



THE INVESTIGATION OF THE RELATIONSHIP BETWEEN SECONDARY SCHOOL TEACHERS' SELF EFFICACY BELIEFS AND ATTITUDE TOWARDS TEACHINGⁱ

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Abstract:

The aim of this research is to determine the relationship between secondary school teachers' self-efficacy perceptions and their attitudes towards the profession. The research was carried out by using relational screening model among descriptive survey models. The target population of the study consists of teachers who work in the secondary schools in Kahramanmaraş province of Turkey in the education year of 2015-2016. The sample of the research consists of 384 teachers working in 15 secondary schools in the central districts of Dulkadiroğlu and Onikişubat. In the scope of the research, in order to determine the professional self-efficacy perceptions of secondary school teachers, the "Teacher Self-efficacy Scale" which was developed by Tschannen-Moran and Woolfolk Hoy (2001) and adapted to Turkish by Çapa, Çakıroğlu and Sarıkaya (2005); to measure their attitudes towards the profession, the "Teacher Attitude Scale" which was developed by Döş and Atalmış (2016); and to determine the personal characteristics of the participants, the "Personal Information Form" which was developed by the researcher are used. The statistical analysis of the data was implemented with SPSS 21.0 program. According to the results of the research, it was seen that the professional self-efficacy perceptions of the secondary school teachers were "quite adequate" and their professional attitudes were at the level of "totally agree". Finally, it is observed that secondary school teachers' perceptions of professional

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self-efficacy and attitudes are related at the medium level and positively; meaning that self-efficacy perceptions significantly and meaningfully predicted their professional attitude levels.

Keywords: self-efficacy belief, attitude, teacher training, secondary school teachers

1. Introduction

When the education is considered as a system, teachers, students, administrators, supervisors, parents and the environment interact with each other to form parts of this system. While the quality of education is only possible with successfully managing all parts of this system, the teacher plays a key role in the efficient management of the system (Akar, 2007; Derman, 2007). It is important to educate the teacher so that he can successfully fulfill this expected role. First of all, those who choose the profession of teaching, which has an important role in restructuring the community, must have a number of professional qualifications as well (Akar, 2007).

The professional performance of the teachers can be decisive in the quality of the education given. Teachers' attitudes toward the profession must be positive so that they can exhibit their professional performances in the most effective way. The professional attitudes of teachers are closely related to their classroom behavior and practices (Demirtaş, Cömert and Özer, 2011). Teachers who have positive professional attitude exhibit positive behavior towards their students and are less likely to encounter problem to motivate them. These teachers who are also creative thinkers can enrich the learning environment since they are open to innovations (Çeliköz and Çetin, 2004). Moreover, it can be said that teachers, who internalize the profession and are proud of being a teacher, also have the basic qualities that a teacher should have in the profession (Şişman and Acat, 2003). When the studies related to the attitudes that significantly influence the achievement and efficiency in the profession are examined, the "concept of self-efficacy" is often encountered. There is a great deal of studies show that the teacher self-efficacy belief is correlated with the effective teacher characteristics such as student success (Ashton, Webb and Doda, 1983; Goddard, Hoy and Woolfolk-Hoy, 2000; Ross and Bruce, 2007), the regulation of student-centered learning experiences (Schriver, 1993), effective classroom management skills (Woolfolk and Hoy, 1990; Cruz and Arias, 2007) and problem-solving skills (Kiremit, 2006). On the basis of all this, it can be said that the teacher self-efficacy belief (Henson and Kogan, 2000; Çakıroğlu, Çakıroğlu and Boone, 2005) and attitude (Üstüner, 2006; Güdek, 2007; Demirtaş, Cömert and Özer, 2011), which is seen as an important variable in the successful implementation of the

education programs (curriculums), concerns both practitioners and researchers (Woolfolk Hoy, 2000).

When the relevant literature on education is examined, it is seen that the studies focus on the relationship between the perceptions of professional self-efficacy and attitudes of the teachers in the middle school level are limited to the variable of field of study (subject). In the studies conducted in this regard, it was seen that the participants were mostly composed of the teachers in the specific fields or the candidate teachers. As for the studies conducted with in-service teachers, they did not address the relationship between self-efficacy beliefs and attitudes. These two aforesaid concepts were examined separately in these studies.

