

## High School Students Perceptions of Social Capital: Adiyaman Sample\*

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### Abstract

*The practice of social capital in educational institutions has started to be vocal in various educational platforms. Schools, universities and educational institutions started to create learning contexts in which 21st century learning skills are developed. The purpose of this study is expected to provide a social capital instrument focusing on students' perceptions as well as revealing their perceptions of social capital. The sample has been chosen through using the purposive sampling. The researcher uses his or her own judgment about which respondents to choose, pick any of those who meet the purposes of the study (Bailey, 1994). In this method it is possible to get an idea about the intended study group. The research is conducted in 2011-2012 academic year in Spring Semester. Three different groups, who study in high schools constituted the sample. The first group involved in the piloting process to adopt the scale into Turkish context. Explanatory Factor Analysis (EFA) was used to get clues for construct validity and conducted on 195 students. Confirmatory Factor Analysis (CFA) was used for the second group to test the structure validity of the instrument and was conducted on 219 students. The third group of respondents constituted of 1381 students, studying in 6 different types of high schools located in Adiyaman. Students, whose parents are university graduates appeared to receive more benefit from social capital when compared to students, whose parents are graduates of primary school, secondary school and high school.*

**Key Words:** Social Capital, High School Students, Students and Families

### 1. Introduction

Social capital refers to the attributes and qualities of family, social and community networks that facilitate cooperation between individuals and groups. It is underpinned by the interactions between family members, friends, neighbors, communities and institutions such as schools, clubs and workplaces (NCVER, 2011, p. 2). The concept of social capital has been on the agenda of UNESCO, World Bank and OECD and it was examined as human capital and economic capital in various social and cultural contexts (Isham *et al.*, 2002; Kilparick, Johns and Mulford, 2010). The term social capital has become known as a commodity or process by which individuals, communities, and developing nations improve their economic and social positions through the exchanges of knowledge, resources, and assistance (Grenfell, 2009; Putman, 1995, 2000; Saton & Benson, 2005, Bailey, 2012). Bailey (2012) describes social capital as the use of informal networking to secure access to resources and opportunities.

Social capital is categorized as “bonding social capital, bridging social capital and linking social capital” (Kilpatrick *et al.*, 2010; NCVER, 2011; Edwards, 2004). Bonding social capital refers to the relationships between similar groups of people; bridging social capital indicates ties between groups of people who have less in common. Linking social capital is described as the ‘vertical’ relationships with those in authority whose aim is accessing financial resources or power (NCVER, 2011, p. 3). Stone, Gray and Hughes (2003) also discusses the networks created by social capital as the “informal networks such as family, friends or neighbors, general networks, such as people within the general community and institutional networks, such as government or the media.

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Coleman (2005) illustrates social capital as a resource for action to introduce social structure into the ratio of an action paradigm. In line with this idea, Kilparick, Johns and Mulford (2010) define social capital as a communal activity that is reproduced as is it consumed. Croninger and Lee (2001) and Schuller (2001) indicate that social capital exists in every organization, having unique qualities depending the structure and the culture of the organization. In their study focusing on high school drop outs, teachers are found to be an important source of social capital, which significantly reduces the probability of dropping out, particularly among disadvantaged students and students with past academic difficulties. In line with this idea, Banks (2010) and Töremen (2002, 2004) underlines the importance of teachers since they have an influence on student engagement by acting as role models, raising aspirations and influencing career goals and choices.

The practice of social capital in educational institutions has started to be vocal in various educational platforms. Schools, universities and educational institutions started to create learning contexts in which 21st century learning skills are developed. Social capital in this context serves a leading force that spurs students' active learning (Trilling and Fadel, 2009). Kilpatrick, Johns and Mulford (2010) asserted that social capital will extend the opportunities provided for students and the public as well as contributing to the development of the society. There is scarcity of empirical evidence as to how social capital is perceived by the students. This study is expected to provide a social capital instrument focusing on students' perceptions as well as revealing their experiences in social capital.

## **2. Method, Sample, Instrument and Data Analysis**

### **2.1. Sample**

The sample has been chosen through using the purposive sampling. The researcher uses his or her own judgment about which respondents to choose, pick any of those who meet the purposes of the study (Bailey, 1994). In this method it is possible to get an idea about the intended study group.

The research is conducted in 2011-2012 academic year in Spring Semester. Three different groups, who study in high schools constituted the sample. The first group involved in the piloting process to adopt the scale into Turkish context. Explanatory Factor Analysis (EFA) was used to get clues for construct validity. Instrument for EFA was conducted on 195 students, who study at high schools located in the center of Adiyaman. 22.1 per cent of the students who responded study at general high schools, 28.7 percent in girls' technical schools, 22.1 per cent Anatolian teacher high schools and 27.2 per cent in science high schools. 55.9 per cent of the students are female and 44.1 per cent male. 10.8 per cent of the students are first graders, 27.2 per cent second graders, 34.4 per cent third graders and 27.70 per cent fourth graders.

Before using the EFA process, the sampling size was checked for compatibility with factoring that plays an important role in the application of almost all statistical methods to estimate the right parameters (Raykov & Marcoulides, 2000). Gorsuch (1983) recommended that sample size should be at least 100, and Kline (1979) supports this recommendation. Guilford (1954) argued that sample size should be at least 200 and Cattell (1978) claimed the minimum desirable sample size is to be 250. Comrey and Lee (1992) offered a rough rating scale for adequate sample sizes in factor analysis: 100=poor, 200=fair, 300=good, 500=very good, and 1,000 or more=excellent (MacCallum & Widaman, 1999).

