

A Cross Sectional Study of Eighth Graders' Sense of School Belonging, Subjective Well-being, and Academic Achievement

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Abstract

The purpose of this study was to determine levels of eighth graders' 'sense of belonging to school' and 'subjective well-being in school', and to reveal whether these variables show differences according to different variables. The sample of the descriptive survey study consisted of 770 eighth graders attending 15 public and private secondary schools with different socioeconomic levels. 'Brief Scale for Adolescents' Subjective Well-Being in School' and the 'Scale for Sense of Belonging to School' were used to collect data. Descriptive and predictive statistics were employed in data analyses. The findings obtained in the study reveal that the students' sense of belonging to school and subjective well-being in school were at high levels, that there was a relationship between the students' subjective well-being in school and their sense of belonging to school, and that the students' sense of belonging differed in favor of girls. Furthermore, it was concluded that students' sense of belonging to school and subjective well-being differed in favor of students with a high socioeconomic status, and of students who had high levels of achievement according to their grade levels. Moreover, it was revealed that students with high levels of perceived parental interest had higher levels of 'sense of belonging to school' and 'subjective well-being in school' than students with low levels of perceived parental interest. It is expected that the data obtained from the study will contribute to the literature and shed light on future studies.

Keywords: Sense of belonging to school, subjective well-being in school, secondary school

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Introduction

The concept of school expresses a complex social organization in which many different components form a spiral, rather than a linear, structure. Basic expectations of parents, as an important member of this institution, is their children's success and happiness at school. Undoubtedly, supporting subjective well-being in school, especially for adolescents, is not an easy task, since they are not only at a critical stage in their development, but they are also faced with a national exam that needs high standards to achieve. Sarason (1997) expresses the concept of well-being: "Wellness is an individual phenomenon, but it is always embedded in an interpersonal, social-familial, or institutional context." Similarly, Noddings (2003) emphasizes that education and happiness are completely nested concepts, that happiness should be one of the aims of education, and that, moreover, the educational institution should make a significant contribution both to individual happiness and to the collective happiness of the school. Roeser, Eccles, and Strobel (1998) state that conditions for educational and mental health need to be provided so that children can display better school performance. Happiness at school is highly correlated with school engagement and sense of belonging to school. Anderman (2003) states that it is important for a student to feel emotional engagement to school and defines the sense of belonging to school as a student's perception of the social context of the school, his/her own place in the school, respect given to his/her presence at school and his/her feeling safe at school.

Sharma and Malhotra (2010) argue that sense of belonging to school and perception of social support are significant predictors of the level of perceived happiness in adolescents. O'Rourke and Cooper (2010) also revealed in their study that subjective well-being and level of happiness in school are related to belonging to school, friendship, and optimism. It is determined that sense of belonging to school also supports self-concept and self-esteem (Nutbrown and Clough, 2009). It is stressed that the connection among individual mental health, satisfaction with school and subjective well-being is crucial, especially in adolescents (Jin and Moon, 2006; Suldo and Huebner, 2004). The initial task of schools is to provide students with the knowledge, skills and values needed by the current age, 21st century, through curriculum. Considering the aims of the school like being a social community or building up learners' characteristics, it is really important that decision makers provide the necessary conditions for students to adopt their environment and feel good. Determining the relationship among subjective well-being at school, sense of belonging to school and academic achievement will reveal that schools are an important need regarding their function of enabling the development of children's cognitive, affective, social, and psychomotor domains together.

Based on these justifications, the main aim of this study was to reveal levels of eighth grade students' sense of belonging to school and subjective well-being at school and to determine whether these variables show differences according to gender, socioeconomic status (SES), school type and academic achievement. In line with this aim, answers were sought to the following questions:

With regard to eighth grade students,

1. At what level is their sense of belonging to school?
2. At what level is their subjective well-being at school?
3. Is there a relationship between their levels of subjective well-being at school and their sense of belonging to school?
4. Do their levels of sense of belonging to school differ according to gender?
5. Do their levels of sense of belonging to school differ according to socioeconomic status?
6. Do their levels of sense of belonging to school differ with regard to their academic achievement according to grade levels?
7. Do their levels of sense of belonging to school differ according to the level of perceived parental interest in school life?
8. Do their levels of sense of belonging to school differ according to how they perceive their own academic achievement?
9. Do their levels of subjective well-being at school differ according to gender?
10. Do their levels of subjective well-being at school differ according to socioeconomic status?
11. Do their levels of subjective well-being at school differ with regard to their academic achievement according to grade levels?
12. Do their levels of subjective well-being at school differ according to the level of perceived parental interest in school life?
13. Do their levels of subjective well-being at school differ according to how they perceive their own academic achievement?

Method

Research Model

This research is a cross-sectional analytical study designed in the descriptive survey model. A descriptive survey model aims to describe a past or existing situation as it exists at present. In this type of study, an attempt is made to describe an event, individual or object under their own conditions and as they are by determining a sample from the population that forms the study universe within a certain period of time (Cohen, Manion, & Morrison, 2007; Karasar, 2014).