In this sense, it is anticipated that this study, in which the perception and attitudes of vocational (professional) self-efficacy of secondary school teachers in office are determined and their relationship between them is examined, will contribute to the evaluation and development of teacher education programs.

2. Literature Review

2.1. Self-efficacy Belief

The basis of the concept of self-efficacy is based on the social cognitive theory of Albert Bandura (1977). Self-efficacy belief includes judgments with respect to how well individuals can perform the behaviors that are necessary to cope with certain situations (Bandura, 1982; 122). The self-efficacy located at the center of human behaviors (Bandura, 1989; Bandura, 2001) expresses confidence in one's own abilities (Bandura, 1994), not whether one is talented or a reflection of previous experiences (Schunk, 1987). It acts as a decision-making mechanism in the initiation of any behavior and in the continuation or termination of ongoing behavior (Pajares, 2006). Beyond the knowledge and skills people actually possess, how they perceive them and what kind of implications they make about their achievements take part at the heart of the debate on self-efficacy. That is to say, it is these perceptions that enable people to decide what they can do by affecting them affectively, cognitively and behaviorally (Bandura, 1989). According to Bandura (1984), self-efficacy is fed by four sources of information. The previous successful experiences of the individual called "mastery experience" by him, indirect learning experiences, the positive feedback of the environment which is described as verbal persuasion, and finally the physiological and emotional state of the person are the sources that affect self-efficacy. It is understood from this that Bandura's theory brings the interaction between cognitive, behavioral and environmental factors into the forefront (Bandura, 1982; Skalvik and Skalvik, 2007).

It is stated that the most effective of the four primary sources of self-efficacy belief is the first-hand experiences of the person. First-hand experience seems necessary for the formation of a strong sense of competence in people (Bandura, 1982; Bandura, 1995). If the individual is unsure of own abilities, does not have any previous experience in regard to the behavior in question and his/her behavior is going to be judged based on a social criterion, indirect learning experiences may be more important (Bandura, 1986). The verbal persuasion, which is one of the information sources of self-efficacy, can play a part in motivating people (Derman, 2007). The positive messages that people, who have the ability to do a job but being suspicious about it, receive from their environments could encourage them to take action. The physiological and emotional state of an individual can provide information about self-efficacy belief while a behavior is being performed. The joy and comfort originated from a successful behavior can increase the individual's self-efficacy belief (Tschannen-Moran and Hoy, 2007). On the other hand, the teachers' self-efficacy beliefs are closely related to their teaching performances (Ünsal, Korkamz and Perçin, 2016).

2.2. Attitude

Attitude is the tendency of thoughts, feelings and behaviors that lead to some behaviors that cannot be observed directly but attributed to the individual related to a specific psychological object (Kaya and Büyükkasap, 2005; Kağıtçıbaşı, 2010). The thesis that the behavior which puts the tendency of thought, feeling and behavior of an individual in harmony is formed by these three elements is still accepted (Cüceloğlu, 1991; Kağıtçıbaşı, 2010; Taylor, Peplau and Sears, 2012). Various knowledge, cognition and beliefs related to the aforesaid attitude constitute the element of thought of attitude (Kağıtçıbaşı, 2010; Taylor, Peplau and Sears, 2012). The affective element is mostly composed of positive and negative evaluations of the individual (Taylor, Peplau and Sears, 2012) and consists of excitement against the object of attitude (Erdoğan, 1994). The behavioral dimension of attitude describes the readiness to react in the direction of attitude. The positive or negative judgment of the person on the object of attitude will lead him/her to act in this direction (Üstündağ, 2001; Taylor, Peplau and Sears, 2012).

Teachers' attitudes towards their profession gain importance due to them being one of the most powerful predictors of professional behavior (Çeliköz and Çetin, 2004; Güdek, 2007; Bursalıoğlu, 2008). Teachers with a positive attitude toward their profession can also evaluate their self-efficacy more objectively and strive to correct their possible drawbacks (Demirtaş, Cömert and Özer, 2011). So, the present study seeks answers to the following questions:

1. What is the level of secondary school teachers' attitudes towards teaching?
2. What is the level of secondary school teachers' self-efficacy?
3. Is there a meaningful relationship between the secondary school teachers' attitudes towards teaching profession and teacher self-efficacy?
4. Is the secondary school teachers' self-efficacy belief meaningful predictor of their teaching attitudes?