Confirmatory Factor Analysis (CFA) was used for the second group to test the structural validity for the adopted instrument. The instrument was conducted on 219 students, who study at high schools located in the center of Adiyaman. 49.8 per cent of the students study at General Schools and 50.2 per cent in Anatolian High Schools. 51.6 per cent of the students are female and 48.4 per cent male. As for the classes, 25.6 are first graders, 23.2 per cent graders, 25.1 per cent are third graders and 26.0 per cent are fourth graders. Hoyle (199) notes that the minimum sample should be above 250 participants while Schermelleh-Engel *et al* (2003) recommends this number as 400.

Sampling size is determined by the number of items in the scale. Floyd and Widaman (1995) stated that acceptable sampling size for CFA is 4:1 or 5:1 for each item. For this study sampling size is determined as 11:1 for EFA and 12:1 CFA analysis.

The third group of respondents constituted of students, studying in 6 different types of high schools located in Adiyaman.

Total 1381 students from 8 high schools participated in the third phase of the study. 23.2 per cent of the students study at general high schools, 13.2 per cent girls vocational high school, 19.8 per cent anatolian high schools, 14.3 per cent anatolian teacher high schools, 13.2 per cent science high schools and 15.3 per cent industrial vocational high schools. 56.6 per cent of the participants are female while 43.4 per cent are male. As for the grade, 11.3 per cent are first graders, 32.9 per cent second graders, 34.1 per cent third graders and 21.1 per cent fourth graders. Number of students in classes showed that 27,5 per cent have less than 25; 51, 6 per cent between 26-35; 16.4 per cent between 36-45 and 4.4 per cent above 46 students in their classes. As for father's educational background, 40.2 percent of the fathers have primary school, 34.9 per cent secondary school diploma while 21.3 per cent have university and 3.6 per cent a master degree. Mother's educational background showed that 69.6 per cent have primary school, 20.5 per cent secondary school, 8.7 per cent high school diploma and 2.4 per cent are university graduates. 1.2per cent of the mothers have a master degree.

## **2.2. Scale Adaptation Process**

The scale was translated from English to Turkish then Turkish to English after getting the permission from Yuang (2002), who developed the scale. Although back translation method takes time it is important for the validity of the scale. In this process two translators translated the questionnaire into the target language then translated back into the source language by two translators, who is blind to the original source. The two source language versions are them compared (Sperber, 2004; Loomanve Farrag, 2009). Items in the instrument were translated into Turkish by the researcher and a linguist, who specializes in Educational Leadership. Another linguist was asked to translate the instrument from Turkish to English, following the two were compared and any necessary changes were made. To ensure clarity and comprehensibility of the items, 30 Education students at Adiyaman University were considered revising the questionnaire. To provide content validity, the draft from of the instrument was examined by three specialists from the field of Educational Sciences.

## **2.3. Content Validity**

In order to test content validity factor analysis has been done. With this method the instrument was tested as to whether it assesses the expected structure. As a result of factor analysis, the scale was observed to have parallel factor structure with the original source, involving 18 items.

## **2.4. Data Analysis**

EFA and CFA was used to test whether Social Capital Scale fits to Turkish context and to test the structure validity. Per cent and frequency calculations were made, correlation, t test and Anova was used for statistical comparisons. In all the variance analysis "Test of Homogeneity of Variances" was used as a prerequisite ( $p > .05$ ). Significant differences were determined by using LSD multi comparison test and ( $p < .05$ ) was accepted as the level of significance. SPSS 15.0 was used for EFA and Lisrel 8.80 program was used for CFA (Jörreskogve Sörbom, 1996, 2001).

## **3. Explanatory and Confirmatory Factor Analysis**

### **3.1. Explanatory Factor Analysis**

Factor analysis, a complex, multi-step and broadly applied statistical technique (Costello and Osborne, 2005, p. 1), is an approach for expressing hypothetical constructs in the language of mathematics by using a variety of observable indicators that can be directly measured. The analysis is considered explanatory when determining how many constructs are needed to explain the relationships among the observed indicators is required, and confirmatory when a preexisting model of the relationship among the indicators directs the search (Raykov and Marcoulides, 2000, 99, 94-95). Explanatory analysis allows the exploration of empirical data for characteristic features and interesting relationships without imposing any definite model on the data (Jörreskog and Sörbom, 1993, p. 22). Explanatory factor analysis is a complex and multi staged process that has been commonly used in social sciences (Costello and Osborne, 2005).

In order to test the compatibility of the data for factor analysis, Kaiser-Meyer-Olkin (KMO) and Barlett Sphericity tests were used. The KMO statistic variables are accepted greater than 0.50. Furthermore, values between 0.50 and 0.70 are mediocre, between 0.70-and 0.80 are good, between 0.80 and 0.90 are great and above 0.90 are superb (Hutchenson, Sofroniou, 1999, pp. 224-225). For this data the value of KMO is 0.87, which falls into great range. Barlett's (1954) test of sphericity is a notoriously sensitive test of the hypothesis that the correlations in a correlation matrix are zero.

The test is available in SPSS Factor, but because of its sensitivity and its dependence on sample size the test is likely to be significant with the samples of substantial size even if correlations are very low. Therefore, use of the test is recommended only if there are fewer than five cases per variable (Tabachnick and Fidell, 2007, p 614). For these data, Barlett’s test is highly significant for EFA ( $X^2_{(153)}=1223.85 P<.001$ ).