Sampling

The study population of the research consisted of 3,306 eighth grade students in 19 secondary schools located in the city center of Aydın province, Turkey (Aydın Provincial Directorate of Education, 07.05.2019 data). The sample of the study was made up of 770 eighth grade students attending 15 public and private secondary schools with different socioeconomic levels. In terms of the sample size, a 3.09% margin of error was calculated at a 95% confidence level.

Data Collection Tools

One of the data collection instruments used in the research is the "Brief Scale for Adolescents' Subjective Well-Being in School", which consists of two sub-dimensions: "School Satisfaction" and "Emotion at School", with 10-item and six-point likert-type scale developed by Özdemir and Sağkal (2016). Besides, the 10-item "Scale for Sense of Belonging to School", consisting of "Satisfaction with School" and "Conformity to School Rules" dimensions having 10 items in five-point Likert-type (Akar-Vural, Yılmaz-Özelçi, Çengel ve Gömleksiz (2013) was used. Data collection tools and their Cronbach's alpha reliability coefficients have been presented in Table 1.

Table 1

Data Collection Tools and Reliability Coefficients

Scale	Cronbach's alpha
Satisfaction with School	.86
Conformity to School Rules	.57
Whole Scale for Sense of Belonging to School	.75
School Satisfaction	.88
Whole Scale for Subjective Well-Being at School	.88

Data Analysis

Data were gathered from students by the researchers on a voluntary basis from the schools in the sample. For the analysis of the data, descriptive and predictive analyses were applied together. Relationships and differences between variables were measured with t-test, one-way analysis of variance and correlation tests, and to find answers to sub-problems, numbers (n), percentages (%) and arithmetic means were calculated. Information about the research questions and statistical analysis techniques have been presented in Table 2.

Table 2

Research Problems and Statistical Analysis Techniques Used for Finding Answers

Research Problem	Statistical Analysis Techniques
Level of subjective well-being at school and sense of belonging to school	
Relationship between subjective well-being at school and sense of belonging to school	Spearman's Rank-Difference Correlation Analysis
Determination of whether subjective well-being at school and sense of belonging to school differ according to gender variable	Mann-Whitney U Test
Determination of whether subjective well-being at school and sense of belonging to school differ according to variable of socioeconomic status	Kruskal-Wallis H-test (when there are more than two groups and they do not show a normal distribution) and Bonferroni-adjusted Mann-Whitney U Test
Determination of whether subjective well-being at school and sense of belonging to school differ depending on variable of their academic achievement according to grade levels.	Kruskal-Wallis H-test and Bonferroni-adjusted Mann-Whitney U Test
Determination of whether subjective well-being at school and sense of belonging to school differ according to variable of level of perceived parental interest in school life	Kruskal-Wallis H-test and Bonferroni-adjusted Mann-Whitney U Test
Determination of whether subjective well-being at school and sense of belonging to school differ according to variable of how students perceive their own achievement	Mann-Whitney U Test

Findings**Mean Scores Related to Levels of Students' "Sense of Belonging to School"**

Table 3 shows that the highest mean score ($\bar{x}=3.97$) for "Sense of Belonging to School" levels is in the "Satisfaction with School" subdimension. This value is followed by the mean score of the scale ($\bar{x}=3.83$), while the lowest value ($\bar{x}=3.69$) belongs to the subdimension of "Conformity to School Rules". It is observed that the scores obtained from the answers of the students for all dimensions are high.

Table 3

Levels of Students' Sense of Belonging to School

Dimension	n	\bar{x}	Sd
Satisfaction with School	770	3.97	.93
Conformity to School Rules	770	3.69	.81
Sense of Belonging to School	770	3.83	.70

Mean Scores Related to Levels of Students' "Subjective Well-Being at School"

In Table 4, it is seen that the mean score ($\bar{x}=4.70$) of the "School Satisfaction" subdimension of the "Subjective Well-Being at School" scale is close to the mean score of the scale ($\bar{x}= 4.64$). Hence, it can be asserted that students have a high score on these variables

Table 4

Levels of Students' Subjective Well-Being at School

Dimension	n	\bar{x}	Sd
School Satisfaction	770	4.70	1.05
Subjective Well-Being at School	770	4.64	1.01

The Relationship between the Levels of the Students' "Subjective Well-Being at School" and "Sense of Belonging to School"

The relationship between the levels of the students' "Subjective Well-Being at School" and "Sense of Belonging to School" were tested with Spearman's Rank-Difference Correlation Analysis. Table 5 reveals a moderate level of correlation between students' levels of belonging to school and subjective well-being ($p<.01$, $r=.58$).

