



## Does Social Support Perception Play a Mediating Role in The Relationship Between Self-Efficacy and Life Satisfaction?

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### Abstract

In this study, the mediating role of social support in the relationship between self-efficacy and life satisfaction was examined. The sample of the research was 521 students from three high schools located in Küçükçekmece District of Istanbul. The participants were selected using the cluster sampling method. Self-efficacy, satisfaction with life, and perceived social support scales were used in the study. In the research, the mediating effects of the model were made through PROCESS Macro and "Model 6" was used. Positive significant correlations were found between social support and self-efficacy and life satisfaction. Social support was found to have a mediating role in female students in the relationship between self-efficacy and life satisfaction when family, friend and teacher support were together, while it was found to have a mediating role in male students when only friend support and family support were together. In addition to these, it was found that male students perceived more family and friend support than female students, students with high levels of success perceived more social support and they had higher self-efficacy and life satisfaction. Finally, it was found that students with high level of income perceived more teacher support and they had higher self-efficacy.

### Keywords

Self-efficacy  
Perceived social support  
Life satisfaction

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### Introduction

A range of issues makes adolescence to be perceived as a stressful period including physical, mental and spiritual changes during adolescence (Santrock, 2012), conflicts especially between parents and peers (Hashim, 2003; Pettit, Lewinsohn, Seeley, Roberts, & Yaroslavsky, 2010), academic success anxiety (Larue & Herman, 2008) and efforts to develop self-awareness and identity (Yoon & Cho, 2011) cause adolescence to be perceived as a stressful period. Self-efficacy is of great importance for adolescents to successfully overcome this difficult process.

Self-efficacy is defined as the belief individuals have about coping with their problems and tasks (Bandura, 1977), and it is believed to be one of the most important determinants of academic performance (Schneider & Preckel, 2017). Self-efficacy affects not only skills, but also individuals' motivations and behaviours (Bandura, 1990) and their determination when faced with difficult situations (Bandura, 1977). While individuals who perceive themselves as efficient in performing tasks

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show more effort and act more ambitious, individuals with low self-efficacy belief may avoid tasks and responsibility because they do not consider themselves efficient (Bandura, 1982; Schunk, 1991). As a result of this, individuals with high self-efficacy consider more difficult tasks as an opportunity to struggle.

While early studies on self-efficacy generally focused on the relationship between self-efficacy and academic achievement (AlAjmi & ALAzemi, 2021; Gutiérrez & Tomás, 2019; Usher, Li, Butz, & Rojas, 2019), it can be seen that recent positive psychology concepts such as self-efficacy and happiness (Asici & Sari, 2021; Iii & Boyd, 2021; Koçak et al., 2021) and self-efficacy and self-confidence have been discussed and studies conducted have shown that self-efficacy also determines psychological well-being of individuals. It is also claimed that self-efficacy is a driving force in protecting individuals' physical (Sheeran et al., 2016) and mental health.

#### ***Life Satisfaction:***

It is expected that the ability of individuals to cope with the difficulties they encounter will contribute to their perceiving life as happier and more meaningful besides increasing their self-confidence. According to Diener, Emmons, Larsen, and Griffin (1985), the good feelings and experiences individuals have are determinants of life satisfaction and in this context, life satisfaction is an expression of happiness and it is the whole of the emotions individuals feel about their lives. Adolescents' life satisfaction is an indicator of their quality of life, and this has many positive effects on the adolescent's lifestyle (Kim & Park, 2020). Life satisfaction reduces adolescents' anxiety and negative emotions (Proctor, Linley, & Maltby, 2010) and causes them to interact more healthily with their social environment (Piko & Hamvai, 2010). Adolescents' high life satisfaction is related to their self-efficacy, and this also affects their future quality of life (Saha, Huebner, Suldo, & Valois, 2010).

Life satisfaction is expressed as the cognitive evaluation of individuals' quality of life (Meule & Voderholzer, 2020) and a sum of their beliefs and evaluations about their lives (Rice, Frone, & McFarlin, 1992). Life satisfaction is affected by individuals' goal setting and the efforts to reach these goals and as a result whether they reach their goals or not (Wang, Li, Sun, Cheng, & Zhang, 2018). Factors such as being healthy and happy, high self-esteem, having a likeable physical appearance, finding life meaningful and high economic standards affect life satisfaction (Appleton & Song, 2008; Lee, Kim, & Wachholtz, 2016). It has been suggested that life satisfaction is a protective factor in individuals' behavioural problems such as depression, anxiety disorders and substance abuse (Sun & Shek, 2010; Gigantesco et al., 2019).

#### ***Relationship Between Self-Efficacy and Life Satisfaction***

Since the changes that occur during adolescence affect their quality of life, studies conducted in recent years to determine the variables associated with adolescents' life satisfaction (Tian, Zhou, Qiu, & Zou, 2022; Zeng et al., 2022) and to determine the factors that negatively affect life satisfaction and carrying out preventive studies (Alsubaie, Stain, Webster, & Wadman, 2019) has gained importance.

It is observed that the problems, obstacles and conflicts in individuals' lives cause life satisfaction to decrease (Demirel & Canat, 2004) and individuals who are open to personal development, willing to participate in social activities, and successful in coping with their anxieties have high life satisfaction (Huebner, Suldo, Smith, & McKnight, 2004; Matheny et al., 2002). In this context, it can be stated that one of the most important factors affecting life satisfaction is self-efficacy, which is considered as the individuals' belief in themselves in fighting life problems. It has been stated that self-efficacy is associated with psychological well-being, high self-efficacy contributes to healing process in chronic diseases (Bisschop, Kriegsman, Beekman, & Deeg, 2004) and low self-efficacy increases depression and anxiety levels (Kashdan & Roberts, 2004). Studies have shown that self-efficacy increases life satisfaction (Bradley & Corwyn, 2004; Burger & Samuel, 2017; Garriott, Hudyma, Keene, & Santiago, 2015).