3. Methods

3.1. Participants

The sample of the research consists of 384 teachers working in 15 different secondary schools in the academic year of 2015-2016. 205 (54.2%) of the participants were male and 173 (48.5%) of them were female. 104 teachers (27.5%) have experience between 1 and 5 years, 93 of them (24.6%) have 6 to 10 years, 112 (24.6%) teachers have 11-15 years, 43 (11.4%) of them have 16-20 years and 26 (6.4%) of them have 21 years or above.

3.2. Data Collection Tools

Three instruments were used in order to gather data for this study: The Teachers' Sense of Efficacy Scale, The Teachers' Attitude Towards Teaching Scale and a personal information questionnaire.

3.2.1. Personal Information Questionnaire

The "Personal Information Form" which was developed by the researcher consists of two questions aim to determine participants' demographic characteristics such as gender and educational background.

3.2.2. The Teachers' Sense of Efficacy Scale

Based on Bandura's (1977) self-efficacy perception theory, the Teachers' Sense of Efficacy Scale developed by Tschannen-Moran and Woolfolk Hoy (2001) consists of 24 items. The scale items were prepared with 9-point Likert scale, 1 being insufficient and 9 being very sufficient. The Turkish version of the scale was developed by Çapa, Çakıroğlu and Sarıkaya (2005). However, in this study, the Teachers' Sense of Efficacy Scale was used to measure the professional self-efficacy perceptions of teachers who are actively working not the candidate teachers. In addition, since it is thought that it could create possible problems in practice, a 5-point Likert scale is preferred instead of a 9-point Likert scale. For this reason, re-factor analysis was considered appropriate for the existing scale. The data is analyzed with the SPSS 21.0 package program for the

exploratory factor analysis and with the MPLUS package program for confirmatory factor analysis.

In the exploratory factor analysis (EFA), it was found that the items 2, 6, 10, 11, 17 and 20 have relatively high load values in both factors. It has been considered appropriate to subtract these items from the scale which have high load values in both factors. The factor loadings of the items which were taken out from the scale are presented in the table below.

Table 1: Factor Loadings of the Items Taken out from the Scale

Items		Factor 2	Factor 3	Factor 4
1. Analysis	Item 2	.447	.464	
	Item 6	.490	.430	
	Item 17	.466		.506
	Item 20		.453	.444
2. Analysis	Item 10	.415		.477
	Item 11	.515		.529

A new exploratory factor analysis was performed with the remaining 18 items. It has been seen that the discrimination values of the items changed between .428 and .645. Through the line chart method, it is seen that the scale consists of four factors. The obtained line chart is presented in Figure 1.

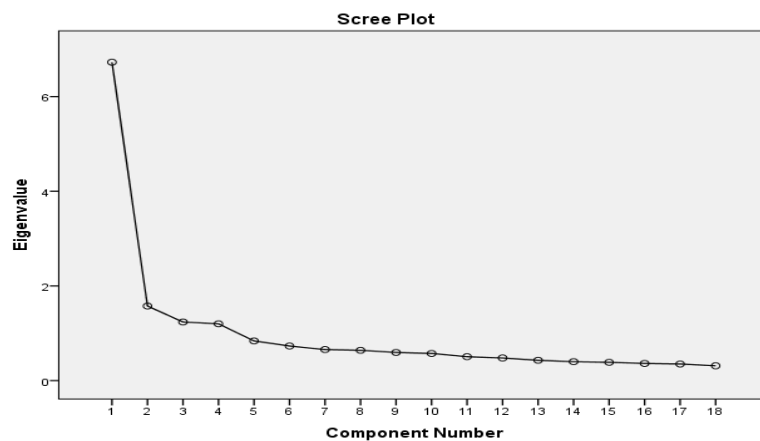


Figure 1: Scree Plot Obtained from Exploratory Factor Analysis of the Teachers' Sense of Efficacy Scale

In the scale consisting of four factors, the first factor is named classroom management sufficiency, the second factor is sufficiency related to student participation, the third factor is the sufficiency of instructional strategies and the fourth factor is called professional dominance. The variance of the scale was 59.663%. For this, the first factor

contributed 37.365%, the second factor contributed 8.752%, the third factor contributed 6.883% and the fourth factor contributed 6.662%.