Table 5

Relationship between Students' Levels of Subjective Well-Being at School and Sense of Belonging to School

	Satisfaction with School	Conformity to School Rules	Sense of Belonging to School	School Satisfaction	Emotion at School	Subjective Well-Being at School
Satisfaction with School	1.00					
Conformity to School Rules	.30*	1.00				
Sense of Belonging to School	.82*	.76*	1.00			
School Satisfaction	.52*	.36*	.55*	1.00		
Subjective Well-Being at School	.55*	.37*	.58*	.97*	.75*	1.00

*Spearman's Rank-Difference Correlation, significant at .01 level

Moreover, it is concluded that there are weak or moderate correlations among all the subdimensions of the scales. Table 5 also shows that there is a moderate positive relationship between the "Satisfaction with School" sub dimension of the "Sense of Belonging to School" scale and the "School Satisfaction" subdimension of the "Subjective Well-Being at School" scale ($p<.01$, $r=.52$). It is concluded that there is a weak positive relationship between the "Conformity to School Rules" subdimension of the "Sense of Belonging to School" scale and the "School Satisfaction" subdimension of the "Subjective Well-Being at School" scale ($p<.01$, $r=.36$)

The Students' Scores for the "Sense of Belonging to School" Scale According to the Gender Variable

To determine the gender differences for the "Sense of Belonging to School" scale Mann-Whitney U test was used. Table 6 shows that there is a weak significant difference in favor of female students in the "Conformity to School Rules" subdimension ($p=.015$, $r=.09$) and on the scale as a whole ($p=.022$, $r=.08$). However, there is no significant difference between girls and boys in the dimension of "Satisfaction with School" ($p=.37$).

Table 6

Students' Scores on "Sense of Belonging to School" Scale According to Gender Variable

Dimension	Gender	n	Mean Rank	Rank Sum	U	Z	p	r
Satisfaction with School	Girls	400	392.34	156936	71264	-.892	.372	
	Boys	370	378.11	139899				
Conformity to School Rules	Girls	400	404.24	161697.5	66502.5	-2.439	.015*	.09
	Boys	370	365.24	135137.5				
Sense of Belonging to School	Girls	400	403.20	161281.5	66918.5	-2.299	.022*	.08
	Boys	370	366.36	135553.5				

* $p<.05$

Students' Levels of "Sense of Belonging to School" According to the SES Variable

In order to understand the socioeconomic status differences for the "Sense of Belonging to School" scale, Kruskal-Wallis H test was used, since there were more than two groups and they did not show normal distribution. The students' scores on the "Sense of Belonging to School" scale differ significantly according to SES in the "Satisfaction with School" subdimension ($p=.00$) and on the scale as a whole ($p=.03$) (Table 7)

Table 7

Students' Scores on "Sense of Belonging to School" Scale According to SES

Dimension	SES	n	Mean Rank	χ^2	Sd	p	Source of Difference
Satisfaction with School	High	308	420.36	23.021	2	.000*	High>Low Middle>Low
	Middle	244	393.43				
	Low	218	327.37				
Conformity to School Rules	High	308	370.15	2.773	2	.250	-
	Middle	244	390.30				
	Low	218	401.83				
Sense of Belonging to School	High	308	404.77	6.888	2	.032*	High>Low
	Middle	244	389.65				
	Low	218	353.63				

* $p<.05$

To reveal the differences between the groups, the Mann-Whitney U test was performed. The level of significance was determined by applying Bonferroni adjustment ($0.05/3=0.016$). Table 8 reveals that in the "Satisfaction with School" subdimension, there is a weak significant difference between schools with high and low socioeconomic status (SES) in favor of students at schools with high SES ($p=.00$, $r=-0.21$). There is also a weak significant difference between schools with middle and low SES in favor of students at schools with middle SES in the "Satisfaction with School" subdimension ($p=.002$, $r=-0.15$). As for the "Sense of Belonging to School" scale, there is a weak significant difference between schools with high and low SES in favor of students at schools with high SES ($p=.01$, $r=-0.11$).

Table 8

Results Related to Students' Scores on "Sense of Belonging to School" Scale According to SES

Dimension	SES	n	Mean Rank	Rank Sum	U	Z	p	r
Satisfaction with School	High	308	284.76	87707.50	35030.5	-1.377	.168	-
	Middle	244	266.07	64920.50				
	High	308	290.10	89350.00	25380	-4.795	.000*	-0.21
	Low	218	225.92	49251.00				
	Middle	244	249.86	60967.00	22115	-3.142	.002*	-0.15
Sense of Belonging to School	High	308	281.36	86659.50	36078.5	-.806	.420	-
	Middle	244	270.36	65968.50				
	High	308	277.91	85595.50	29134.5	-2.587	.010*	-0.11
	Low	218	243.14	53005.50				
	Middle	244	241.79	58996.50	24085.5	-1.754	.079	-
	Low	218	219.98	47956.50				

*Statistical Difference Between Groups $p<.016$

The Students' Levels of "Sense of Belonging to School" According to the Variables of Academic Achievement and the Grade Levels

To determine whether the students' levels of "Sense of Belonging to School" differed depending on the variable of their academic achievement according to the grade levels, Kruskal-Wallis H test was conducted.