### *Perceived Social Support as a Mediator*

Satisfaction individuals get from life and their perceptions about their talents are shaped in interaction with the social environment. The need of humans, who are social beings, for social support always shows continuity According to Van der Kolk (2015), social support is not just the presence of people around us and our interactions with them, but it is also feeling that we are in the hearts and minds of others. Social support is defined as the material and psychological resources that individuals think they have achieved through human relations (Lima, Cardoso, & Silva, 2016) and all kinds of support that contribute to the psychological health of individuals by increasing their adaptability skills (Dunst, Trivette, & Cross, 1986). It can be seen that social support can be grouped in two as “perceived social support” which shows how reliable the relationships of individuals with others are, how valuable individuals think they are for others and individuals’ belief that there are people to help them in case of need and “received social support” which is defined as the existing support (Norris & Kaniasty, 1996; Schaefer, Coyne, & Lazarus, 1981).

It is thought that self-efficacy increases individuals’ motivation and their determination to cope with difficulties, which causes them to be respected in their social environment and to get more social support. While one study showed that self-efficacy and social support are positively correlated (Adler-Constantinescu, Beşu, & Negovan, 2013), another study conducted on adolescents showed that friends, teachers and finally family support predicted self-efficacy (Traş & Arslan, 2013). In a similar study, it was observed that for university students, the support of first friends and then significant others increased self-efficacy (Yusoff, 2012).

The process of social support is very important for individuals’ physical and psychological health (House, Landis, & Umberson, 1988). Studies conducted showed that there were negative correlations between perceived and received social support and anxiety and depression (Henry et al., 2019; Lee & Kim, 2016; Viseu, Leal, De Jesus, Pinto, & Pechorro, 2018), peer support increased psychological well-being (McCreary, Slavin, & Berry, 1996) and increased self-esteem (Colarossi & Eccles, 2003). In this context, it is thought that individuals feel healthier as perceived and received social support increases and as a result, they have high life satisfaction. Studies conducted showed that social support has positive effects on life satisfaction (Marsack & Perry, 2018; Park, Roh, & Yeo, 2011; Tsuji & Khan, 2016). Because self-efficacy increases life satisfaction (Ekinici & Koç, 2023; Zammitti, Moreno-Morilla, Romero-Rodríguez, Magnano, & Marcionetti, 2023) and it is associated with social support (Hua & Ma, 2022; Warshawski, 2022), and also because social support is an important predictor of life satisfaction (Fisher, Sung, Kammes, Okyere, & Park, 2022; Ji, Zhou, Wu, & Zhang, 2022), social support may be a determinant in the relationship between self-efficacy and life satisfaction. Based on this, the main problem that this research aims to address is to reveal the mediating role of all dimensions of social support in the relationship between self-efficacy and life satisfaction.

Adolescence is a period of intense physical, mental and emotional changes. It is very important to take the necessary precautions before these changes have devastating effects on adolescents. Proctor, Linley, and Maltby (2017) state that life satisfaction is an important power in preventing adolescents’ existing developmental problems. Life satisfaction is an important driving force for a healthy transition from adolescence to adulthood (Hawkins, Letcher, Sanson, Smart, & Toumbourou, 2009). Furthermore, it is one of the main reasons for psychological well-being, especially during youth (Proctor, Linley, & Maltby, 2009). For this reason, it is considered very important to clearly reveal the variables related to adolescents’ life satisfaction and to determine the factors that will affect life satisfaction positively or negatively. In this research, the relationship between self-efficacy and life satisfaction and the mediating role of social support perception in this relationship is investigated. In particular, what makes this research important is revealing the strength of the sub-dimensions of social support (family, teacher and friend support) on life satisfaction and the role of gender factor as an intervening variable. It is expected that the findings obtained will guide experts, educators, and parents working in this field, as well as lay the groundwork for new research on this subject.

In this regard, answers to the following questions were sought.

1. Do students' family, friends, family support, self-efficacy and life satisfaction scale scores show significant differences according to gender, final grade, and income level?
2. Is there a significant relationship between self-efficacy and life satisfaction?
3. Is there a significant relationship between self-efficacy and perceived social support factors (family, friend, and teacher support)?
4. Is there a significant relationship between perceived social support factors (family, friend, and teacher support) and life satisfaction?
5. Do perceived social support factors (family, friend, and teacher support) have a multiple mediating role in the relationship between self-efficacy and life satisfaction?

## Methods

### *Research Design*

In this study, it was aimed to reveal whether the social support perception has a mediating role in the relationship between self-efficacy and life satisfaction, and for this reason, the research was carried out in the relational screening model.

### *Population and Sample*

The population of the research is high school students within the borders of Küçükçekmece District of Istanbul. In the study, three schools were selected with the cluster sampling method (lower, middle, upper socio-economic level), and a total of 521 students (mean age  $16.0 \pm 2.7$ ) were enrolled in these schools, 289 of whom were girls (55.5%) and 232 of whom were boys (44.5%) students were taken as a sample.