In order to test the validity of the four-factor structure determined as a result of the exploratory factor analysis of the Teachers' Sense of Efficacy Scale, the confirmatory factor analysis of the scale was conducted.

The result of the analysis is presented in Figure 2.

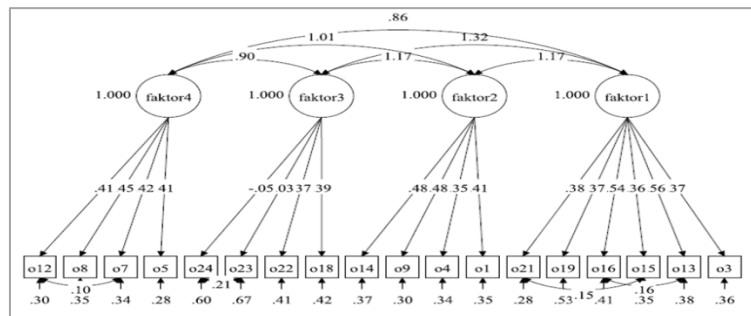


Figure 2: The Graphic the CFA of the Teachers' Sense of Efficacy Scale

It can be said that the Teachers' Sense of Efficacy Scale has good consistence since its RMSEA value is .075 and other values like CFI (.89) and TLI (.86) values are also acceptable.

The internal consistency coefficient of the final version of the scale was calculated and the Cronbach Alpha value was found to be .90. The coefficient alpha values for the secondary teachers were .86 for the classroom management, .76 for the student engagement, .74 for the instructional strategies and .69 for the professional mastery.

3.2.3. The Teachers' Attitude towards Teaching Scale

The Teachers' Attitude towards Teaching Scale revised by Atalmış, Döş and Kayran (2016) has the purpose of measuring the attitudes of the candidate teachers towards the teaching profession. The scale consists of 19 items and 5 factors and it is in the type of 5-point Likert scale. Getting a high score on the scale where only the negative attitude dimension is reversed indicates that the professional attitude is high. The reliability coefficient for the whole scale was calculated as .84. This study was used to determine the attitudes of the teachers who are currently in charge. For this reason, factor analysis related to the Teachers' Attitude towards Teaching Scale was conducted by the researcher.

In the explanatory factor analysis (EFA), it was considered appropriate to subtract the 5th item that has the item-total correlation value of 0.129, and 17th and 18th items which are overlapping in both factors. In addition, since only the 14th and 15th items link to the fourth factor, these items have also been removed from the scale. The

analysis was repeated for the remaining items. It can be seen that the discrimination values of the items changed between .341 and .763. In the analysis, it is defined that the scale consists of three important factors according to the eigenvalue scale. The line chart plotted according to the eigenvalues is shown in Figure 3.

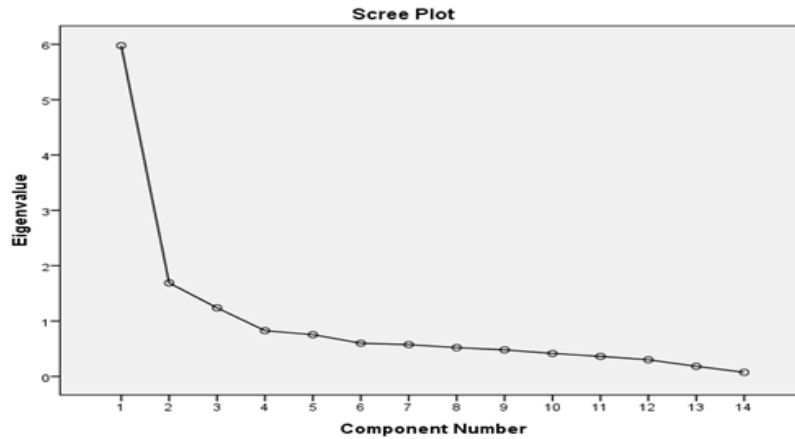


Figure 3: Scree Plot Obtained from EFA of the Teachers' Attitude towards Teaching Scale