It is seen in the Table 9, students' scores on the "Sense of Belonging to School" scale differ significantly on the whole scale and in both subdimensions in terms of their academic achievement according to their grade levels. To determine between which groups there were significant differences, the Mann-Whitney U test was performed. The level of significance was determined by applying Bonferroni adjustment ($0.05/3=0.016$).

Table 9

Students' Scores on "Sense of Belonging to School" Scale Related to Achievement Level Variable

Dimension	Achievement	n	Mean Rank	χ^2	sd	p	Source of Difference
Satisfaction with School	High	208	448.52	27.711	2	.000*	High>Low
	Low	194	389.68				High>Medium
	Medium	368	347.68				
Conformity to School Rules	High	208	407.50	8.769	2	.012*	High>Low
	Low	194	345.90				
	Medium	368	393.94				
Sense of Belonging to School	High	208	442.51	18.956	2	.000*	High>Low
	Low	194	370.02				High>Medium
	Medium	368	361.44				

*p<.05

According to Table 10, in the "Satisfaction with School" subdimension, there is a weak significant difference between students with high and low academic achievement with regard to the grade levels in favour of students with high academic achievement (p=.004, r= -0.14).

Table 10

Students' Scores on "Sense of Belonging to School" Scale According to Variable of Academic Achievement According to Grade Levels

Dim.	Achievement	n	Mean Rank	Rank Sum	U	Z	p*	r
Satisfaction with School	High	208	217.57	45255.5	16832.5	-2.893	.004	-0.14
	Low	194	184.27	35757.5				
	High	208	335.44	69772.5	28507.5	-5.119	.000	-0.21
	Medium	368	261.97	96403.5				
	Low	194	302.91	58765.5	31541.5	-2.280	.023	-
Conformity to School Rules	High	208	217.55	45250	16838	-2.877	.004	-0.14
	Low	194	184.29	3575				
	High	208	294.45	61245.5	37034.5	-.647	.517	-
	Medium	368	285.14	104930.5				
	Low	194	259.11	50267	3135	-2.381	.017	-
Sense of Belonging to School	High	208	220.78	45923	16165	-3.450	.001	-0.17
	Low	194	180.82	35080				
	High	208	326.23	67856	30424	-4.095	.000	-0.17
	Medium	368	267.17	98320				
	Low	194	286.69	55618	34689	-.551	.582	
	Medium	368	278.76	102585				

*Statistical Difference Between Groups p<.016

Moreover, in this subdimension, there is a weak significant difference between students with high and medium academic achievement in favour of students with high academic achievement ($p=.00$, $r=-0.21$).

In the "Conformity to School Rules" subdimension, there is a weak significant difference between students with high and low academic achievement according to grade levels in favour of students with high academic achievement ($p=.004$, $r=-0.14$).

For the "Sense of Belonging to School" scale, there is a weak significant difference between students with high and low academic achievement according to grade levels in favour of students with high academic achievement ($p=.001$, $r=-0.17$), while there is a weak significant difference between students with high and medium academic achievement in favour of students with high academic achievement ($r=-0.17$, $p=.00$).

The Students' Levels of "Sense of Belonging to School" According to the Variable of Level of Perceived Parental Interest in School Life

To determine whether the students' levels of "Sense of Belonging to School" differed according to the variable of level of perceived parental interest in school life, Kruskal-Wallis H test was used. Regarding the Kruskal-Wallis test results included in Table 11, it is seen that the students' scores in the "Sense of Belonging to School" scale differ significantly on the whole scale and in both subdimensions with regard to their levels of perceived parental interest in school life.

Table 11

Students' Scores on "Sense of Belonging to School" Scale According to Variable of Level of Perceived Parental Interest in School Life

Dimension	Level of Interest	n	Mean Rank	χ^2	sd	p	Source of Difference
Satisfaction with School	None or Very Little	69	292.12	34.264	2	.000*	A Great Deal>Moderate
	Moderate	252	343.88				
	A Great Deal	449	423.21				
Conformity to School Rules	None or Very Little	69	323.28	24.279	2	.000*	A Great Deal>Moderate
	Moderate	252	343.79				
	A Great Deal	449	418.47				
Sense of Belonging to School	None or Very Little	69	283.93	45.505	2	.000*	A Great Deal>Moderate
	Moderate	252	334.49				
	A Great Deal	449	429.74				

* $p<.05$

To determine between which groups there were significant differences, the Mann-Whitney U test was performed (Table 12). The level of significance was determined by applying Bonferroni adjustment ($0.05/3=0.016$).