**Table 1.** General Characteristics of the Samples

Variables		N	%
Gender	Female	289	55.5
	Male	232	44.5
Final grade	3.0-4.0	191	36.7
	2.0-3.0	234	44.9
	1.0-3.0	96	18.4
Income level	Low	88	16.9
	Moderate	408	78.3
	High	25	4.8
Perceived parental attitude	Indifferent	81	15.5
	Authoritative	90	17.2
	Democratic	350	67.3
Number of siblings	No siblings	28	5.4
	1-2	340	65.2
	3 and more	153	29.4

### *Data Collection Tools*

Self- Efficacy Scale in Youth: Self- Efficacy Scale in Youth developed by Muris (2001) was adapted to Turkish culture by Telef and Karaca (2012). The fit indices and item discrimination values obtained as a result of the adaptation of the scale to Turkish culture were found to be high. The scale has a 5 Likert type design and includes 21 items (example item: How well can you raise your spirits by yourself in the face of a negative event?). High scores from the scale show that self-efficacy is high. Cronbach's alpha value calculated for the reliability study of the scale was calculated as .86. As a result of factor analysis, it was seen that the factor structure of the Turkish form of the scale was the same as the factor structure of the original form. According to the exploratory factor analysis, it was observed

that the total variance explained was 43.74%. As a result of the confirmatory factor analysis, it was determined that the fit indices of the model represented by the three sub-dimensions and the upper dimension were high ( $\chi^2 = 614.68$ , GFI =.94, CFI =.96, RMSEA = .050) (Telef & Karaca, 2012). Cronbach Alpha value calculated for the scores obtained from the participants of this study was measured as .78.

**Perceived Social Support Scale:** The scale was developed by Yıldırım (1997) to find out the levels of social support adolescents perceived from their families, friends, and teachers. The scale has 50 items, 20 in the family support factor, 13 in the friend support factor, and 17 in the teacher support factor (Example item: Supports me when I am subjected to injustice). It was found that the factor loads obtained as a result of the factor analysis were high (.51 and over), correlation values obtained as a result of applying a similar scale for external validity were significant (.69) and Cronbach Alpha reliability values (.74 for friend support, .79 for family support and .75 for teacher support) were within acceptable limits (Yıldırım, 1997). Cronbach Alpha value was calculated again for this study, it was measured as .83 for family support factor, as .83 for friend support factor, and as .77 for the teacher support factor.

**Satisfaction with Life Scale:** It is a 5-item scale developed by Diener et al. (1985) and adapted to Turkish by Dağlı and Baysal (2016) (Example item; So far, I've gotten the things that are important to me in life). It was found that the factor loads and fit indices of the adapted scale were high ( $\chi^2 = 5.87$ , GFI =.99, CFI =1.00, RMSEA = .030). It was found that the reliability values of the scale were higher than .80. Cronbach Alpha value of the satisfaction with life scale in the present study was found as .84.

### **Data Analysis**

Before collecting data, necessary ethical and application permissions were obtained from the institutions (Istanbul Sabahattin Zaim University Date and Number; 06.04.2022-E.25489) and consent from the students' families the students were informed about the purpose of the study and measurement instruments were applied to the students who volunteered to participate in the study. It was found that in general, the students responded to measurement instruments in approximately 15 minutes. Before analysis, the measurement instruments were examined and the 5 forms which were found to be filled in randomly were excluded from evaluation.

The data were analyzed in IBM SPSS 22 with the Process 3.5 macro plug-in developed by Hayes. Skewness and Kurtosis values were calculated for normality tests of the scores obtained from the scales and the distribution was considered to be normal since the obtained values were  $\pm 1.5$  (George & Mallery, 2010). It can be said that there are no multiple connection and linearity problems since the tolerance value of the scores obtained from the scale was higher than .10, variance inflation factor (VIF) was higher than 5, and the correlation values between the scores obtained from the scales were not high (Çokluk, Şekercioğlu, & Büyüköztürk, 2012; Hu, 2005). It was observed that there was no autocorrelation problem in the model since the calculated Durbin-Watson value was 2.00. (Albayrak et al., 2005). In order to check the presence of extreme values in the data set, Mahalanobis distance values were examined (Çokluk et al., 2012) and no extreme values were found as a result of the analysis. Additionally, the Cook distance of the data was calculated for the presence of extreme values. If this value is greater than 1.00, it indicates that there are extreme values in the data set (Tabachnick & Fidell, 2019). In the calculation, it was observed that the Cook distance varied between .000 and .086. Cronbach Alpha values of the scales were found to be very high, Pearson correlation coefficient was found for the relationship between the variables, and t test and ANOVA tests were performed to find out the differences between the groups.

The predictive level of mediating variables in the relationship between dependent and independent variables was determined by using regression-based serial multiple mediating variable analysis (PROCESS Model 6) (Cheng, & Yan, 2017) Bootstrap confidence interval values were calculated to find out the significance of mediating effect. According to confidence interval value if the lower (BootLLCI) and upper (BootULCI) confidence interval values corresponding to the indirect effect value do not include zero (0), the indirect effect is considered significant and it is understood that a mediating effect has occurred.

## Findings

In this section, the findings of the multiple mediation model used in the research on the relationships between self-efficacy, perceived social support, and life satisfaction are included.

Table 2 shows the correlations between the scores of the factors of perceived social support scale and self-efficacy and satisfaction with life scale and descriptive statistics of the scales.

