants**

Seven hundred and fifty-eight participants completed the CSCS scale—533 men and 235 women. For other demographic information see Table 2.

**Results EFA**

Thirteen EFA iterations of the CSCS were conducted resulting in the removal of 22 items (from 42 to 20 items), and two factors statistically merging with another reduced from 6 factors to 4 (see also Figure 1). The four factors were governance, norms, friendship-acceptance, and trust-reciprocity. Table 3 provides an overview of the four factors, their items, and factor loadings (range between .67 and .88). The final CSCS scale explained 51.22% of the variance (friendly – acceptance = 39.74%; norms of behavior = 4.02%; trusting – reciprocity = 3.89%; governance = 3.58%). The factors, “friendly” (1, 2, 6, 7) and “acceptance” (items 3, 4, 5, 8)
Figure 1. Scree plot for the final EFA.

loaded onto one factor, with two clear sets of items. Therefore, in further analysis both of these factors were treated separately. Trust-reciprocity loaded as one joined factor (items 13, 14, 15, 16) indicating the strong relationship among trust, helping, and reciprocity. Finally, the Kaiser-Meyer Olkin was .93 and Bartlett’s test of sphericity $P < .001$ indicating adequate sampling.

Based on the assumption that social capital is a single concept incorporating related factors, it was not surprising to find the factors were moderately to strongly correlated (between .46 and .57) reflecting a moderate to strong relationship. The scale as a whole (Cronbach alpha = .93) and its factors (between .77 and .88) also had good reliability, with no item detracting from overall scale reliability (see Table 3). Items correlated strongly (between .55 and .86) suggesting that the CSCS showed high uniformity, consistency, and reliability.

**Confirmatory factor analyses**

CFA was conducted using maximum likelihood estimation in SPSS AMOS (v. 23) and tested a first and second order model (see Figure 2) with a four- or five-factor structure of the CSCS (Byrne, 2016). The following goodness-of-fit indices were used to establish model fit (Byrne, 2016; Hu & Bentler, 1999): a) chi squared/degrees of freedom with values greater than 1 indicating an adequate fit; b) goodness of fit index (GFI) with a value $> .90$ indicating a good fit; c) comparative fit index (CFI) with values greater than or equal to .95 indicating a good and .90 indicating adequate fit; d) root mean square error of approximation (RMSEA) with values $< .60$ indicating a good fit; and e), PCLOSE with a nonsignificant result ($p > .05$) indicating a good fit.

Cronbach’s alpha was calculated to test the CSCS internal consistency for the different factors and the scale as a whole with .60 to .69 being questionable, .70 to .79 being acceptable, and $> .80$ being good (Kline, 1998).

**Participants**

Three hundred and thirty-nine participants completed the CSCS scale—235 men and 104 women. For other demographic information see Table 2.
Table 3. Final factor loadings of the items for the four factors and factor reliability from both the EFA and CFA analysis.

|                    | F1  | F2  | F3  | F4  |
|--------------------|-----|-----|-----|-----|
| **EFA**            |     |     |     |     |
| **Factor 1: Friendly-Acceptance** (EFA \(\alpha = .88\); CFA \(\alpha = .89\)) |     |     |     |     |
| 1. In our club, it is easy to make friends. | .73 |     | .76 | .76 |
| 2. The club brings people together bonding them. | .79 |     | .80 | .80 |
| 3. No matter who or where you come from, the club accepts you. | .73 |     | .74 | .74 |
| 4. Members make friends with people from different backgrounds. | .63 |     | .67 | .67 |
| 5. Diversity in our club makes it better. | .68 |     | .72 | .72 |
| 6. People join the club for the activity, but friendships keep them there | .70 |     | .72 | .72 |
| 7. New members are welcomed in this club | .65 |     | .66 | .66 |
| 8. Differences between income and education do not reduce club unity. | .69 |     | .71 | .71 |
| **Factor 2: Norms of Behavior** (EFA \(\alpha = .79\); CFA \(\alpha = .80\)) |     |     |     |     |
| 9. In our club there are expectations of behaviour | .79 |     | .78 | .78 |
| 10. Club members behaving inappropriately are reprimanded. | .61 |     | .69 | .69 |
| 11. Our club expects a high standard of behaviour | .64 |     | .73 | .73 |
| 12. People behaving inappropriately are noticed. | .63 |     | .65 | .65 |
| **Factor 3: Trusting-Reciprocity** (EFA \(\alpha = .77\); CFA \(\alpha = .77\)) |     |     |     |     |
| 13. Club members who help other members know the favour will be returned. | .76 |     | .71 | .71 |
| 14. If club members need to go away suddenly they trust friends in the club to care for their children. | .59 |     | .59 | .59 |
| 15. People helped in the club have usually helped other members | .69 |     | .71 | .71 |
| 16. Club members lend members money trusting them to pay it back. | .55 |     | .59 | .59 |
| **Factor 4: Governance** (EFA \(\alpha = .84\); CFA \(\alpha = .78\)) |     |     |     |     |
| 17. The club allows members to have input into decisions. | .86 |     | .86 | .86 |
| 18. Members who disagree with club direction can voice their opinion. | .70 |     | .81 | .81 |
| 19. For decisions club members discuss issues and decide together | .66 |     | .73 | .73 |
| 20. Club leaders consult members about what they want in the club. | .66 |     | .80 | .80 |