Table 12

Students' Scores on "Sense of Belonging to School" Scale According to Variable of Level of Perceived Parental Interest in School Life

Dimension	Level of Interest	n	Mean Rank	Rank Sum	U	Z	p	r
Satisfaction with School	None or Very Little	69	143.10	9874.00	7459.000	-1.814	.07	-
	Moderate	252	165.90	41807.00				
	Moderate	252	304.48	76730.00	44852.000	-4.584	.000*	-0.17
	A Great Deal	449	377.11	169321.00				
	None or Very Little	69	184.01	12697.00	10282.000	-4.533	.000	-0.20
	Moderate	252	271.10	121724.00				
A Great Deal	449	377.11	169321.00					
Conformity to School Rules	None or Very Little	69	153.77	10610.00	8195.000	-.733	.464	-
	Moderate	252	162.98	41071.00				
	Moderate	252	307.31	77443.00	45565.000	-4.293	.000*	-0.16
	A Great Deal	449	375.52	168608.00				
	None or Very Little	69	204.51	14111.50	11696.500	-3.289	.001*	-0.14
	Moderate	252	267.95	120309.50				
A Great Deal	449	375.52	168608.00					
Sense of Belonging to School	None or Very Little	69	142.82	9854.50	7439.500	-1.838	.066	-
	Moderate	252	165.98	41826.50				
	Moderate	252	295.01	74342.00	42464.000	-5.491	.000*	-0.21
	A Great Deal	449	382.43	171709.00				
	None or Very Little	69	176.12	12152.00	9737.000	-4.977	.000*	-0.22
	Moderate	252	272.31	122269.00				
A Great Deal	449	375.52	168608.00					

*Statistical Difference Between Groups $p < .016$

According to Table 12, in the "Satisfaction with School" subdimension, there is a weak significant difference between students whose parents were perceived to show "moderate" interest and those whose parents were perceived to show "a great deal" of interest in school life in favour of those whose parents were perceived to show "a great deal" of interest ($p=.00$, $r=-0.17$). In the same subdimension, there is a weak significant difference between students whose parents were perceived to show "no or very little" interest and those whose parents were perceived to show "a great deal" of interest in school life in favour of those whose parents were perceived to show "a great deal" of

interest ($p=.00$, $r=-0.20$). In the "Conformity to School Rules" subdimension, there is a weak significant difference between students whose parents were perceived to show "moderate" interest and those whose parents were perceived to show "a great deal" of interest in school life in favour of those whose parents were perceived to show "a great deal" of interest ($p=.00$, $r=-0.16$). In the same subdimension, there is a weak significant difference between students whose parents were perceived to show "no or very little" interest and those whose parents were perceived to show "a great deal" of interest in school life in favour of those whose parents were perceived to show "a great deal" of interest ($p=.001$, $r=-0.14$). For the "Sense of Belonging to School" scale, there is a weak significant difference between students whose parents were perceived to show "moderate" interest and those whose parents were perceived to show "a great deal" of interest in school life in favour of those whose parents were perceived to show "a great deal" of interest ($p=.00$, $r=-0.21$). Moreover, there is a weak significant difference between students whose parents were perceived to show "no or very little" interest and those whose parents were perceived to show "a great deal" of interest in school life in favour of those whose parents were perceived to show "a great deal" of interest ($p=.001$, $r=-0.22$).

The Students' Scores for the "Sense of Belonging to School" Scale According to the Variable of Students' Perception of their Own Achievement

Mann-Whitney U test analysis was conducted to determine whether the scores of the students in the "Sense of Belonging to School" scale differed according to the perceived achievement variable. It can be noticed in Table 13 that students' perceptions of their own achievement differed slightly on the "Sense of Belonging to School" scale as a whole and in both subdimensions in favour of those who perceived their own achievement as above average ($p=0.018$, $r=-0.09$; $p=.00$, $r=-0.16$; $p=.00$, $r=-0.14$).

Table 13

Students' Scores on "Sense of Belonging to School" Scale According to Variable of Students' Perception of their Own Achievement

Dimension	Achievement	n	Mean Rank	Rank Sum	U	Z	p	r
Satisfaction with School	Average or Below	522	372.51	194451.00	57948	-2.364	.018*	-0.09
	Above Average	248	412.84	102384.00				
Conformity to School Rules	Average or Below	522	360.57	188218.00	51715	-4.527	.000*	-0.16
	Above Average	248	437.97	108617.00				
Sense of Belonging to School	Average or Below	522	364.05	190033.00	53530	-3.887	.000*	-0.14
	Above Average	248	430.65	106802.00				

* $p<.05$

The Students' Scores for the "Subjective Well-Being at School" Scale According to the Gender Variable

To determine the gender differences for the "Subjective Well-Being at School" scale, Mann-Whitney U test was applied. Table 14 affirms that students' levels of subjective well-being at school do not differ according to gender variable.

Table 14

Students' Scores on "Subjective Well-Being at School" Scale According to Gender

Dimension	Gender	n	Mean Rank	Rank Sum	U	Z	p	r
School Satisfaction	Female	400	394.92	157969.00	70231.000	-1.224	.221	-
	Male	370	375.31	138866.00				
Subjective Well-Being at School	Female	400	393.00	157199.00	71001.000	-.973	.330	-
	Male	370	377.39	139636.00				

The Students' Levels of "Subjective Well-Being at School" According to the SES

In order to understand the socioeconomic status differences for the "Subjective Well-Being at School" scale, Kruskal-Wallis H test was used. According to Table 15, students' levels of subjective well-being at school differ in the "School Satisfaction" subdimension according to socioeconomic status ($p=.049$).

