

Evaluation of Youth Social Capital Scale in a Malaysian Undergraduate Sample: A Confirmatory Factorial Analysis

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Abstract

Studies on adolescents' development have shown that social capital plays an important role in reducing engagement in risky behaviours. However, social capital has been broadly conceptualized. The differences in definition raise the need for a comprehensive scale to capture the full picture of social capital especially among young people. Onyx, Wood, Bullen, and Osburn (2005) developed the 34-item Youth Social Capital Scale (YSCS), which taps on seven dimensions of social capital (Family and Friends, Participation in Community, Moral Principles, Neighbor Connections, Trust and Safety, Friends and Youth Social Agency). The YSCS is one of the few scales available to measure social capital among young people. Although the YSCS has been found to be reliable and valid, a study using Greece sample revealed that only five out of the seven subscales were psychometrically sound. The inconsistency suggests that structure of the YSCS may vary culturally. The primary goal of this study was to evaluate factor structure of the YSCS in Malaysia context. Confirmatory factor analysis on responses obtained from 194 undergraduates supported the theoretical structure of seven first-order factors and one second order factor upon running the necessary modifications. Specifically, all items loaded on the corresponding seven dimensions as assumed except two items (item 3 and 15). Moreover, a general social capital score can be accounted for by the seven dimensions. The findings offer preliminary evidence that YSCS is a valid measure of social capital among young Malaysians. However, some items were found conceptually overlapped and modifications are needed to improve qualities of the YSCS.

Keywords: Social capital, confirmatory factor analysis, validity, youth, Malaysia

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1.0 INTRODUCTION

At a surface level, social capital can be defined as close ties with one's family, friends, or neighbours that can be relied upon when one is facing a crisis. However, it is often characterised as sets of norms and networks that enable individuals to act as a group (Woolcock & Narayan, 2000). Moreover, social capital can be conceptualized at three levels: micro, meso, and macro level. At micro level, social capital consists of ties among immediate family and friends, while at meso level, it involves social structure such as the relationship between groups. This can be observed how in certain community, you may have the elite and non-elite members. This interaction between these groups will influence the community dynamic. At macro level, social capital is reflected as a more officialised relationships and structures such as the state rules, political regime. (Grootaert & van Bastelaer, 2001). Woolcock and Narayan (2000) further emphasised that social capital can be defined multidimensional.

Social capital can be divided into two components, which are structural and cognitive. Structural social capital refers to networks or links between individuals or in institutions, which can be observed whereas cognitive social capital refers to norm and values. Cognitive social capital is more subjective in nature (Harpham, 2008). Bonding social capital refers to strong connections with individuals within the same community (e.g. friends) whereas bridging refers to connections with individuals with different structural power e.g. local government). Bridging social capital can be referred to as a subset of linking social capital, which refers to linkages with external sources of network or power such as the state government (Harpham, 2008). However, the nature of social capital as to how it is viewed and the manifestations of it; e.g. through norms, values, bridging or bonding can change over time as the equilibrium shifts within different levels (Woolcock & Narayan, 2000; Grootaert & van Bastelaer, 2001).

For young people, their lives are shaped by the social relationships that they have. These relationship provides them with experiences, norms and values that shape their life; which leads to the production of social capital (Allan, Catts, & Stelfox, 2012). As such, young people's social capital can be observed at different levels. It can be seen in family bonds, peer networks, school environment as well as in community networks (Catts & Allan, 2012). Hence, often different domains of social capital such as school social capital has been studied separately or together (Novak & Kawachi, 2015). For an example, McPherson et al., (2014) through their review of thirty-four papers found that family social capital such as parental monitoring and religiosity are useful for reducing risk behaviours whereas quality school environment contributes to decreased usage of tobacco, alcohol, and drug. Salmi and Kivivuori (2006), on the other hand found the lesser an adolescent reported of teacher control, the more likely he or she was to be a frequent offender. Camlin and Snow (2008) demonstrated how membership in social clubs are associated with safer sexual behaviours. The memberships in clubs as such was said to provide a site to resist social norms that make the adolescents especially females vulnerable to HIV.