In order to reveal the factor design of the scale, Principal Components analysis and Varimax Rotated Component Matrix was chosen as the factor analysis. In applied social science research, orthogonal rotation is used most often, perhaps because it is the default in major statistical programs such as SPSS (varimax rotation), and the perception of orthogonally rotated solutions are more easily interpreted because the factor loadings represent correlations between the indicators and the latent factors (e.g. squaring the factor loading provides the proportion of variance in the indicator that the factor solution explains (Brown, 2006, p. 31). Analysis showed that 18 items with eigen value above value 1, has the same factor distribution as the original scale.

The magnitude of the factor loading must be at least 0.30 (Barnes *et al.* 2001). As a rule of thumb, only variables with loadings of 0.32 and above are interpreted. The greater the loading, the more variable is a pure measure of the factor. In this study 0.40 is accepted as the lowest cut off point. Analysis with regards to factor design, item factor loadings, total factor variance and item analysis are shown in Table 1 below.

**Table 1: Explanatory Factor Analysis for Social Capital Scale (Vertical rotated varimax) and item analysis**

Items	Factor Design and Item Loadings				Common Factor Variance ( $h^2$ )	Item Analysis						
						Correlation		Item discrimination feature				t**
						Item Factor	Item Total	Sub %27 (n=53)		Top %27 (n=53)		
F1	F2	F3	F4	R**	R**	$\bar{X}$	Ss	$\bar{X}$	Ss			
A1	.77	-.08	.15	.09	.63	0.71	0.57	2.58	1.13	4.28	0.79	-8.93
A2	.81	.12	.05	.19	.71	0.81	0.69	2.23	1.14	4.42	0.72	-11.84
A3	.69	.13	.26	.11	.57	0.75	0.67	2.11	1.07	4.21	0.86	-11.10
A4	.77	.19	.03	.19	.66	0.78	0.68	2.47	1.22	4.62	0.63	-11.43
A5	.57	.11	.33	.02	.44	0.65	0.58	2.45	1.28	4.40	0.66	-9.83
A6	.53	.31	.09	.10	.39	0.64	0.58	2.53	1.30	4.38	0.86	-8.66
A7	.45	.41	.26	-.22	.49	0.57	0.51	1.58	0.86	3.08	1.14	-7.58
A8	.74	.23	-.03	.12	.61	0.75	0.64	2.83	1.52	4.83	0.47	-9.18
A9	.17	.61	-.04	.42	.58	0.74	0.55	2.49	1.38	4.32	0.78	-8.40
A10	.15	.78	.05	.04	.63	0.73	0.51	2.32	1.37	4.04	0.94	-7.53
A11	.33	.56	.06	.28	.50	0.73	0.61	2.55	1.35	4.36	0.68	-8.71
A12	.02	.58	.26	.25	.47	0.69	0.49	2.70	1.23	4.04	1.04	-6.05
A13	.24	.28	.12	.67	.60	0.80	0.60	2.42	1.38	4.36	0.79	-8.91
A14	.08	.08	.00	.72	.53	0.75	0.40	2.00	1.24	3.09	1.33	-4.37
A15	.13	.14	.22	.71	.59	0.76	0.52	2.43	1.31	3.98	1.10	-6.59
A16	.01	.01	.80	.03	.64	0.75	0.36	1.91	1.24	3.08	1.24	-4.85
A17	.27	.20	.74	.06	.66	0.83	0.60	2.13	1.39	4.25	0.78	-9.66
A18	.21	.11	.75	.21	.67	0.84	0.58	1.70	1.15	3.74	1.26	-8.69

Not: F1: Student parent interaction, F2: Good peer teacher interaction F3: Friend support, F4: Teacher support

As can be seen in Table 1, items that were theoretically defined fall into related categories. Factor loadings of the sub scales are as follows: Student Parent Interaction between 0.43-0.81; Good peer teacher interaction between 0.58-0.78; Friend Support between 0.67- 0.71 and Teacher Support between 0.74- 0.80.

The factor loadings of 10 items (1., 2., 4., 8., 10., 14., 15., 16., 17., 18.) are determined to be higher than 0.7, which is considered as “excellent”; the factor loadings of three items (3.,13., 15) are between 0.63-0.71, which is considered as “very good”; the factor loadings of three items (5., 11., 12.) are between 0.55-0.62 which is considered as “good” and the factor loadings of two items ( 6., 7. ) are between 0.45-0.54, which is considered as “fair” (Comrey and Lee, 1992 cited in Tabachnick and Fidell, 2007).

After the adaptation process of the Social Capital Scale into Turkish, it consists of four sub scales with 18 items. Higher values reveal that students interact effectively with their parents, receive adequate support from their friends as well as providing support to them. Higher values also show that students received support from their teachers in homework, their personal problems as well as their career plans. While higher values indicate that students share social topics with their friends and teachers, lower values reflect the barriers and constraints experienced in these areas.

In order to confirm the applicability of the scale to the Turkish context item factor, item total correlation, item discrimination feature and item total correlations were calculated. Joint factor variance ( $h^2$ ) is between 0.39-0.71, item sub factor correlation is between 0.57-0.84 and item total correlation is between 0.36-0.69. Findings of item analysis showed that the scale is reliable and valid. Table 2 shows the correlation between the sub scales.