**Table 2.** Descriptive Statistics and Correlation Values of Family, Friend, Teacher Support and Self-Efficacy and Satisfaction with Life Scale Scores (N=521)

Variables	1	2	3	4	5	M	St.	Skewness	Kurtosis
1.Family support	–					44.90	6.45	1.12	0.78
2.Friend support	0.26**	–				73.86	8.85	1.23	1.02
3.Teacher support	0.28**	0.39**	–			37.38	5.36	0.98	0.23
4.Self-efficacy	0.13**	0.21**	0.18**	–		69.21	6.51	1.01	0.65
5. Satisfaction with life	0.29**	0.26**	0.24**	0.38**	–	17.33	6.43	1.45	1.33

\*\* $p < 0.01$ , M. Mean, St. Standard Deviation

As can be seen in Table 2, family support is positively significantly correlated with friend support ( $r = 0.26, p < .01$ ), teacher support ( $r = 0.28, p < .01$ ), self-efficacy ( $r = 0.13, p < .01$ ) and satisfaction with life ( $r = .029, p < .01$ ), while friend support is similarly positively significantly correlated with teacher support ( $r = 0.39, p < .01$ ), self-efficacy ( $r = 0.21, p < .01$ ) and satisfaction with life ( $r = 0.26, p < .01$ ). Positive significant correlation was found between teacher support and self-efficacy ( $r = 0.18, p < .01$ ) and satisfaction with life ( $r = 0.24, p < .01$ ) and between self-efficacy and satisfaction with life ( $r = 0.38, p < .01$ ).

Table 3 shows the t test and Anova results performed to find out whether perceived social support factors and self-efficacy and satisfaction with life scale scores differed significantly in terms of gender, academic achievement and family level of income.

**Table 3.** T Test and ANOVA Results of Family, Friend and Teacher Support, Self-Efficacy and Life Satisfaction Scales (N=521)

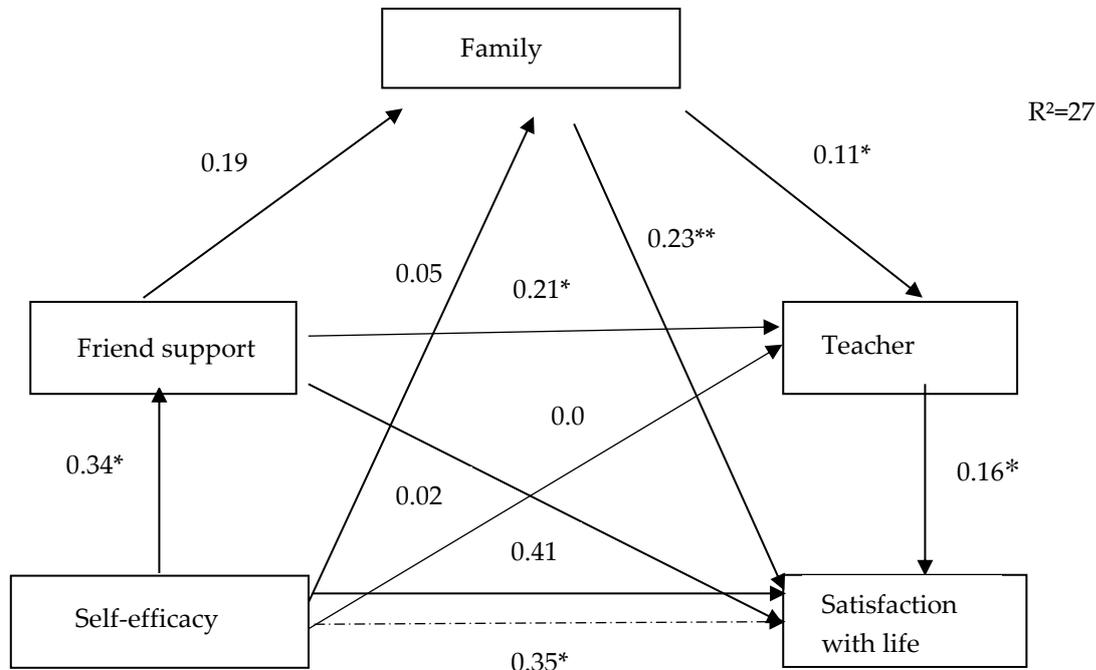
	N	Family support (M±Sdt)	Friend support (M±Sdt)	Teacher support (M±Sdt)	Self-efficacy (M±Sdt)	Satisfaction with life (M±Sdt)	
Gender	Female	289	44.32±6.46	74.75±8.98	37.34±5.49	58.74±6.67	14.70±2.23
	Male	232	45.61±6.39	72.98±8.60	37.44±5.20	59.79±6.26	15.45±3.21
			$t_{(519)}=2.26$ $p < 0.05$	$t_{(519)}=2.26$ $p < 0.05$	$t_{(519)}=2.26$ $p > 0.05$	$t_{(519)}=2.26$ $p > 0.05$	$t_{(519)}=2.26$ $p > 0.05$
Final grade	3.0-4.0	191	45.35±6.46	74.64±8.12	37.85±4.23	65.50±5.67	17.12±3.23
	2.0-3.0	234	44.55±6.28	73.33±8.45	34.17±3.90	61.45±5.32	16.10±3.29
	1.0-3.0	96	40.52±7.01	71.35±7.33	30.00±3.76	56.22±4.99	14.56±2.34
			$F_{(4-516)}=2.81$ $p < 0.05$	$F_{(4-516)}=2.76$ $p < 0.05$	$F_{(4-516)}=2.91$ $p < 0.05$	$F_{(4-516)}=10.62$ $p < 0.01$	$F_{(4-516)}=3.95$ $p < 0.01$
Income level	Low	88	45.78±6.34	74.23±8.45	36.10±5.01	58.30±5.40	15.55±3.11
	Moderate	408	44.12±6.15	73.35±8.01	37.23±5.88	60.33±6.60	14.97±2.67
	High	25	44.06±6.22	74.09±8.34	38.80±5.40	62.00±6.98	15.31±2.99
			$F_{(3-517)}=0.29$ $p > 0.05$	$F_{(3-517)}=1.92$ $p > 0.05$	$F_{(3-517)}=2.78$ $p < 0.05$	$F_{(3-517)}=5.67$ $p < 0.01$	$F_{(3-517)}=0.12$ $p > 0.05$

M= Mean, Std=Standard Deviation

As can be seen in Table 3, perceived family support is significantly high in male students, while perceived friend support is significantly high in female students. It was found that perceived teacher support, self-efficacy and satisfaction with life scores did not differ significantly in terms of gender.