Needless to say, social capital is one of those factors that have been implicated with young peoples' risky behaviours and positive development. Studies have shown that social capital (e.g. parental support, peer interaction) that is available in one's environment can reduce the likelihood of participation in risky behaviours (Carney, Jacob, & Hazler, 2011; Salmi & Kivivuori, 2006), violent behaviour among secondary school students (Wright, 2006) and delinquent behaviours (Salmi & Kivivuori, 2006). Social capital also serves as a significant predictor of quality of life (Karimzadeh, Ahmad & Karimzadeh, 2013), academic performance (Dixon-Roman, 2013), young-adult adjustment (Pettit, Erath, Lansford, Dodge, & Bates, 2011), aiding in young girls' resiliency (Bottrell, 2009) and as a protective role in shielding adolescents from effects of poverty (Denner, Kirby, Coyle, & Brindis, 2001), influence.

Social capital's influences were also observable in studies conducted among Malaysian sample. Tamam (2013) investigated the level of interracial bridging social capital among 447 public university undergraduates in Kuala Lumpur. In this study, the interracial bridging scale was developed by the researcher by borrowing some ideas other researchers. The eight-item scale measures how far the students are integrated in multiracial environment and able to gather support to obtain aid from people of other races. The study found that the frequency of socialisation with peers of other races and interracial bridging social capital is low among the undergraduates. It shows that the students are not racially integrated. In a study among 569 academicians from Malaysian public universities different dimensions of social capital were studied. Three different measurements were used in this study to measure different dimensions of social capital such as social ties, participatory capital and trust. Measurement by such as Internet Social Capital Scale (ISCS), inquiry on individual's participation in community and statement such as "Most people are honest." to measure trust were used in this study. The study aimed to investigate if life satisfaction predicted social capital since social capital's influence on life satisfaction is established. It was found life satisfaction predicts social capital, with strong ties accounting for the highest variance, followed by trust, participatory capital and weak ties (Mohd Arif, Rahim Khan, & Idid, 2012). Yokoyama and Ali (2006) study found that structural and cognitive social capital exert their influence differently. In this study conducted among farmers in Kuala Selangor found that those who participate in community activities tend to be less healthy but those who think Area Farmers Organisation (PPK) as important tend to be healthier. Questions that touch on each aspect of social capital were employed in this study.

Despite its importance as a variable that can influence human development, social capital as a concept can be deemed controversial (Schuller, Baron, & Field, 2000). For instance, Bottrell (2009) raises the question on how social capital could have a conflicting conceptualisation. In her qualitative studies with girls residing in public housing estate, which is commonly associated with social problems, she found that it is not easy to distinguish community and family relationship in a complex neighbourhood. The divided view on defining this concept provides much room for it to be studied. Petit et al. (2011) also found that the multidimensionality of this concept poses another obstacle, at which different dimensions of social capital might influence a person at different stages of life. Specifically, measuring community social capital is proven to be a challenge, what more among young people (Onyx, Wood, Bullen, & Osburn, 2005; Harpham, 2008). Harpham (2008) pointed that often community social capital is measured on a dichotomous or ordinal scale. The need to have multiple items to measure each social capital indicator was also raised as one of the obstacles present in constructing a reliable measurement (Harpham, 2008).

With this in mind, Onyx, et al. (2005) developed the Youth Social Capital Scale (YSCS) to measure community social capital among young people. YSCS was adapted from the social capital scale for adults (Onyx & Bullen, 2000) and used rural Australian young people as their sample of study. Less attention has been paid to what social capital actually means to young people and this scale is among the few that aims to capture youth social capital (Onyx & Bullen, 2000; Onyx, et al., 2005). Hence, YSCS maybe a potential viable tool to be used to measure social capital among Malaysian young people. YSCS's response is based on a 5-point likert scale, and has more than one item to represent each subscale. Besides this, the YSCS was also validated in Greek language and it was found to be a fit instrument to measure social capital of young people in Greece with minor modifications (Koutra, Orfanos, Roumeliotaki, Kritsotakis, Kokkevi, & Philalithis, 2012). These studies (Onyx, et al., 2005; Koutra, et al., 2012) reveal that there could exist cultural influence when social capital is tested in different population. Thus, the current study aims to evaluate the structure of YSCS among the Malaysian youth. It seeks to address the need to have a fit measurements to study youth social capital in a multicultural country as Malaysia.