Table 15

Students' Scores on "Subjective Well-Being at School" Scale According to SES

Dimension	SES	n	Mean Rank	χ^2	sd	p	Source of Difference
School Satisfaction	High	308	370.97	6.024	2	.049*	-
	Middle	244	376.07				
	Low	218	416.58				
Subjective Well-Being at School	High	308	373.73	4.122	2	.127	-
	Middle	244	377.34				
	Low	218	411.26				

* $p<.05$

To determine between which groups there were significant differences, the Mann-Whitney U test was performed (Table 16). The level of significance was determined by applying Bonferroni adjustment ($0.05/3=0.016$). According to the Bonferroni-adjusted Mann-Whitney U test results, the students' levels of subjective well-being at school do not differ according to socioeconomic status.

Table 16

Students' Scores on "Subjective Well-Being at School" Scale According to SES Variable

Dimension	SES	n	Mean Rank	Rank Sum	U	Z	p	r
School Satisfaction	High	308	275.20	84760.50	37174.500	-2.16	.829	-
	Middle	244	278.15	67867.50				
	High	308	250.27	77084.00	29498.000	-2.375	.018	-
	Low	218	282.19	61517.00				
	Middle	244	220.43	53784.00	23894.000	-1.888	.059	
	Low	218	243.89	53169.00				

The Students' Levels of "Subjective Well-Being at School" with Regard to the Variables of Their Academic Achievement According to Grade Levels

To determine whether the students' levels of "Subjective Well-Being at School" differed with regard to the variable of their academic achievement according to grade level, analysis was made with the Kruskal-Wallis H test. It can be seen from the Table 17 that the students' levels of subjective well-being at school differ on the scale as a whole and in the "School Satisfaction" subdimension depending on the variable of their academic achievement according to the grade levels.

Table 17

Scores on "Subjective Well-Being at School" Scale with Regard to Variable of Academic Achievement According to Grade Levels

Dimension	Achievement	n	Mean Rank	χ^2	sd	p	Source of Difference
School Satisfaction	High	208	426.75				
	Low	194	340.40	15.166	2	.001*	High>Low
	Medium	368	385.96				
Subjective Well-Being at School	High	208	429.25				
	Low	194	341.87	15.557	2	.000*	High >Low
	Medium	368	383.77				

*p<.05

To determine between which groups there were significant differences, the Mann-Whitney U test was performed (Table 18). The level of significance was determined by applying Bonferroni adjustment ($0.05/3=0.016$). Table 18 shows that in the "School Satisfaction" subdimension, there is a weak significant difference between students with high and low academic achievement according to grade levels in favour of students with high academic achievement ($p=.00$, $r=-0.21$). As for the "Subjective Well-Being at School" Scale as a whole, there is a weak significant difference between students with high and low academic achievement according to grade levels in favour of students with high academic achievement ($p=.00$, $r=-0.21$).

Table 18

Students' Scores on "Subjective Well-Being at School" Scale According to Variable of Academic Achievement According to Grade Levels

Dimension	Achievement	n	Mean Rank	Rank Sum	U	Z	p	r
School Satisfaction	High	208	225.07	46815	15273	-4.218	.000*	-0.21
	Low	194	176.23	34188				
	High	208	306.18	63685	34595	-1.919	.055	-
	Medium	368	278.51	102491				
	Low	194	261.68	50765	31850	-2.104	.035	-
	Medium	368	291.95	107438				
Subjective Well-Being at School	High	208	225.14	46829	15259	-4.228	.000*	-0.21
	Low	194	176.15	34174				
	High	208	308.61	64191.5	34088.5	-2.182	.029	-
	Medium	368	277.13	101984.5				
	Low	194	263.22	51064	32149	-1.939	.052	-
	Medium	368	291.14	107139				

*Statistical Difference Between Groups $p < .016$

The Students' Levels of "Subjective Well-Being at School" Differed According to the Variable of Perceived Parental Interest in School Life

To determine whether the students' levels of "Subjective Well-Being at School" differed according to the variable of perceived parental interest in school life, analysis was made with the Kruskal-Wallis H test.

Table 19

Students' Scores on "Subjective Well-Being at School" Scale According to Variable of Parental Interest in School Life

Dimension	Level of Interest	n	Mean Rank	χ^2	sd	p	Source of Difference
School Satisfaction	None or Very Little	69	287.23	71.683	2	.000*	A Great Deal > Moderate
	Moderate	252	310.72				A Great Deal > None or Very Little
	A Great Deal	449	442.57				
Subjective Well-Being at School	None or Very Little	69	287.28	77.623	2	.000*	A Great Deal > Moderate
	Moderate	252	306.35				A Great Deal > None or Very Little
	A Great Deal	449	445.02				

* $p < .05$

According to Table 19, the students' levels of subjective well-being at school differ on the scale as a whole and in both sub dimensions according to the variable of perceived parental interest in school life.