It was found that perceived family, friend and teacher support and self-efficacy and life satisfaction scores were significantly high in students who were successful. Perceived teacher support and self-efficacy scores were significantly high in students whose families had high levels of income. However, it was found that perceived family, friend support and satisfaction with life scale scores did not differ significantly in terms of level of income.

Figure 1 shows the multiple mediation analysis results of friend, family and teacher support in the relationship between self-efficacy and life satisfaction in female students.



**Figure 1.** Direct and Indirect Effects of Self-Efficacy on Friend, Family and Teacher Support and Satisfaction with Life in Female Students. \*  $p < .01$ . \*\*  $p < .05$

As can be seen in Figure 1, the direct effect of self-efficacy on life satisfaction ( $c = 0.41$ ,  $S_h = 0.06$ ,  $t = 7.96$ ,  $p < .001$ ) is significant (Step 1). In addition, while the direct effect of self-efficacy on mediating variable of friend support ( $B = 0.34$ ,  $S_h = .08$ ,  $t = 4.52$ ,  $p < .01$ ) is significant, its direct association on family support ( $B = 0.05$ ,  $S_h = 0.05$ ,  $t = 0.97$ ,  $p > .05$ ) and teacher support ( $B = 0.06$ ,  $S_h = 0.05$ ,  $t = 1.33$ ,  $p > .05$ ) is insignificant (Step 2). While the direct effect of mediating variables family support ( $B = 0.23$ ,  $S_h = 0.05$ ,  $t = 4.18$ ,  $p < .01$ ) and teacher support ( $B = 0.16$ ,  $S_h = 0.06$ ,  $t = 2.50$ ,  $p < .05$ ) on life satisfaction is significant, it can be seen that the effect of family support ( $B = 0.02$ ,  $S_h = 0.04$ ,  $t = 0.45$ ,  $p > .05$ ) is insignificant (Step 3). When self-efficacy and all mediating variables are taken in the equation at the same time (Step 4), the direct effect of self-efficacy on life satisfaction was found to decrease ( $c' = 0.35$ ,  $S_h = .05$ ,  $t = 6.91$ ,  $p < .001$ ), while the result obtained was found to remain at significant level. This result shows that in female students, friend, family and teacher support, friend and teacher support and finally friend and family support together have a mediating role between self-efficacy and life satisfaction. In addition to these, it can be seen that the whole model is significant ( $F(4-284) = 26.10$ ,  $p < .001$ ) and explains 27% of total variance on life satisfaction. Table 4 shows the direct and indirect effects and specific indirect effects of self-efficacy on life satisfaction through the mediation of perceived social support (friend, family and teacher support) in female students.

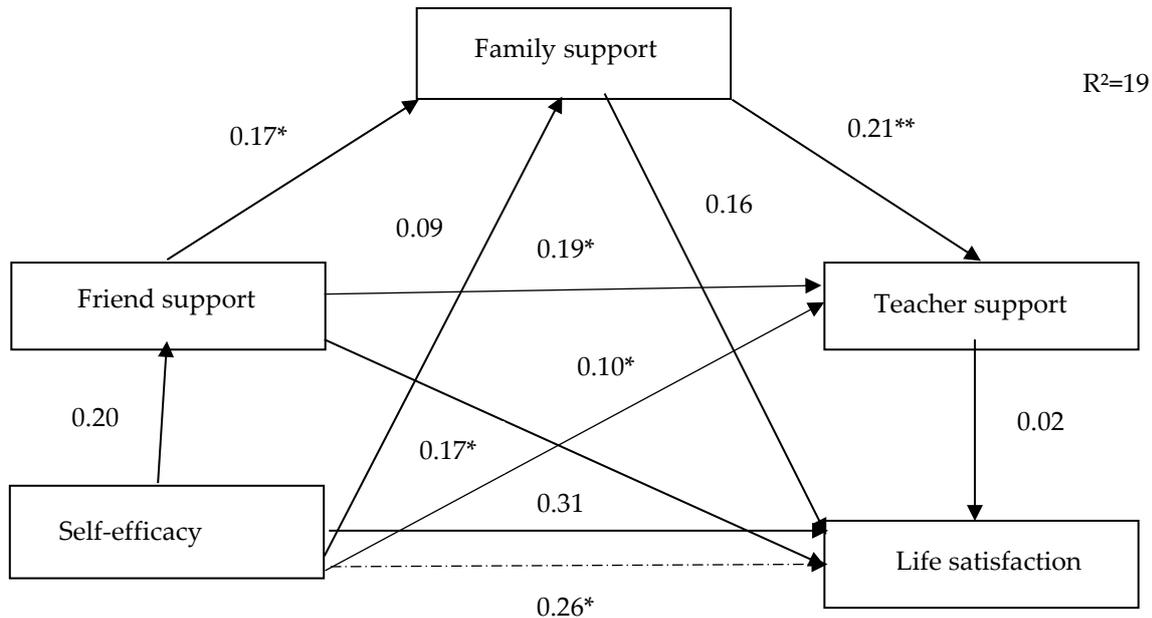
**Table 4.** Comparison of the Direct and Indirect Effects of Self-Efficacy of Female Students on Life Satisfaction Through the Mediation of Perceived Social Support Factors