■2.0 METHODOLOGY

Research Sample

Psychology undergraduate students were recruited for this study. The recruited students are part of the university's research participant pool, whereby upon completing the questionnaire, they received points for their coursework. Of the 194 students, 138 were females and 56 of them are males. The average age of the respondents are 20 years old, $SD= 1.52$. Majority of the respondents are Chinese and Buddhist. Of all the respondents, 19 of them reported that their parents either divorced, separated or widowed with 2 reported of parents being remarried. Majority of the respondents are staying with their own family, with 3 respondents staying with stepfamily, 2 with single fathers and 16 with single mother.

Research Instrument

The questionnaire consist of two sections. The first section consists of questions that capture respondents' demographic details such as age and gender, living situation and parental marital status.

The second section measures youth social capital. The YSCS was developed to measure social capital among youth aged between 12 to 20 years old (Onyx et al., 2005). The self-administered instrument consists of 34 items, which are categorized in seven factors: Participation in community (8 items), Youth social agency (6 items), Trust and safety (2 items), Neighborhood connections (4 items), Family and Friends (5 items), Friends (3 items) and Moral principles (6 items). The scores for each subscale can be tabulated by summing up the items response. verall sum of all the subscale scores will indicate the score for general social capital. The higher the score, the higher the social capital one has (Onyx et al., 2005).

Research Procedure

The research questionnaire consist of two sections: i) demographic data and ii) YSSC. The questionnaire was distributed via the Qualtrix online survey to University Tunku Abdul Rahman's Psychology undergraduates. This online survey was conducted at the university's computer lab and the lab can accommodate 23 respondents at one time. Upon their arrival, participants were informed the nature and purpose of the study. They were required to sign the online inform consent form. The researchers were also present and briefed the respondents on the study. It took about 5 to 10 minutes to complete this questionnaire.

Data Analysis

Confirmatory factor analysis (CFA) was used to examine whether the theoretical structure (i.e., seven first-order factors and one second-order factor) of the YSSC emerges in Malaysian sample.

We examined fitness of the model using several widely used indices, including the ratio of chi-square value divided by degrees of freedom, Tucker-Lewis index (TLI), comparative fit index (CFI), root mean square error of approximation (RMSEA), and the standardized root mean-square (SRMR). Whereas a model is considered as acceptable fit when the TLI and CFI $\geq .90$ and the RMSEA is between .50 and .80 (Hu & Bentler, 1999), model with ratio of chi-square to degrees of freedom below three (Tabachnick & Fidell, 2007), TLI and CFI above .95, RMSEA below .50, and SRMR below .08 is considered good fit (Hu & Bentler, 1999). Poor-fit model was re-specified by referring to the modification indices.

3.0 RESULTS

Missing value was replaced by series mean prior to analysis. Datanormality is assumed as the absolute values of skewness and kurtosis for each item of the YSSC were below three and eight (Kline, 2011).

Analysis showed that the theoretical model of seven first-order factors and one second-order factor (Model 1) showed poor fit statistics (see Table 1) with the exception of the ratio of chi-square value divided by degrees of freedom and RMSEA. Moreover, factor loadings of two items—item 3 (“People with different lifestyles don’t belong in our community. Do you agree?”) (reverse scored) of Moral subscale and item 15 [“Are you an active member of a local organization or club (e.g. sport, craft, social club)?”] of Neighbour subscale—were not statistically significant. We, therefore, removed the two items and re-ran the analysis. Fitness of the model was improved, though the TLI and CFI were still below cutoff value. Examination of modification indices suggested adding an error covariance between item 29 and item 34, item 6 and item 7, item 14 and item 19, item 13 and item 21, item 8 and item 33, social capital and item 12. The modifications resulting in a better fit (see Model 1a).