Results CFA

Table 4 provides an overview of the results of the CFA for the first and second order model for both the four- and five-factor CSCS scale. All models had an acceptable model fit. Table 3 provides an overview of the factor loadings and reliability of the CSCS for this analysis. In addition the regression weight for friendly acceptance (.89), norms of behavior (.82), trusting-reciprocity (.86), and governance (.82) on the second order latent variable social capital were high.

Discussion

The primary aim of this research was to develop a scale to measure social capital in recreation and sport clubs. In the qualitative stage items were developed through interviews and refined
through a panel of experts. Pilot testing and a large study using EFA resulted in a 20-item and four- or five-factor solution. CFA confirmed that both the first- and second-order scale with either four or five factors were appropriate.

The CSCS includes some factors common in other studies to measure social capital. The Onyx and Bullen (1997) study of social capital in local communities, and Koutra et al. (2012) study of social capital among Greek youth, both share the five factors of trust-safety, neighborhood-connections, community participation, friendship, and tolerance of diversity.

Table 4. Results of the CFA for first and second order models and for the 4 and 5 factor model of the CSCS.

| Model Type                  | $X^2$   | $X^2$/DF | GFI   | CFI   | RMSEA  | PCLOSE |
|----------------------------|---------|----------|-------|-------|--------|--------|
| First Order 4 Factors      | 275.5   | 1.69     | .926  | .967  | .045   | .833   |
| Second Order 4 Factors     | 290.2   | 1.75     | .923  | .963  | .046   | .740   |
| First Order 5 Factors      | 282.9   | 1.77     | .924  | .964  | .047   | .698   |
| Second Order 5 Factors     | 310.9   | 1.88     | .917  | .957  | .050   | .451   |

$X^2$ = Chi-Square; DF = Degree of Freedom; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation

Figure 2. Second-order model for the 4 factor CSCS model with the standard estimates*. The fit indices for this second-order model was $X^2 = 290.2; P < .001; X^2/DF = 1.75; GFI = .923; CFI = .963; RMSEA = .046$ and PCLOSE .740.
In these studies, trust was associated with safety. This was not the case in the present study. This might be due that in sport and recreation clubs everybody is more likely to know each other and as such safety is not an issue.

Trust and its role in nurturing social capital is evident in most research on social capital and was noted in the present study. However, trust was closely aligned to reciprocity (returned favors) resulting in one factor in the final version of the CSCS. This is in contrast to Okayasu et al. (2010), in a study of Japanese sport clubs, in which trust and reciprocity were viewed as two independent factors. However, in their study the instrument used was not statistically tested. Overall, our findings suggest that trust and reciprocity are important constructs in the development of social capital in recreation and sport clubs and that they are closely related. If somebody does a favor, he or she is likely to expect something in return sometime in the future.

The factors norms of behavior and governance have been reported previously in the literature examining social capital (e.g., Grootaert & Van Bastelaer, 2002). In the CSCS, these factors relate to members behaving in a certain way with unwritten rules and an open and transparent club. In particular, the governance factor has received some interest over the last few years in Australia. The Australian Sport Commission (ASC) has taken significant steps to promote more open and transparent governance of sport clubs at all levels (ASC, 2012). The CSCS could be useful in measuring club governance and whether recommendations provided by the ASC are having the desired effect.

The factor tolerance of diversity was modified in this study to become acceptance, reflecting stronger, closer social ties expressing equality. The factor analysis suggested a statistical link with friendship as one joined independent factor of two related components (friendly – acceptance). This factor was also the strongest contributor to explained variance in the EFA (39.74%). Inspection of the items suggest a clear distinction between friendly acceptance. In addition, CFA indicated this factor could be treated as either one or two separate factors. Further studies would be required to further examine the relation between these concepts. In the current context the close relationship indicates that a friendly and welcoming club is likely to accept members and vice versa.