Model 1	BE	SE	t	95% BCa Confidence Interval	
				LLCI	ULCI
Total Effect	0.411	0.046	7.96	0.310	0.513
Direct Effect	0.352	0.054	6.91	0.252	0.453
Indirect Effect	0.058	0.023		0.017	0.108
Indirect Effect (SE→FRS→LS)	0.006	0.015		-0.022	0.039
Indirect Effect (SE→FS→LS)	0.012	0.013		-0.013	0.042
Indirect Effect (SE→TS→LS)	0.010	0.008		-0.004	0.030
Indirect Effect (SE→FRS→FS→LS)	0.015	0.006		0.005	0.031
Indirect Effect (SE→FRS→TS→LS)	0.011	0.005		0.002	0.025
Indirect Effect (SE→FS→TS→LS)	0.009	0.001		-0.001	0.004
Indirect Effect (SE→FRS→FS→TS→LS)	0.012	0.009		0.000	0.003

Bootstrap sample size = 5000; BE Boot effect, SE standard error, LLCI lower limit confidence interval, ULCI upper limit confidence interval. Self-Efficacy (SE), Friend Support (FRS), Family Support (FS), Teacher Support (TS), Life Satisfaction (LS)

The indirect effects of the variables used in the study were tested by using 5000 bootstrap sample, predictions were evaluated at 95% confidence interval, bias errors were eliminated and corrected results were shown in Table 2. Table 2 shows that the total effect value is 0.411, direct effect value is 0,352 and total indirect effect value is 0.058. The model has seven indirect effects. In the first indirect effect, the effect of self-efficacy (SE) on life satisfaction (LS) with the mediation of friend support (FRS) is insignificant (bootstrap = 0.006, %95 CI = -0,022, 0,039), in the second indirect effect, the effect of self-efficacy (SE) on life satisfaction (LS) with the mediation of family support (FS) is insignificant (bootstrap = 0.012, %95 CI = -0,013, 0,042), while in the third indirect effect, the effect of self-efficacy (SE) on life satisfaction (LS) with the mediation of teacher support (TS) is insignificant. Similarly, the effect of self-efficacy (SE) on life satisfaction (LS) with the mediation of family support (FS) and teacher support (TS) is also insignificant (bootstrap = 0.009, %95 CI = -0,001, 0,004). This is due to the fact that confidence intervals include zero. On the other hand, the effect of self-efficacy (SE) on life satisfaction (LS) with the mediation of friend support (FRS) and family support (FS) is significant (bootstrap = 0.015, %95 CI = 0,005, 0,031), the effect of self-efficacy (SE) on life satisfaction (LS) with the mediation of friend support (FRS) and teacher support (TS) is also significant (bootstrap = 0.011, %95 CI = 0,002, 0,023), and finally the effect of self-efficacy (SE) on life satisfaction (LS) with the mediation of friend support (FRS), family support (FS) and teacher support (TS) is also significant.

Figure 2 shows the multiple mediation analysis results of friend, family and teacher support in the relationship between self-efficacy and satisfaction with life in male students.



**Figure 2.** Direct and Indirect Effects of Self-Efficacy on Friend, Family and Teacher Support and Life Satisfaction in Male Students\*  $p < .01$ . \*\* $p < .05$

As can be seen in Figure 2, the direct effect of self-efficacy on life satisfaction is significant in male students ( $c = 0.31$ ,  $S_{it} = 0.06$ ,  $t = 4.96$ ,  $p < .001$ ) (Step 1). In addition, the direct effects of self-efficacy on mediating variables friend support ( $B = 0.20$ ,  $S_{it} = .09$ ,  $t = 2.28$ ,  $p < .05$ ) and teacher support ( $B = 0.11$ ,  $S_{it} = 0.05$ ,  $t = 2.15$ ,  $p < .05$ ) are significant, while its direct effect on family support ( $B = 0.09$ ,  $S_{it} = 0.07$ ,  $t = 1.40$ ,  $p > .05$ ) is insignificant (Step 2). While the direct effects of mediating variables on family support ( $B = 0.16$ ,  $S_{it} = 0.06$ ,  $t = 2.48$ ,  $p < .05$ ) and friend support ( $B = 0.17$ ,  $S_{it} = 0.05$ ,  $t = 3.40$ ,  $p < .01$ ) are significant, their direct effect on teacher support ( $B = 0.02$ ,  $S_{it} = 0.08$ ,  $t = 0.25$ ,  $p > .05$ ) is insignificant (Step 3). When self-efficacy and all mediating variables were taken in the equation at the same time (Step 4), the direct effect of self-efficacy on life satisfaction decreased ( $c' = 0.26$ ,  $S_{it} = .06$ ,  $t = 4.15$ ,  $p < .001$ ), while the result found remained at significant level. This result shows that in male students, friend support alone and friend and family support together had a mediating role in the relationship between self-efficacy and life satisfaction. It was also found that the whole model was significant ( $F(4-227) = 13.37$ ,  $p < .001$ ) and explained 19% of the total variance on life satisfaction.

Table 5 shows the direct and indirect effects and specific indirect effects of self-efficacy on life satisfaction through the mediation of perceived social support (friend, family and teacher support) in male students.