In order to find the best model, we also tested two alternative models. First, we examined a seven-factor model in which the factors were allowed to correlate with each other. Because the factor loadings of item 3, item 15, and item 9 were not significant, we eliminated these items and correlation that was not significant and then re-ran the analysis (Model 2). Likewise, on the basis of modification indices suggestions, error covariance was added between item 29 and item 34, item 6 and item 7, item 8 and item 33, item 18 and item 23, and item 13 and item 21 (Model 2a). All the indices were found acceptable after re-specifying the model except SRMR was slightly higher than the suggested cutoff criterion.

We also examined one-factor model with 34 items. Item 3, again, was removed from further analysis because the factor loading was not significant (Model 3). Results, however, showed a poor fit model statistics for the Model 3, even after adding error covariance. Taken together, results provided support for the modified theoretical model (i.e., Model 1a) as the best fitting model.

Table 1 Goodness-of-fit Indices for Youth Social Capital Scale ($N = 194$)

Model	χ^2	df	χ^2/df	TLI	CFI	RMSEA [90% CI]	SRMR
1	844.06	520	1.62***	.766	.783	.057 [.050, .064]	.090
1a	566.95	451	1.26***	.907	.915	.036 [.026, .046]	.063
2	610.11	420	1.45***	.844	.859	.048 [.040, .057]	.086
2a	534.74	415	1.29***	.901	.911	.039 [.028, .048]	.083
3	993.69	495	2.01***	.636	.659	.072 [.066, .079]	.082

Note. Model 1 = model of seven first-order factor and one second-order factor; Model 1a = modified Model 1 with adding error covariance; Model 2: model of seven factors; Model 2a = modified Model 2 with adding error covariance; Model 3: model of single factor, TLI = Tucker-Lewis Index; CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean-square.

*** $p < .001$

Composite score was computed for each factor by summing up the score of items loaded on the particular factor. For instance, the scores of items 18, 20, 23, 24, and 34 were summed up to represent the overall score for the Family and Friends factor. An overall score for social capital was also computed by summing the score of 32 items. Table 2 shows the descriptive statistics and Cronbach alpha coefficients for the overall score and factors. The composite score was found to have good internal consistency, lending further support to the model. Nonetheless, most of the factors except Community showed low reliability.

Table 2 Descriptive statistics and reliability for youth social capital scale.

Item/Domain	<i>M</i>	<i>SD</i>	Min	Max	Skewness	Kurtosis	Alpha
Social Capital (32)	80.60	12.84	55	120	0.23	-0.42	.88
Family (5)	14.64	2.71	8	20	-0.22	-0.67	.58
Community (8)	15.82	5.06	7	31	0.65	0.18	.85
Moral (5)	13.46	2.65	7	20	0.06	-0.48	.58
Neighbour (3)	6.38	2.20	3	12	0.70	-0.20	.67
Trust (2)	4.08	1.30	2	8	0.33	-0.28	.32
Friends (3)	8.69	1.72	5	12	-0.09	-0.45	.46
Social agency (6)	17.53	2.75	10	24	-0.16	-0.11	.48

Note. Family = Family and Friends, Community = Participation in community, Moral = Moral principles, Neighbour = Neighbour connections, Trust = Trust and safety, Social agency = Youth social agency; *M* = mean, *SD* = standard deviation; value in parenthesis represents number of item.

We also conducted bivariate correlation analysis to examine the theoretical associations among the factors and the overall score. Results (see Table 3) indicated that the seven factors were significantly correlated with the overall social capital score. Moreover, the seven factors were positively associated with each other with the exception of the relationship between Neighbour and Trust.

Table 3 Intercorrelation for youth social capital scale.

Item/Domain	1	2	3	4	5	6	7
1. Social Capital	1						
2. Family	.74	1					
3. Community	.78	.39	1				
4. Moral	.76	.56	.43	1			
5. Neighbour	.52	.34	.24	.35	1		
6. Trust	.44	.18*	.35	.28	.10 ^a	1	
7. Friends	.67	.53	.38	.47	.26	.31	1
8. Social agency	.73	.52	.41	.54	.28	.21	.50

Note. Family = Family and Friends, Community = Participation in community, Moral = Moral principles, Neighbour = Neighbour connections, Trust = Trust and safety, Social agency = Youth social agency; ^a*p* > .05, * *p* < .05, coefficient without superscript was significant at .01 level.