**Table 2: Correlation between the sub scales of Social Capital Scale and the Variance Explained**

Sub Scales	Student Parent Interaction	Interaction with Friends and Teachers	Friend Support	Teacher Support	Total
Student Parent Interaction	1				0.87
Good peer teacher interaction	0.48	1			0.74
Friend Support	0.37	0.51	1		0.66
Teacher Support	0.41	0.31	0.30	1	0.64
<b>Eigen value</b>	3.99	2.20	2.16	2.01	10.34
<b>Variance explained (%)</b>	22.15	12.20	11.97	11.14	57.46

\*\* p<.01

Correlations between the sub scales of social capital is between 0.31-0.51 and the total correlation among the sub scales is between 0.64 -0.87. In empirical studies, a correlation value of among the factors equal to 0.85 or less is desirable (Brown, 2006). Analysis shows that 18 items fall into four dimensions (eigen value=1), explaining the 51.46 per cent of the variance. Eigen value and variance scores for each factor is as follows: student parent interaction: 3.99 and 22.15%, good peer teacher interaction 2.20 and 12.20%, friend support 2.16 and 11.97 % and teacher support 2.01 and 11.14%. Scale total explains the 57.46 % of the variance. In social sciences, a range of 40 % and 60 % is accepted as sufficient (Scherer, Wiebe, Luther and Adams, 1988) and an explained variance of 60 % and sometimes less as acceptable (Vieira, 2011, 29).

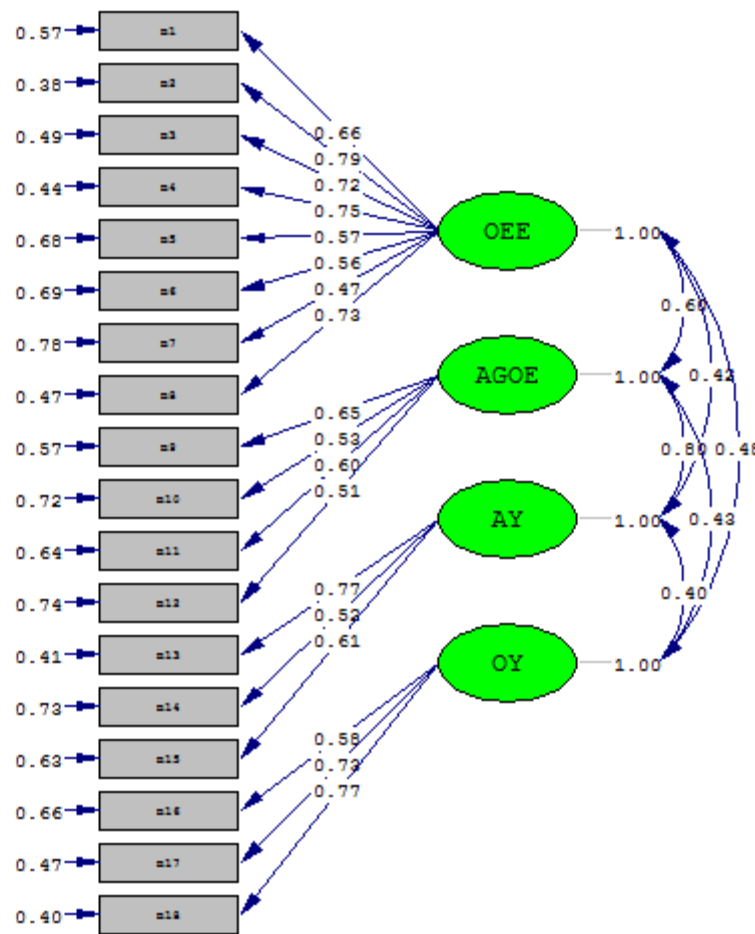
### 3.2. Confirmatory Factor Analysis

Confirmatory factor analysis is not concerned with discovering a factor structure, but with confirming the existence of a specific factor structure. In this respect, confirmatory factor analysis is considered to be a general modeling approach that is designed to test hypothesis about a factor structure whose number and interpretation are given in advance (Raykov and Marcoulides, 2000, p. 94). In confirmatory analysis on the other hand one builds a model assumed to describe or account for the empirical data in terms of relatively few parameters (Jörreskog and Sörbom, 1993). The technique of CFA analyzes a priori measurement model in which both the number of factors and their correspondence with the indicators are explicitly specified (Kline, 2011). Table 3 shows that error and fit index in items.

**Table 3. Error and Fit Index for Social Capital Scale**

Fit Index	Acceptable Fit	Suggested New Model
$\chi^2/df$	$.00 < \chi^2/sd < 3$	212.08 /129= 1.6
RMSEA	$.05 \leq RMSEA \leq .10$	.05
RMR	$.00 \leq RMR \leq .10$	.09
SRMR	$.00 \leq SRMR \leq .10$	.06
NFI	$.90 \leq NFI \leq .95$	.92
NNFI	$.95 \leq NNFI \leq .97$	.96
CFI	$.90 \leq CFI \leq .95$	.97
GFI	$.90 \leq GFI \leq .95$	.90
AGFI	$.80 \leq AGFI \leq .90$	.87
PGFI	$.00 \leq PGFI \leq .95$	.68