**Table 5.** Comparison of the Direct and Indirect Effects of Self-Efficacy of Male Students on Life Satisfaction Through the Mediation of Perceived Social Support Factors

Model 2	BE	SE	t	95% BCa Confidence Interval	
				LLCI	ULCI
Total Effect	0.323	0.061	4.96	0.191	0.444
Direct Effect	0.268	0.063	4.16	0.136	0.383
Indirect Effect	0.058	0.036		0.011	0.012
Indirect Effect (SE→FRS→LS)	0.034	0.024		0.035	0.081
Indirect Effect (SE→FS→LS)	0.015	0.013		-0.003	0.045
Indirect Effect (SE→ TS → LS)	0.002	0.008		-0.013	0.021
Indirect Effect (SE→ FRS → FS → LS)	0.005	0.004		0.002	0.015
Indirect Effect (SE→ FRS → TS → LS)	0.008	0.003		-0.005	0.007
Indirect Effect (SE→ FS → TS → LS)	0.004	0.002		-0.003	0.005
Indirect Effect (SE→ FRS → FS → TS → LS)	0.001	0.006		-0.001	0.006

Bootstrap sample size = 5000; BE Boot effect, SE standard error, LLCI lower limit confidence interval, ULCI upper limit confidence interval. Self-Efficacy (SE), Friend Support (FRS), Family Support (FS), Teacher Support (TS), Life Satisfaction (LS)

The indirect effects of the variables used in the study were tested by using 5000 bootstrap sample, predictions were evaluated at 95% confidence interval, bias errors were eliminated and corrected results were shown in Table 5. Table 5f shows that the total effect value is 0.323, direct effect value is 0,268 and total indirect effect value is 0.058. The model has seven indirect effects. In the first indirect effect, the effect of self-efficacy (SE) on life satisfaction (LS) through the mediation of friend support (FRS) is significant (bootstrap = 0.034, %95 CI = 0,011, 0,012), while in the fourth indirect effect, the effect of self-efficacy (SE) on life satisfaction (LS) through the mediation of friend support (FRS) is significant (bootstrap = 0.005, %95 CI = 0,002, 0,015) as well. However, the effect of self-efficacy (SE) on life satisfaction (LS) through the mediation of family support (FS) (bootstrap = 0.015, %95 CI = -0,003, 0,045), the effect of self-efficacy (SE) on life satisfaction (LS) through the mediation of teacher support (TS) (bootstrap = 0.002, %95 CI = -0,013, 0,021), the effect of self-efficacy (SE) on life satisfaction (LS) through the mediation of friend support (FRS) and teacher support (TS) (bootstrap = 0.008, %95 CI = -0,005, 0,007), the effect of self-efficacy (SE) on life satisfaction (LS) through the mediation of family support (FS) and teacher support (TS) (bootstrap = 0.004, %95 CI = -0,026, 0,005) and finally the effect of self-efficacy (SE) on life satisfaction (LS) through the mediation of friend support (FRS), family support (FS) and teacher support (TS) are insignificant (bootstrap = 0.001, %95 CI = -0,001, 0,006). This is due to the fact that confidence intervals include zero.

## Discussion and Conclusion

In this study, it was aimed to reveal whether the social support perception has a mediating role in the relationship between self-efficacy and life satisfaction. Study results show that male students perceived more family support, while female students perceive more friend support. In Turkey, generally families expect boys to get a better education and have a better career (Akbaş, 2006; Sayılan, 2012). It can be thought that girls perceive friend support more due to reasons such as their need to share the biological and emotional changes that occur in them because they enter puberty earlier than boys (Erikson, 1984; Saka, 2011), and their need to act as autonomous individuals. Research shows that women generally receive more social support than men (Noret, Hunter, & Rasmussen, 2020; Tifferet, 2020). In a similar study, it was found that women perceived friend support most, while men perceived family support most (Cheng & Chan, 2004).

According to the results of the study, it can be seen that successful students had higher self-efficacy, life satisfaction and social support perceptions. Studies conducted also show that successful students have higher life satisfaction (Chow, 2005; Rode et al., 2005) and receive more social support (McNaughton-Cassill et al., 2021; Novitasari et al., 2021). When social support scale scores of adolescents were examined in terms of the level of income, significant difference was seen only in teacher support. It can be seen that adolescents with a high level of income perceived teacher support more. The reasons for this can be the fact that families with high level of income send their children to private schools, teachers in these schools are more interested in students and they support students more. In a study conducted by Christens and Lin (2014), level of income was found to predict social support perception positively. Similarly, it can be seen that children who have families with high level of income have higher self-efficacy.

The present study examined whether friend, family and teacher support had a mediating role in the relationship between self-efficacy and life satisfaction. The results found showed that self-efficacy had a special effect on life satisfaction, self-efficacy increased family, friend and teacher support and all of these together had a special importance in increasing satisfaction with life. According to the results, the direct effect of self-efficacy on life satisfaction is significant in both male and female students. Based on this result, one of the factors affecting life satisfaction is self-efficacy, which is expressed as the belief, motivation and determination of individuals in fighting problems. Studies conducted give similar results (Marcionetti & Rossier, 2021; Jhang, 2021). Saha et al. (2010) reveal that high levels of self-efficacy and peer relationships positively affect life satisfaction. However, in another study, it was observed that self-efficacy reduces anxiety and increases psychological resilience (Park, 2011), and that adolescents with high self-efficacy are more successful academically, and as a result, these adolescents have higher life satisfaction (Feldman & Kubota, 2015).

The direct effect of self-efficacy on friend support for female students, and the direct effect of self-efficacy on both friend and teacher support for male students is significant. However, it seems that the direct effect of self-efficacy on family support is insignificant in both genders. As a result of self-efficacy increasing the problem-solving power of individuals, these people receive more respect from their friends and therefore have more friend support. Studies reveal that self-efficacy strengthens friendship relationships (Altermatt, 2019; Cattelino, Chirumbolo, Baiocco, Calandri, & Morelli, 2021; Li, Peng, Lu, Liao, & Li, 2020). It was found interesting that male students' self-efficacy increased teacher support, whereas the direct effect of female students' self-efficacy on teacher support was insignificant. The main reason for this may be that the boys included in the sample were academically more successful than the girls. Also, studies show that those with higher academic success perceive more teacher support (López, Ehly, & García-Vázquez, 2002; Yıldırım & Ergene, 2003). Additionally, the direct effect of self-efficacy on family support for girls and boys is insignificant. Other studies largely show that there is a positive relationship between self-efficacy and family support (Gao et al., 2021; Guerra, Farkas, & Moncada, 2018; Yıldırım & Çelikkol, 2023). It is thought that this result is due to the characteristics of the sample group.