To understand between which groups there were significant differences, the Mann-Whitney U test was performed. The level of significance was determined by applying Bonferroni adjustment ($0.05/3=0.016$). Table 20 shows that for the scale as a whole and in the "School Satisfaction" subdimension, there is a weak significant difference between students whose parents were perceived to show "moderate" interest and those whose parents were perceived to show "a great deal" of interest in school life in favour of those whose parents were perceived to show "a great deal" of interest ($p=.00$, $r=-0.29$; $p=.00$, $r=-0.24$; $p=.00$, $r=-0.31$). Furthermore, for the scale as a whole and in the "School Satisfaction" subdimension, there is a weak significant difference between students whose parents were perceived to show "no or very little" interest and those whose parents were perceived to show "a great deal" of interest in school life in favour of those whose parents were perceived to show "a great deal" of interest ($p=.00$, $r=-0.22$; $p=.00$, $r=-0.20$; $p=.00$, $r=-0.22$).

Table 20

Students' Scores on "Subjective Well-Being at School" Scale According to Variable of Parental Interest in School Life

Dimension	Level of Interest	n	Mean Rank	Rank Sum	U	Z	p	r
School Satisfaction	None or Very Little	69	147.86	10202.5	7787.5	-1.328	.184	-
	Moderate	252	164.60	41478.5				
	Moderate	252	272.62	67800	36822	-7.687	.000*	-0.29
	A Great Deal	449	394.99	177351				
	None or Very Little	69	174.37	12031.5	9616.5	-5.082	.000*	-0.22
Subjective Well-Being at School	A Great Deal	449	272.58	122389.5				
	None or Very Little	69	148.83	10234.5	7819.5	-1.2381	.200	-
	Moderate	252	164.47	41446.5				
	Moderate	252	268.38	67631.5	35753.5	-8.099	.000*	-0.31
	A Great Deal	449	397.37	178419.5				
	None or Very Little	69	173.96	12003	9588	-5.104	.000*	-0.22
	A Great Deal	449	272.65	122418				

*Statistical Difference Between Groups $p<.016$

The Students' Levels of Subjective Well-Being at School According to the Variable of Students' Perception of Their Own Achievement

To determine whether the students' levels of subjective well-being at school differed according to the variable of students' their own achievement perception (declaration), analysis was made with the Mann-Whitney U test. According to Table 21, in both subdimensions of the scale, students' levels of subjective well-being at school differ slightly in favour of those who perceive their own achievement as above average ($p=.00$, $r=-0.22$; $p=.00$, $r=-0.23$).

Table 21

Students' Scores on "Subjective Well-Being at School" Scale According to Achievement Variable

Dimension	Achievement	n	Mean Rank	Rank Sum	U	Z	p	r
School Satisfaction	Average or Below	522	351.70	183587	47084	-6.125	.000*	-0.22
	Above Average	248	456.65	113248				
Subjective Well-Being at School	Average or Below	522	349.88	182637	46134	-6.452	.000*	-0.23
	Above Average	248	460.48	114198				

* $p<.05$

Results and Discussion

The results generally show that the eighth-grade students' sense of belonging to school was at a relatively high level. Similarly, the students' subjective well-being at school was relatively high. There was a moderate and weak relationship between the students' levels of sense of belonging to school and their subjective well-being at school. A similar finding was obtained in a study conducted with teachers by Aydoğan (2019), and it was concluded in that study that the teachers' perceptions related to school climate positively predicted their levels of psychological well-being. Results and discussion of the other dimensions of the study are presented below under related variables of the study.

Gender

According to the findings related to gender, conformity to school rules and sense of belonging to school were higher in girls than in boys in eighth grade. In terms of satisfaction with school, however, no significant difference was observed between female and male students. A similar finding related to sense of belonging to school was obtained in a study carried out by Ma (2015). As a result of the study, in which sense of belonging to school was examined with regard to different variables, it was seen that sense of belonging to school was higher in girls than in boys. Different studies obtaining findings in this direction exist in the literature (Furrer and Skinner, 2003; O'Neel and Fuligni,

2013; Özdemir, Sezgin, Şirin, Karip & Erkan, 2010; Sarı, 2012). However, in a study conducted by Altuntaş and Sezer (2017) with secondary school students, in contrast to this study, no difference was seen between female and male students in terms of sense of belonging to school.

Another finding of the present study was that no significant difference was determined between female and male students with regard to subjective well-being at school. A similar finding was obtained in a study carried out by Bartels and Boomsma (2009) on adolescents and young adults. In that study, the relationship of subjective well-being with gender and age was examined, and it was concluded that subjective well-being did not differ according to gender.

Different from the findings of current study, within the scope of a study carried out by Derdikman-Eiron, Indredavik, Bratberg, Taraldsen, Bakken, & Colton (2011), relationships among subjective well-being, self-esteem, academic achievement, anxiety, and depression in students aged 13-19 in Finland were investigated. As a result of the research, it was concluded that male students' levels of subjective well-being and academic achievement were lower than those of female students. When the literature is examined, different studies also exist which conclude that levels of subjective well-being differ in favour of female students (Gündoğdu & Yavuzer, 2012; Lucas & Gohm, 2000; Sezer, 2011). The reason for the different results regarding the gender variable may be due to the cultural characteristics of the regions where the studies were conducted. In order to examine this situation in more depth, different studies can be conducted that investigate the effects of cultural characteristics on gender.