In the scale consisting of three factors, the first factor is named professional commitment, the second factor is positive attitude, and the third factor is negative attitude. The first factor was 32.549%, the second factor was 17.059% and the third factor was 14.003% of the total variance. According to the analysis the announced variance of the scale is found to be 63.611%. In order to test the validity of the three-factor structure determined as a result of the exploratory factor analysis of the Teachers' Sense of Efficacy Scale, the confirmatory factor analysis of the scale was conducted. The results obtained are shown in Figure 4.

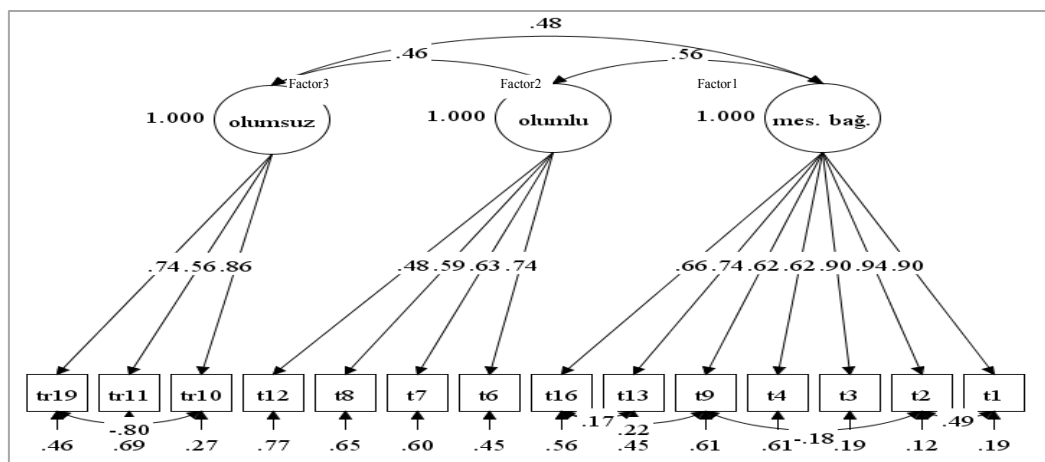


Figure 4: The Graphic the CFA of the Teachers' Attitude towards Teaching Scale

As a result of the confirmatory factor analysis, it can be said that the Teachers' Sense of Efficacy Scale has an acceptable level of consistence since its RMSEA value is (.088). It is stated that the scale has excellent consistence level in terms of CFI (.929) value and good consistence level in terms of TLI (.906) value. The internal consistency coefficient of the final version of the scale was calculated and the Cronbach Alpha value was found to be .89. The coefficient alpha values for the secondary teachers were .90 for the teaching commitment, .68 for the positive and negative attitude.

3.3. Data Analysis

The Pearson correlation coefficient was calculated to determine the possible meaningful relationship between teachers' self-efficacy perceptions and attitudes. Simple and multiple regression analyzes were also conducted to determine whether the independent variables (self-efficacy perception dimensions) significantly predicted the dependent variable (teaching attitude). The statistical package for social sciences (SPSS) version 21 was used in this respect.

4. Results

The first problem of the research is stated as "What is the level of secondary school teachers' attitudes towards teaching?". The accordingly obtained findings are presented in Table 2.

Table 2: Findings related to the attitude levels of secondary school teachers

Scales	N	X	s	Interval
Positive Attitude	378	18.26	2.14	Totally agree
Negative Attitude	378	4.33	2.02	Totally disagree
Professional Commitment	278	29.53	5.08	Totally agree
Teacher Attitude Scale	378	61.46	7.62	Totally agree

According to the findings presented in Table 2, teachers' professional attitudes were found to be "totally agree" with an average of 61.46. The teachers' professional commitment ($x = 29.53$) had the highest average in the scale and their negative attitude ($x = 4.33$) was at the level of "totally disagree".