The direct effect of family and teacher support on life satisfaction in girls and friend and family support in boys is significant. In this context, it appears that family support has a significant impact on determining life satisfaction for both genders. Piko (2023) found that the most important predictor of life satisfaction is family support. According to the findings, teacher support is an important factor for life satisfaction in girls. The main reason for this is assumed to be the importance and closeness that female students give to their teachers and the fact that they care about the support their teachers give them. Studies also reveal that girls' perception of closeness to teachers is higher than boys (Açılan & Özgenel, 2021), that female students perceive their teachers as more supportive than male students, and that they are more satisfied with their school life (Ersoy, 2020). It appears that friend support has a higher direct effect on life satisfaction in men than family support. This situation was found to be very

important since it shows how much men need friend support for their life satisfaction. This may be due to the fact that during adolescence, adolescents receive more support from their friends when they suffer from self-disclosure and when they exhibit adolescent deviant behaviors. Studies also reveal that boys' self-disclosure levels among their friends are higher than girls (Atalay & Özyürek, 2020), however, boys receive more support from their friends with maladaptive behaviors than girls (Delikara, 2000).

It can be seen that in female students, social support had a mediating role in the effect of self-efficacy on life satisfaction when friend and family support were together. In this context, it can be said that self-efficacy affects life satisfaction in females when social support is supported with its all dimensions. This result is important in terms of showing how important social environment is in the effect of self-efficacy on life satisfaction and showing how much girls need friend support and then teacher support. Another study conducted by Bokhorst, Sumter, and Westenberg (2010) shows that when compared with male students, female students perceive more social support from teachers, families and friends.

In addition to these, it was found in the study that only friend support had a mediating role in the effect of self-efficacy on life satisfaction in male students. This result is important in terms of showing how much boys need friend support in adolescence in terms of life satisfaction. In Turkey, while girls can talk to their mothers and get support from them in issues such as adolescence problems, hormonal changes and intensity of sexual desires, boys are not given much opportunity to talk to their parents on these issues. It can be thought that this is why boys need peer support more than girls in this period. At the same time, reasons such as the needs of boys to belong to a group to feel strong in their social environment, the anxiety for normality is met within group as a result of the quick changes that occur in adolescence increase the importance of peer support. Studies show that boys form closer relationships than girls during adolescence (Çevik & Atıcı, 2008; Çok, 1993). Oppedal, Røysamb, and Sam (2004) reveal that boys perceive social support from friends and family, but the social support they perceive from teachers is low. In another study, it was observed that boys perceived lower levels of social support than girls (Llabre ve Hadi, 1997), and in the study conducted by Noret et al. (2020), girls perceived lower levels of social support than boys. The different results of the research findings reveal that the support given by the social environment to girls and boys differs according to culture.

Different results can be seen when studies on adolescence and social support taken from different sources are examined as a whole. Some studies showed that friend support was higher in adolescents (Furman & Buhrmester, 1992), while others showed that family and friend support were equal (Helsen, Vollebergh, & Meeus, 2000) and friend support decreased gradually (Kerres Malecki & Kilpatrick Demary, 2002). Another study conducted by Bokhorst et al. (2010) showed that girls perceived more support than boys and there were no significant differences between girls and boys in terms of support perceived from parents.

In addition to similar results found in the present study and in previously conducted studies, different results can also be found. In this context, it is thought that the cultural and social environment adolescents live in create differences in perceived social support.

When it is considered that social support perception decreases depression (Holt & Espelage, 2007), increases well-being and self-efficacy (Karademas, 2006), regulates social relationships (Grisset & Norvell, 1992) and increases student adaptation (Demaray & Malecki, 2002), the importance of social support in individuals' lives can be seen better. In this context, it seems very important to show the reasons for differences in the level of social support perceived by children and adolescents and for low social support perceptions and to eliminate the factors that are determined as problems. The strengths of the present study are the fact that it shows the differences in social support types in terms of gender and prepares a basis for new studies to examine the results of this, and shows the mediating role of social support in the relationship between self-efficacy and life satisfaction. In addition to these, the limitations of the study are the fact that it has a cross-sectional design and it does not establish a cause and effect relationship between the results.

## Suggestions

According to research findings, students with low income levels and academic success have low self-efficacy and low life satisfaction. It is important to investigate the reasons for this and provide psychological support to these students. The reasons for the insignificant mediating role of family support in the relationship between self-efficacy and life satisfaction in both male and female students should be investigated. Also, research can be conducted to examine the reasons for the insignificant mediating role of friend support in girls and teacher support in boys and their effects on the relationship between self-efficacy and life satisfaction. The indirect effects of family, friend and teacher support on life satisfaction are significant. For this reason, it is recommended to raise the awareness of about the importance of parent and teacher support, especially in group guidance and parent meetings held in schools.

When the research findings are evaluated as a whole, it is seen that the levels of family, friend and teacher support perceived by the students give different results. In this context, this and similar research should be conducted in different cultures and sample groups and the reasons for the differences should be investigated. Based on the research findings, studies can be conducted on the relationship between variables such as parental attitudes and self-esteem and their effects on the relationship between self-efficacy and life satisfaction. However, in order to increase life satisfaction, it seems necessary to conduct qualitative studies that allow in-depth analysis. Finally, the research was conducted on high school students, and it is recommended that this and similar studies be conducted at different ages and grade levels.

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