Factor structure of the adopted scale, which has four sub dimensions with 18 items was determined through the CFA. Chi Square ( $\chi^2$ ), RMSEA, NFI, NNFI, CFI, GFI, ve AGFI are the most commonly used statistical analysis in model data fit structure. Results are as follows: Chi Square ( $\chi^2$ ) good fit;  $\chi^2=212.08$ ,  $df = 129$ ,  $\chi^2/df = 1.6 < 2$ ,  $p=0.001$ , Goodness of Fit Index (GFI =.90), The Adjusted Goodness of Fit Index (AGFI = .87), The Normed Fit Index (NFI=.92), The Non-Normed Fit Index (NNFI = .96), The comparative Fit Index (CFI=.97), The Root Mean Square Error of Approximation (RMR= .09), The Standard Root Mean Square Residual (SRMR= .06), the root mean square error of approximation(RMSEA = .05), as well asthe ParsimonyGoodness-of-Fit Index (PGFI=.68) indicate good fit (Cote, Netemeyer and Bentler, 2001; Vieira, 2011; Hooper, Coughlan and Mullen, 2008; Brown, 2006; Schreiber, Stage, King, Nora and Barlow, 2006; Schermelleh-Engel, Moosbrugger and Müller, 2003; MacCallum, Browne and Sugawara, 1996; Hu and Bentler, 1999; Baumgartner and Homburg, 1996). The model is acceptable for testing high school students’ perceptions of social capital scale when CFA results are taken into consideration. Figure 1 below reveals the factor distribution and the interaction among the subscales.



Chi-Square=212.08, df=129, P-value=0.00001, RMSEA=0.054

Figure 1: Significance Levels of Explanation Rates of Observed Potential Indicators for Four-Dimensioned Method Social Capital Scale

(Note: OEE=Student Parent Interaction, AGÖE=Good Peer and Teacher Interaction, AY: Friend Support, ÖY: Teacher Support)

Sub scales were analyzed through the error variance scores and following results were observed: student parent interaction between 0.38-0.78; good peer and teacher interaction between 0.74-0.72; friend support between 0.41-73 and teacher support between 0.40-0.66. This shows that each sub scale has an entity (Peter, 1981; Brown, 2006). Correlation value between 0.40-0.80 is also a good indicator (Brown, 2006).

### 3.3. Reliability ( $\alpha$ )

Reliability of the scale was determined as 0.87 as a result of EFA; as for the sub scales; student parent interaction 0.86, good peer teacher interaction 0.70, friend support .67 and teacher support 0.74.

After using CFA, Cronbach  $\alpha$  was determined as 0.87; student parent interaction 0.86, good peer teacher interaction 0.67, friend support 0.68 and teacher support 0.73. Similar Cronbach  $\alpha$  values obtained in EFA and CFA showed that the scale is reliable and valid. Cronbach  $\alpha$  value above 0.60<sup>7</sup> in shows that the scale is reliable (Kalaycı, 2010, p. 405).

## 4. Findings

### 4.1. Students' Perceptions of Social Capital

**Table 4. Students' Perceptions of Social Capital: Frequency, Percentage, Mean and Standard Deviation Distribution**

Social Capital Scale (N=1383)		Disagree and Totally Disagree		Agree and Totally Agree		$\bar{X}$	Ss
		f	%	f	%		
1	My parents always ask me about test results from school.	320	23.10	830	60.40	3.50	1.22
2	My parents are very interested in my school work.	325	23.50	811	58.60	3.49	1.21
3	My parents appreciate me often about my school work.	303	21.91	716	51.77	3.40	1.17
4	My parents usually know about my activities in school.	504	36.44	904	65.37	3.69	1.20
5	My parents often talk about how clever I am	338	24.44	729	52.71	3.40	1.26
6	I always tell parents the results of my tests and schoolwork.	321	23.21	770	55.68	3.53	1.29
7	My parents often help me with my schoolwork.	795	57.48	358	25.89	2.46	1.34
8	My parents always ask me how I am doing at school.	167	12.08	1080	78.09	4.10	1.17
9	I often discuss social problems with my friends.	226	16.34	938	67.82	3.73	1.22
10	I often discuss social problems with other people.	361	26.10	734	53.07	3.32	1.26
11	I am interested in social issues.	204	14.75	902	65.22	3.71	1.15
12	We often discuss social issues with students and teachers in class.	315	22.78	702	50.76	3.34	1.20
13	For personal problems, I seek help from a friend.	347	25.09	750	54.23	3.36	1.27
14	Form my future education plan, a friend is the person I talk with.	544	39.33	507	36.66	2.90	1.27
15	For schoolwork, a friend is the person I seek help from.	313	22.63	808	58.42	3.44	1.22
16	For personal problems, a teacher is the person I go to.	749	54.16	319	23.07	2.44	1.29
17	For my future education plan, a teacher is the person I talk with.	481	34.78	630	45.55	3.07	1.34
18	For school work, a teacher is the person I seek help from.	581	42.01	538	38.90	2.88	1.36

Table 4 reveals students' perceptions with regards to social capital scale as frequency, percentage, mean and standard deviation values. 78 per cent of the students indicated that their parents ask them how she or he is doing at school; 60.40 per cent follow their school success. 58 per cent asserted that their parents are interested in their school work and 55 per cent mentioned that they share the results of their exams and school success with their parents. 65 per cent of the students accepted that they are interested in social issues and 67 per cent share these issues with their friend. 53 per cent of the students mentioned that they share social issues with other people and 50 per cent share it with their classmates and teachers. 58 per cent of the students seek help for their homework and 54 per cent seek help for their personal problems. 39 per cent of the students asserted that they do not ask for help from their friends for their future career plans whereas 45 per cent consult to their teachers. 54 per cent of the students do not receive help from their teachers about their personal problems. 42 per cent do not ask for help from their teachers about their school work. Students' perceptions with regards to gender variable are given in Table 5 below.