4.0 DISCUSSION

The main objective of the study was to investigate if the YSCS was a fit instrument to measure community social capital among Malaysian sample. Based on the CFA, it was found that the model is fit with some modifications. All the items correspond significantly on the respective subscale except item 3 (“Moral Principles”) and item 15 (“Neighbour Connections”). All the items when summed up can be accounted for overall social capital. However, none of the subscales can be considered to have good internal consistency except for “Participation in Community”. Error of covariances were added for six pair of items, indicating the conceptual overlapping of these items. All the subscales correlated significantly with the overall score of social capital and with each other, except the relationship between Neighbor connections and Trust and Safety subscales.

The YSCS was developed with the aim to conceptualise the nature of social capital from the perspective of young people. It was found that through the formulation of the scale, youths place great importance towards their relationship with other young people, feeling of safe and emphasis on moral values (Onyx, et al., 2005). The current finding do suggest similar notion with Malaysian undergraduate sample. However, there are some modifications that need to be made in order for YSCS to be a more reliable tool. This suggest that there could be some cultural or context variations that need to be considered, which resonates well with Koutra et al. (2012). When YSCS was translated and administered to Greek youth, it was found that only five YSCS subscales based on 30 items seemed relevant for the sample. The items of Friends subscale and Family and Friends subscale were combined into one factor while the original factor of Youth Social Agency” could not be replicated in the Greek sample (Koutra, et al., 2012).

The current study saw the item 3 and item 15 were removed from the construct as it seems these items is not relevant with Malaysian undergraduate sample in comparison to the Australian sample. Error of covariance was added to six pair of items as the analysis reveals the items to be conceptually similar. The respondents of the study seem to perceive and interpret these items as related or of carrying similar meaning. Besides, this finding echos the concern that was raised by Harpham (2008). When conceptualizing social capital, there may exist individual characteristics that may influence it (Harpham, 2008). The current sample comprises mainly of Chinese students from various town of origins, be it urban or rural. In congruent with this, the community of young people may consist of the virtual friends that exist in social media such as Facebook or Twitter that can refer to friends from school, their neighbourhood, religious community and other places. Some may even have two homes (Harpham, 2008). In current study’s findings, it is possible that the respondents may define their community more subjectively as the respondents may or may not attribute it to their own neighbourhood back in their hometown or their own student community. However, conclusive statements as to why these items are perceived as conceptually similar cannot be made and further explorations need to be done. Through this study, it can also be found that having good neighbour connection does not necessarily gives young people the feeling of being heard or safe. This resonates with Onyx et al., (2005) findings, which suggest that although they give importance to each other but they feel unheard or unsafe.

This main strength of this study is the CFA that was run that provided a platform for researchers to further investigate young people’s social capital. However, this study’s small sample size pose as one of the limitations for this study. As a rule of thumb, 10 participants are need for every parameter studied (Schreiber, Stage, King, Nora, & Barlow, 2006). However, since this is a preliminary study, the data

serves to provide the guide for areas necessary for further explorations. The reliability analysis that was run in this study could be bias as it did not take into consideration the error of covariance that was added. Thus, the internal consistencies of this measurement can still investigated further.

This study provides evidences that YSCS can be a reliable tool to measure social capital among Malaysian undergraduates but further investigation is needed. YSCS need to be studied again using a bigger sample and also to be compared against different age group of young people.

5.0 CONCLUSION

The study aimed to investigate whether YSCS is a valid tool for Malaysian young people. It was found that YSCS is a fit measurement that needs some modifications. Item 3 and item 15 were removed to improve the construct and error of covariance were added to some of the items. The findings revealed that some items of YSCS maybe perceived differently by Malaysian undergraduates or not relevant in this context. The need for the construct to be tested and validated in new cultural setting was reinforced through this study. Current study provided the basic groundwork for the youth social capital to be studied much deeper. Needless to say, conceptualising social capital is still very enticing as we can conclude that different youth population may yield different conceptualization of social capital.

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