The self-efficacy perception levels of the teachers were measured as the second sub-problem of the research and the findings are presented in Table 3.

Table 3: Findings related to the self-efficacy perception levels of secondary school teachers

Scales	N	X	s	Interval
Classroom Management	378	23.88	3.56	Fair enough
Student Participation	378	14.76	2.26	Fair enough
Teaching Strategies	278	15.34	2.33	Fair enough
Professional Mastery	378	16.29	2.05	Fair enough
The Teachers' Sense of Efficacy Scale	378	70.27	8.22	Fair enough

According to the findings presented in Table 3, teachers' self-efficacy perceptions were found to be "fair enough" with an average of 70.27. When the scale is approached according to the sub-dimensions, it can be said that teachers' classroom management self-efficacy perceptions ($x = 23.88$) is the highest and self-efficacy perceptions related to the student participation ($x = 14.76$) is the lowest.

Pearson correlation test was conducted to reveal the relationship between the secondary school teachers' professional self-efficacy perceptions and attitudes in accordance with the research problems. The relationship between the secondary school teachers' professional self-efficacy perceptions and attitudes is presented in Table 4.

Table 4: Pearson correlation test for determining the relationship between secondary school teachers' professional self-efficacy perceptions and attitudes

	1	2	3	4	5	6	7	8	9
1. Classroom management	1								
2. Student Participation	.508**	1							
3. Teaching Strategies	.523**	.537**	1						
4. Professional Mastery	.547**	.534**	.506**	1					
5. Total Self-Efficacy	.857**	.780**	.783**	.776**	1				
6. Negative Attitude	-.133**	-.125*	-.136**	-.133**	-.164**	1			
7. Positive Attitude	.287**	.183**	.141**	.224**	.270**	-.402**	1		
8. Professional commitment	.285**	.305**	.276**	.221**	.341**	-.418**	.531**	1	
9. Total Attitude	.306**	.288**	.260**	.246**	.347**	-.656**	.742**	.927**	1

When the correlations between teacher self-efficacy and attitude scale were examined, it is seen that there is a significant correlation between the two variables in medium level and positive direction ($r = .347$, $p < .01$). Accordingly, it can be said that as teachers' self-efficacy perceptions increase, their attitudes will increase in the same direction as well. When the correlations of both scales according to their sub-dimensions are examined, it is seen that the highest-level relation is occurred between student participation and professional commitment ($r = .305$) and the lowest one between student participation and negative attitude ($r = -.125$). These results can be interpreted as if the teachers'

perceptions of self-efficacy related to student participation increase, their professional commitment will increase and so will their teaching attitude.

Multiple regression analysis was conducted to determine the predictive power of the secondary school teachers' self-efficacy perceptions on attitude levels. The obtained results are presented in Table 5.

Table 5: Results of multiple regression analysis regarding secondary school teachers' self-efficacy perceptions' prediction of attitudes

Variables	B	Standard Error	β	t	p	Binary r	Multiple r
Constant	39.512	3.279	-	12.051	.000	-	-
Classroom management	.379	.135	.177	2.803	.005	.306	.144
Student participation	.467	.213	.138	2.197	.029	.288	.113
Teaching strategies	.241	.205	.074	1.180	.239	.260	.061
Professional mastery	.142	.236	.038	.603	.547	.246	.031

R= .350, R²= .123, Adjusted/Corrected R² = .113, F_(4, 373)=13.019, p= .000

According to the results obtained, it is seen that the self-efficacy perception dimensions and attitude scores have a meaningful relationship at low level, R= .350, R²= .123, p<.01. Four variables related to teacher self-efficacy describe about 12 percent of the total variance. According to the standardized regression coefficient (β), the relative order of importance of the predictive variables on the teaching attitude can be listed as; classroom management, student participation, teaching strategies and professional mastery. When the results of the t test on the meaningfulness of the regression coefficients are examined, it can be said that only the classroom management dimension is a significant predictor on the teaching attitude.