**4.2. Students’ Perceptions of Social Capital Scale with regards to Gender Variable**

**Table 5. T Test Analysis on Students’ Perceptions of Social Capital Scale with regards to Gender Variable**

Sub Scales	Gender	n	$\bar{X}$	Ss	t	sd	p
Students Parent Interaction	Female	783	3.54	0.84	4.63	1381	.000**
	Male	600	3.33	0.79			
Good Peer Teacher Interaction	Female	783	3.60	0.86	3.18	1381	.001**
	Male	600	3.44	0.91			
Friend Support	Female	783	3.30	0.96	2.95	1381	.003*
	Male	600	3.15	0.96			
Teacher Support	Female	783	2.91ii	1.08	4.34	1381	.000**
	Male	600	2.65	1.09			

**\*P<.05, \*\*P<.001**

Table 5 shows t test results with regards to gender variable. Significance was determined in the sub dimensions of student parent interaction ( $t_{(1381)} = 4.63, p < 0.01$ ), interaction with friends and teacher ( $t_{(1381)} = 3.18, p < 0.001$ ), friend support( $t_{(1381)} = 2.95, p < 0.001$ ) and teacher support ( $t_{(1381)} = 4.34, p < 0.001$ ).

Female students’ perceptions of social capital appear to be higher than male students in the dimensions of student parent interaction (female students:  $\bar{X} = 3.54$ ), (male students  $\bar{X} = 3.33$ );good peer and teacher interaction(female students  $\bar{X} = 3.60$ ), (male students  $\bar{X} = 3.44$ );friend support(female students  $\bar{X} = 3.30$ ), (male students  $\bar{X} = 3.15$ ) and teacher support (female students  $\bar{X} = 2.91$ ), (male students  $\bar{X} = 2.65$ ).

**4.3. Students’ Perceptions of Social Capital Scale with regards to with Class Variable**

**Table 6. One Way ANOVA Analysis on Students’ Perceptions of Social Capital Scale with regards to with Class Variable**

Sub Dimensions	Grade	n	$\bar{X}$	Ss	F	p	(LSD)
Student - Parent Interaction	Grade 1	156	3.81	0.76	12.80	.000**	1>2>3>4
	Grade 2	455	3.48	0.83			
	Grade 3	480	3.43	0.80			
	Grade 4	292	3.31	0.85			
Good Peer Teacher Interaction	Grade 1	156	3.42	0.86	3.92	.008*	3>1
	Grade 2	455	3.49	0.93			
	Grade 3	480	3.62	0.80			
	Grade 4	292	3.55	0.95			
Student Support	Grade 1	156	2.93	1.12	2.61	.050*	1>2>3>4
	Grade 2	455	2.84	1.10			
	Grade 3	480	2.78	1.01			
	Grade 4	292	2.65	1.18			

**\* P<.05, \*\*P<.001**

Table 6 shows One Way ANOVA results with regards to gender variable. Significance was determined in the sub dimensions of student parent interaction [ $F_{(3-1379)} = 12.80, p < .001$ ]; good peer and teacher interaction[ $F_{(3-1379)} = 3.92, p < .05$ ] and teacher support [ $F_{(3-1379)} = 2.61, p < .05$ ]. Significant differences were determined by using LSD.

First grade students’ ( $\bar{X} = 3.81$ ) perceptions of social capital appear to be significantly higher than 2nd grade ( $\bar{X} = 3.48$ ), 3rd grade ( $\bar{X} = 3.43$ ) and 4th grade students ( $\bar{X} = 3.31$ ) ( $p < .05$ ).

In the sub dimension focusing on the interaction with friends and teachers, 3rd grade students’ perceptions ( $\bar{X} = 3.62$ ) determined to be higher than 1st grade students ( $\bar{X} = 3.42$ ) ( $p < .05$ ).



In the sub dimension of “teacher support”, 1st grade students’ perceptions ( $\bar{x} = 2.93$ ) was determined to be higher than 2nd grade ( $\bar{x} = 2.84$ ), 3rd grade ( $\bar{x} = 2.78$ ) and 4th grade students ( $\bar{x} = 2.65$ ) ( $p < .05$ ).

**4.4. Students’ Perceptions of Social Capital Scale with regards to High School Type**

**Table 7. One Way ANOVA Analysis on Students’ Perceptions of Social Capital Scale with regards to High School Type**

Sub Scales	High School Type	n	$\bar{x}$	Ss	F	p	(LSD)
Student - Parent Interaction	General High School	335	3.42	0.86	7.61	.000**	5>3>2>4>1
	Girls Vocational High School	183	3.47	0.92			
	Anatolian High School	274	3.48	0.78			
	Anatolian Teacher High School	198	3.45	0.78			
	Science High School	182	3.72	0.76			
	Technic and Industrial Vocational High School	211	3.22	0.79			
Good Peer Teacher Interaction	General High School	335	3.48	0.98	3.41	.005*	5>3>4>1
	Girls Vocational High School	183	3.53	0.88			
	Anatolian High School	274	3.63	0.83			
	Anatolian Teacher High School	198	3.50	0.78			
	Science High School	182	3.69	0.84			
	Technic and Industrial Vocational High School	211	3.38	0.90			
Friend Support	General High School	335	3.08	1.00	2.99	.011*	1<3<4<5<6
	Girls Vocational High School	183	3.19	1.06			
	Anatolian High School	274	3.56	0.93			
	Anatolian Teacher High School	198	3.28	0.91			
	Science High School	182	3.22	0.87			
	Technic and Industrial Vocational High School	211	3.27	0.98			