The mixed method approach adopted in the present study has been promoted in prior research to better understand social capital (Caveye, 2004). It also supported Woolcock's (2001) call for addressing social capital in distinct fields and to try to truly understand and subsequently measure it (see also Franke, 2005). Overall, this study provides a relatively short (20-item) questionnaire to assess social capital in recreation and sport clubs. The CSCS can be completed in 5–10 minutes by participants and has good psychometric properties. As such, this research fulfilled its aims of developing a scale to measure social capital in recreation and sport clubs.

Although the CSCS was specifically developed for the domain of sport and recreation clubs, it may be suitable to other domains. Its construction was based on measuring social capital in an organized network or club which has a governance structure. Therefore, it would be particularly relevant to other organized clubs, including arts, youth, and environmental or volunteer welfare groups. This would provide evidence for the similarities and differences of social capital factors across different (social) domains. This has occurred when the Onyx et al. (2001) scale was modified to measure social capital in Greek youth groups (Koutra et al., 2012). Such research would have important implications for policy and interventions regarding governance in governmental sectors.

With various government departments viewing social capital as an important outcome of clubs membership, improving communities, the CSCS would be a useful instrument to
measure the impact of their policies. As such, the CSCS could be a valuable tool for local, state, and national governments to provide baseline levels of social capital and its factor scores in recreation and sport clubs and examine social capital changes as a consequence of their policies and initiatives. Governments at all levels wish to support better communities and recreation and sport clubs are seen as a vehicle to do this. However, rather than measuring possible outcomes of change (e.g., increased participation or safer communities) the CSCS provides scores (levels) of social capital and factors resulting in such changes.

At the micro level, the CSCS could provide for a preferred model to gain a profile of clubs and used to guide strategies that would lead to growth in club numbers, quality of membership, and trust within clubs. The CSCSs would be able to identify club members’ viewpoints and beliefs to ascertain levels of social capital and community good through club network social capital.

The strengths of this study included development of the CSCS providing an empirical measure of social capital in recreation and sport clubs. Social capital is a complex concept and comprises a number of factors; this scale addresses each of those factors and overall social capital in its measurement (Zakus et al., 2009). Advantages of this study include the large sample size and the range of sport and recreation clubs that participated in the research. Additional strengths of the research include the rigorous process of item reduction and the thorough manner in which the statistical methods were employed (EFA and CFA). The development of the CSCS provided further understanding of the nature and underpinnings of social capital. Using mixed methods provides an appropriate-method of scale development and a better understanding of complex phenomena such as social capital.

The limitations of this study include the data collection from some clubs coincided with season completion reducing club response rate. However, this was overcome by contacting a small number of additional associations to augment the sample. Although the CFA indicated an appropriate factorial structure, the use of Rasch models has been promoted to examine items in questionnaires (Engelhard, 2013). However, such analysis was beyond the scope of the present research. Finally, future research should consider full validation of the CSCS. Discriminant or convergent validity could be explored with scales measuring trust or norms whereas predictive validity could be assessed in terms of membership fluctuation in sport and leisure clubs (i.e., one would expect less fluctuations in clubs with higher levels of social capital).

The study developed the 20-item CSCS consisting of four factors (governance, norms, friendship–acceptance, and trust-reciprocity) to measure individual members’ perceptions of their recreation and sport clubs’ social capital. This appears to be the first scale that assesses the underlying factors of social capital in sport and recreation clubs rather than its outcomes and, as such, provides a new tool to develop and evaluate interventions in this domain. CFA provided evidence for its good psychometric properties. However, future research addressing discriminant/convergent and predictive validity is required to further examine the suitability of the CSCS.

**Conclusion**

This research has contributed to knowledge development in social capital in recreation and sport clubs. The mixed methodology identified social capital dimensions (factors) in leisure clubs. These identified factors (friendly–acceptance; norms of behavior, trusting–reciprocity, and governance) provide a distinctive model of social capital in a recreation and sport club setting. This research also developed a scale (CSCS) to measure these factors and overall levels
of social capital in club settings. The CSCS provides researchers with a tool to examine the level of these factors in different leisure settings but also to examine how changes in these factors might help to improve selected outcomes (e.g., increased participation). The research supports and raises the profile of social capital as an important theoretical and practical concept in the world of leisure and sport clubs, and the CSCS provides a new tool to examine and evaluate social capital in this setting.

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