Socioeconomic Status

The findings related to socioeconomic status reveal that the students' sense of belonging to school differed significantly according to their socioeconomic status levels. Students with high and medium socioeconomic status had higher levels of sense of belonging to school than those with low socioeconomic status. Results that support this finding are found in studies by Sarı (2012) and Bellici (2015). In both studies, it is seen that secondary school students' sense of belonging to school differs according to their socioeconomic status. In contrast to these findings, in the study conducted by Altuntaş and Sezer (2017), it was found that there was no significant difference in secondary school students' commitment to school in terms of the family income variable.

Another finding of the study was that the eighth-grade students' levels of subjective well-being at school did not differ according to their socioeconomic status levels. A similar finding is in evidence in a study by Özdemir (2012), in which the relationships of subjective well-being in adolescents with parental control, parental

affection, parents' educational status and income level, gender and age were examined. The findings of the research revealed that high educational and income status in parents had a positive effect on students' subjective well-being. Examination of the literature reveals that there are also different studies concluding that social characteristics and parents' income level are predictors of students' subjective well-being (Canbay, 2010; Diener, Sandvik, Seidlitz & Diener, 1993; Diener, Suh and Oishi, 1997; Diener & Biswas-Diener, 2002; Diener, Diener and Diener, 2009; Dolan, Peasgood, & White, 2008). Considering the data, it can be said that the socio-economic level generally affects the affective characteristics of the students.

Perceived Parental Interest in School Life

According to the findings, students with high levels of perceived parental interest in school life had higher levels of sense of belonging to school than those who perceived 'no' or 'very little' parental interest. In Uslu's (2012) study, the importance of family participation for secondary school students in relation to their sense of belonging to school was emphasised, and it was concluded that family participation in school and academic support at home increased the sense of belonging to school. Similarly, in Ümmet, Doğan and Kemahlı's (2019) study, it was seen that family relationships had an impact on students' sense of belonging to school. Another finding of the study was that students with high levels of perceived parental interest in school life had higher levels of subjective well-being in school than those who perceived no or very little parental interest. Similar to this finding, there are different studies concluding that parental interest and attitude have an effect students' subjective well-being (Canbay, 2010; Özdemir, 2012; Türkmen, 2012). Considering the data in various studies, it can be said that the affective characteristics of the students are positively affected as the family's interest in school life increases.

Grade Level and Academic Achievement

The findings also indicate that students with high levels of academic achievement according to the class they attended had higher levels of sense of belonging to school than students in low and medium level classes in terms of academic achievement. Moreover, eighth graders who perceived their own levels of achievement as above average had higher levels of sense of belonging to school than students who perceived their own achievement levels as average or below average.

There are different studies which conclude that students with high achievement levels according to grade levels determined by the school or according to their own perceptions have higher levels of sense of belonging to school (Altuntaş & Sezer, 2017; Anderman, 2003; Bellici, 2015; Ma, 2003; Midgley & Urdan, 1996; Sari, 2012; Voelkl, 1995). However, studies also exist which conclude that students' sense of belonging to

school does not differ according to the variable of achievement (Capps, 2003; Sanchez, Colon, & Esparza, 2005). Another finding obtained in the present study is that students with high levels of academic achievement according to the class they attended and according to their own perceptions had higher levels of subjective well-being in school than those of other students. In studies by Samuel, Bergman and Brunner (2013) and Canbay (2010), the researchers examined that relationship between subjective well-being and academic achievement, and it was determined that as levels of achievement increased, levels of subjective well-being also increased.

As emphasised in Bronfenbreener's Ecological Model, there exists within the school system a micro system containing the social communication network of family, friends, teachers and peers, and a mesosystem including the organisational processes and school resources. These two structures also affect the "learner/student" as a social individual. Rumberger and Palardy (2004) and Saab (2009) stated that the mesosystem entailed a school's administration processes and teaching practices reflecting the school culture. In the school as an organisational structure, teaching practices, the school's organisational structure and policies, peer groups, parental behaviours and the school's learning environment directly affect a number of individual and social variables regarding students. Support for all developmental areas and learning domains of students within the school organisation will support both academic achievement and positive socio-emotional outcomes. In order to carry out a school's educational programmes in a healthy way and for students to achieve the educational targets set for them, the establishment of a healthy school culture is a prerequisite.

In the light of the data of this study, the following recommendations can be made:

- Quantitative research techniques were used in this study. Qualitative research techniques such as interview and observation may be used to investigate deeply in future studies.
- This study was carried out with eighth grade students. Future studies can be carried out at different ages and schools comparatively.
- Future studies can be carried out on a larger scale by including teachers, administrators, and parents in the research sample.

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