**\*P<.05, \*\*P<.001**

Table 7 shows One Way ANOVA results with regards high school type at which students pursue their education. Significance was determined in the sub dimensions of student parent interaction [ $F_{(5-1377)} = 7.61, p < .01$ ]; good peer and teacher interaction [ $F_{(5-1377)} = 3.41, p < .05$ ] and friend support [ $F_{(5-1377)} = 2.99, p < .05$ ].

Multi comparisons revealed that perceptions of students, who study at science high schools ( $\bar{x} = 3.72$ ) was determined to be higher than the perceptions of students, who study at Anatolian high schools ( $\bar{x} = 3.48$ ), girls vocational high school ( $\bar{x} = 3.47$ ), Anatolian teacher high schools ( $\bar{x} = 3.45$ ) and General high schools ( $\bar{x} = 3.42$ ) ( $p < .05$ ).

In the sub dimension of “good peer and teacher interaction”, perceptions of students, who study at Technical and industrial high schools and science high schools ( $\bar{x} = 3.69$ ) appeared to be higher than that of students from Anatolian high school ( $\bar{x} = 3.63$ ), Anatolian teacher high schools ( $\bar{x} = 3.50$ ) and general high schools ( $\bar{x} = 3.48$ ) ( $p < .05$ ).

In the dimension of “friend support”, students from Anatolian high schools ( $\bar{x} = 3.56$ ) appeared to have higher perceptions of social capital than the students from Anatolian teacher high schools ( $\bar{x} = 3.28$ ) and science high schools ( $\bar{x} = 3.22$ ). ( $p < .05$ ).

**4.5. Students’ Perceptions of Social Capital Scale with regards to Students’ Grades**

**Table 8. One Way ANOVA Analysis on Students’ Perceptions of Social Capital Scale with regards to Students Grades**

Sub Scales	Grades	n	$\bar{x}$	Ss	F	p	LSD
Student - Parent Interaction	Below 50	34	2.90	0.99	11.17	.000**	5>3>2>1
	51-65	219	3.26	0.83			
	66-75	417	3.42	0.84			
	76-85	430	3.49	0.76			
	86 and above	283	3.64	0.83			
Good Peer Teacher Interaction	Below 50	34	3.01	1.15	4.91	.001**	5>3>2>1
	51-65	219	3.40	0.95			
	66-75	417	3.55	0.91			
	76-85	430	3.58	0.78			
	86 and above	283	3.60	0.87			
Teacher Support	Below 50	34	2.53	1.18	2.68	.030*	4>2
	51-65	219	2.64	1.14			
	66-75	417	2.75	1.08			
	76-85	430	2.90	1.06			
	86 and above	283	2.80	1.09			

**\*P<.05, \*\*P<.001**

Table 8 reveals the significance observed with regards to the sub dimensions of student parent interaction [ $F_{(4-1378)} = 711.17, p < .01$ ], interaction with friends and teacher [ $F_{(4-1378)} = 4.91, p < .05$ ] and teacher support [ $F_{(4-1378)} = 2.68, p < .05$ ].

As for the sub dimension of students parent interaction students, who have a grade point of more than 86 ( $\bar{x} = 3.64$ ), appeared to have high social capital scores than students within the grade range of 66-75 ( $\bar{x} = 3.42$ ), 55-66 ( $\bar{x} = 3.26$ ) and below 50 ( $\bar{x} = 2.90$ ) ( $p < .05$ ).

Multicomparisons concerning the sub dimension of good peer teacher interaction showed that students, who have a grade point of more than 86 ( $\bar{x} = 3.60$ ) were found to have higher perceptions of social capital than students within the grade range of 66-75 ( $\bar{x} = 3.55$ ), 55-66 ( $\bar{x} = 3.40$ ) and below 50 ( $\bar{x} = 3.01$ ) ( $p < .05$ ).

As for the sub dimension of receiving support from the teachers, students within the grade range of 76-85 appeared to get more support from their teachers in terms of social capital than students within the grade range of 55-66 ( $\bar{x} = 3.64$ ) ( $p < .05$ ).

**4.6. One Way ANOVA Analysis on students’ Perceptions of Social Capital Scale with regards to Mother’s Educational Background**

**Table 9. One Way ANOVA Analysis on Students’ Perceptions of Social Capital Scale with regards to Mother’s Educational Background**

Sub Scales	Mother’s Educational Background	n	$\bar{x}$	Ss	F	p	LSD
Student - Parent Interaction	Primary School	317	3.19	0.80	17.63	.000**	4>3>2>1
	Secondary School	646	3.45	0.81			
	High School	283	3.61	0.77			
	Undergraduate Degree	121	3.90	0.87			
	Graduate Degree	16	3.05	1.16			

**\*P<.05, \*\*P<.001**

Table 9 shows One Way ANOVA results with regards to students' mother's educational background [ $F_{4-1378} = 17.63, p < .001$ ]. Significance observed with regards to the sub dimensions of student parent interaction Students, whose mothers have university degree ( $\bar{x} = 3.90$ ) appeared to have higher social capital perception scores than students whose mothers have high school degree ( $\bar{x} = 3.61$ ), secondary school degree ( $\bar{x} = 3.45$ ) and primary school degree ( $\bar{x} = 3.19$ )