The regression equation (mathematical model) for predicting the teaching attitude according to the obtained results of the regression analysis is as follows:

$$\text{Attitude} = 39.512 + 0.379 * \text{Classroom Management} + 0.467 * \text{Student Participation} + 0.241 * \text{Teaching Strategies} + 0.142 * \text{Professional Mastery}$$

5. Conclusion and Discussion

In this study, it was determined that the level of professional self-efficacy perception of secondary school teachers was "quite sufficient". It can be said that the result of the research is in line with the results of Kahyaoğlu and Yangın (2007), O'Neill and Stephenson (2012), and Djigić, Stojiljković and Doskovic (2014). Kahyaoğlu and Yangın (2007), in their studies, examined the professional self-efficacy perceptions of the candidate teachers in the department of primary education and found that the

professional self-efficacy perceptions of the candidate teachers were quite sufficient. O'Neill and Stephenson (2012) demonstrated that teachers' self-efficacy perceptions regarding student learning and behaviors were quite sufficient in their study conducted with 573 Australian candidate classroom teachers. Djigić, Stojilković and Dosković (2014) conducted a study with 168 Norwegian teachers and found that teachers' perceptions of self-efficacy towards the profession are quite high with teaching dimension being the highest one.

When the professional attitudes of the secondary school teachers are examined in general, it is determined that the attitude levels of the teachers are "totally agree". It is seen that this obtained result is parallel to the results of the researches carried out by Kaya and Büyükkasap (2005) and Çağlar (2013). The study of Kaya and Büyükkasap (2005) with candidate physics teachers showed that the attitude towards teaching profession was positive. Çağlar (2013), in his study with students from education faculty, observed that the professional attitudes of prospective teachers were high. However, in the study conducted by Saracaloğlu, Bozkurt, Serin ve Serin (2004), the attitudes of the prospective teachers regarding the profession were examined according to some variables and the attitudes of candidate teachers related to the profession were found to be moderate in general. Banerjee and Behera (2014) pointed out that secondary school teachers' professional attitudes are moderate in their study conducted in India. This can be explained by the fact that the researches have been carried out with different sample groups.

As a result of the analyzes to determine the possible relationship between the levels of professional self-efficacy perception and attitudes of secondary school teachers, it was concluded that professional self-efficacy perception and attitudes of secondary school teachers are positively and moderately related. It can be said that this result of the survey is in line with the results of Derman (2007), Çaycı (2011), Demirtaş, Cömert and Özer (2011), Tarkın and Uzuntiryaki (2012), and Arastaman (2013). It is also seen in these studies that teachers' self-efficacy perceptions and attitudes are positively related. Furthermore, Chestnut and Burley (2015), in a meta-analysis study of 33 researches, found that there is a positive relationship between teachers' self-efficacy beliefs and their professional commitment.

As a result, taking all these researches into consideration, it is expected that secondary school teachers, who consider themselves very good about teaching within the scope of this research, should also have a positive attitude regarding the profession.

Besides, it is found that the self-efficacy perceptions of secondary school teachers significantly predict their professional attitudes. When the literature of the relevant area is examined, it can be stated that this result shows parallelism with the results of the

researches of Morgil, Seçken and Yücel (2004) and Erawan (2011). Morgil, Seçken and Yücel (2004) found that the attitudes of chemistry students related to chemistry significantly predict their self-efficacy beliefs. Similarly, in Erawan's (2011) study, prospective teachers' professional attitudes were found to predict self-efficacy perceptions considerably.

6. Implications

The relationship between the secondary school teachers' self-efficacy perceptions and level of professional attitudes was examined in this study. In the following researches, the changes in teachers' self-efficacy perceptions and attitudes can be examined according to variables such as gender, professional seniority and branch. It may be useful to conduct longitudinal studies at this point since the study of teacher training requires a process. In this way, starting with undergraduate education, a more comprehensive and holistic view related to the teachers' self-efficacy perceptions and attitudes can be obtained during the process of appointment and their professional life.

In addition, the candidate teachers who are new to their profession should be encouraged to work in schools where they can get constructive feedback from the school management and colleagues (verbal conviction) and where the necessary social support will be provided (psychological state). It is envisaged that this would enhance teachers' professional self-efficacy perceptions and strengthen their positive professional attitudes.

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