#### 4.7. One Way ANOVA Analysis on Students' Perceptions of Social Capital Scale with regards to Father's Educational Background

Table 10. One Way ANOVA Analysis on Students' Perceptions of Social Capital Scale with regards to Father's Educational Background

Sub Scales	Father's Educational Background	n	$\bar{x}$	Ss	F	p	LSD
Student - Parent Interaction	Primary School	41	3.01	0.84	10.16	.000**	4>3>2>1
	Secondary School	514	3.32	0.82			
	High School	483	3.52	0.78			
	Undergraduate Degree	295	3.61	0.83			
	Graduate Degree	50	3.51	1.04			

\* $P < .05$ , \*\* $P < .001$

Table 10 shows One Way ANOVA results with regards to students' father's educational background. Significance observed with regards to the sub dimensions of student parent interaction [ $F_{4-1378} = 10.16, p < .01$ ]. Students, whose fathers have university degree ( $\bar{x} = 3.61$ ) appeared to have higher social capital perception scores than students whose mothers have high school degree ( $\bar{x} = 3.52$ ), secondary school degree ( $\bar{x} = 3.32$ ) and primary school degree ( $\bar{x} = 3.01$ ).

#### 5. Results and Recommendations

Scholarship in social capital has shown that home structure and residential stability can influence parental expectations, parent-child involvement of school activities, type of school attended, school changing, parental involvement in school activities and parent-school academic contact as well as the influences of human and economic capital at home (Huang, 2009). These influences also affect school achievement (Güzel & Berberoglu, 2005; Meier, 1999) and educational attainment of the students (Sandefur & Wells, 1999; Sandefur, Meier, & Campbell, 2006, Huang, 2009).

Female students were observed to have higher social capital perceptions when compared to males in terms of asking for help from their friends and teachers. This finding overlaps with the results of Huang's study (2009), with the general impression that girls are more active and better at networking at school, thereby leading them to acquire more social capital than their male counterparts.

As for the dimension of interaction with parents and asking help from teachers, 1st grade students appeared to perceive more interactive. This could be explained with the entry phase to high school. It was revealed from the school administrators during the administration of the questionnaires that parents are involved more with the school activities in the first two years. It could be said that the more students get familiar with their school settings the less they ask support from their teachers.

Science high school students appeared to interact with their friends and teachers more when compared to students studying at other types of high schools. The reason for this could be that science high school students are engaged more in joint projects, which enables them to interact more. On the other hand, Anatolian high school students were determined to ask help from their friends more when compared to other students.

Students within the grade range of 86 and above appeared to have high social capital scores in the sub dimensions of student parent interaction and interaction with friends and teachers. Students within the grade range of 76-85 appeared to have higher scores in the sub dimension of teacher support. These findings could be interpreted with the collaborative learning method in which students are actively involved in the learning processes through the intense interaction with their peers, parents, teachers alike.

This finding should be further explored in further studies. Students, whose parents are university graduates appeared to have higher social capital perception scores when compared to students, whose parents are graduates of primary school, secondary school and high school. Having a higher degree might have an influence on the way how parents channel the notion of social capital to their students. It was revealed during the informal conversations with the school administrators that although parents may not be familiar with the idea of social capital, they implement the various processes of it by using the knowledge and the skills that acquired during their university education. Breen and Jonsson, 2005; Thrupp, 1999; Teachman, Paasch and Carver, 1996; Harding, 2003; Huang, 2009 found that socio-economic background of the student have a dominance over the school.

This study is limited with the results obtained through the questionnaires. However further studies could explore the ways in which university education have an impact on students' perception of social capital and the way how he or she practices it.

This study examined students' perceptions and it is limited from the experiences of the students. Stakeholders of the school, administrators and teachers could also be used as a sample in future studies. After exploring the current context, in house trainings could be given to various stakeholders to incorporate the notion of social capital at the school.

Students should be given the opportunity to take an active role in the administration processes. In this way their voices could be heard and they could contribute to the development and implementation the idea of social capital in the whole school. In this context, parent school partnership is crucially important since the principles of social capital align with the idea of family support and collaboration. In line with this idea, having social activities will enable the students to internalize the notion of social capital and making the most of it. As it was asserted by Huang (2009) that the positive effect of 'good child-parent interaction' on achievement is reduced while the effect of 'good peer-teacher interaction' is strengthened. In the mentioned study, student age and gender were found to have rather strong effects on social capital variables and student achievement. This study did not focus on student achievement. However, further studies could give insights by investigating the demographic that affect students success.

This study investigated teacher support as one of the sub dimensions of social capital. Further studies could explore how it is practiced in real classroom settings. Teaching methods needs to be developed in parallel with the ideas of social capital. Teachers are expected to be provided with professional development opportunities, in which they are more tolerant and collaborative towards their students. Their teaching load could be adjusted in a way that after class support mechanisms could be implemented at the schools.

As it was asserted by Astone *et al.* (1991) and Huang (2009) social capital is based on three main pillars, which are "family, society and school". This study is expected to provide an instrument focusing on students' perceptions of social capital. Results obtained from the research are based on students' perceptions from an East part of Turkey, Adiyaman. Further studies could explore students' perceptions from cosmopolitan cities.

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