



| Research Article / Araştırma Makalesi |

## Pre-Service Pre-School Teachers' Music Education Self-Efficacy Levels: A Case Study

### Okul Öncesi Öğretmen Adaylarının Müzik Eğitimi Öz-Yeterlik İnanç Düzeyleri: Durum Çalışması

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#### Keywords

1. Self-efficacy belief
2. Music education self-efficacy belief
3. Music education in early childhood
4. Teacher training
5. Professional development in music education

#### Anahtar Kelimeler

- 1.Öz-Yeterlik İnanç
- 2.Müzik Eğitimi Öz Yeterlik İnanç
- 3.Okul Öncesi Dönem Müzik Eğitimi
- 4.Öğretmen Yetiştirme
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#### Abstract

*Purpose:* This study aims to examine pre-service preschool teachers' music education self-efficacy levels in terms of their gender and grades.

*Design:* The research has been designed as descriptive research based on the survey model. The data collection tool includes the 'Music Education Self-Efficacy Scale for Preschool Teacher Candidates' developed by Yıldız (2017). The study group includes 221 pre-service preschool teachers.

*Findings:* Research indicates that pre-service preschool teachers' music education self-efficacy is at a 'good level.' Considering grades, it is found that as the grade level increases, there is an increase in the self-efficacy beliefs of pre-service preschool teachers related to music education. The lowest music education self-efficacy levels belong to freshman pre-service preschool teachers, and the highest music education self-efficacy levels belong to senior pre-service preschool teachers. However, it is found that the music education self-efficacy levels do not significantly differ according to gender.

*Highlights:* It draws attention to a significant increase in the music education self-efficacy belief levels of the 3rd and 4th grade pre-service preschool teachers who took 'Early Childhood Music Education' as a compulsory course in the 2nd year of undergraduate education.

#### Öz

Bu araştırmada okul öncesi öğretmen adaylarının müzik eğitimine yönelik öz yeterlik inanç düzeylerinin sınıf ve cinsiyet değişkenleri açısından incelenmesi amaçlanmıştır.

Araştırma tarama modeli temel alınarak hazırlanmış betimsel bir araştırma olarak desenlenmiştir. Araştırmanın çalışma grubunu 221 okul öncesi öğretmen adayı oluşturmuştur. Veri toplama aracı olarak Yıldız (2017) tarafından geliştirilen 'Okul Öncesi Öğretmen Adaylarının Müzik Eğitimi Öz-Yeterlik İnanç Ölçeği' kullanılmıştır.

Araştırma bulguları okul öncesi öğretmen adaylarının müzik eğitimi öz yeterlik inanç düzeylerinin 'iyi düzeyde' olduğunu ortaya koymuştur. Sınıf değişkenine göre; sınıf düzeyi yükseldikçe müzik eğitimine ilişkin öz-yeterlik inanç düzeylerinin de yükseldiği, en düşük müzik eğitimi öz-yeterlik inanç düzeyi puanlarının birinci sınıfta öğrenim görmekte olan okul öncesi öğretmen adaylarına, en yüksek müzik eğitimi öz-yeterlik inanç düzeyi puanlarının ise dördüncü sınıfta öğrenim görmekte olan okul öncesi öğretmen adaylarına ait olduğu tespit edilmiştir. Bununla birlikte müzik eğitimi öz yeterlik inanç düzeylerinin cinsiyet değişkenine göre anlamlı bir farklılık göstermediği tespit edilmiştir.

*Önemli vurgular:* Lisans eğitiminin ikinci senesinde zorunlu ders olarak 'Erken Çocuklukta Müzik Eğitimi' alan 3. ve 4. sınıf okul öncesi öğretmen adaylarının müzik eğitimi öz yeterlik inanç düzeylerinde ortaya çıkan anlamlı artış dikkat çekmektedir.

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## INTRODUCTION

Self-efficacy is one of the basic concepts that Albert Bandura –the developer of social cognitive theory- thought practical on behavior. While Bandura (1986) defines self-efficacy as “the individual's judgment about his/her capacity to organize and successfully perform the necessary activities to show a certain performance” (as cited in Senemoğlu, 2005, p. 216,230), Senemoğlu makes a definition of self-efficacy as “to what degree an individual can overcome difficult situations that s/he may face in the future.” She describes it as “one’s judgment and belief about himself/herself that s/he can be successful.” According to Senemoğlu, self-efficacy is not a function of an individual's skills but a product and result of his/her judgments about what s/he can do with his/her skills (Senemoğlu, 2005, p. 230,231). According to Bandura (1980), four primary sources affect individuals' self-efficacy judgments. These resources include (1) the information that the individual has obtained as a result of successful or unsuccessful activities that he has done directly, (2) the successful or unsuccessful activities of other people who are similar to himself/herself, and the 'indirect experiences' of the individual, which can be explained as the judgment of whether s/he can achieve the same activities himself. (3) 'Verbal persuasion,' which can be explained as advice, advice, and incentives that an individual has received regarding whether he or she can succeed or fail to succeed. (4) Psychological state. Individuals with a high perceived self-efficacy level are less afraid of trying anything and are more insistent on trying more to overcome any task (Cited by Senemoğlu, 2005, 231).

Self-efficacy motivates teachers for their work and supports them in developing self-confidence in their professional lives. A high self-efficacy belief is also fundamental for teachers to create an effective learning environment (Öztutgan, 2018, p. 576). Teachers' self-efficacy beliefs towards fulfilling their duties are related to their classroom management skills, the methods they prefer, and students’ effort levels to be successful (Kurt, 2012, p. 202). Teacher self-efficacy belief can be defined as teachers' inner beliefs about how well they can do the activities, and they can produce solutions for possible problems they may encounter in their education processes (Kaçar & Beycioğlu, 2017, p. 1755). According to Duy (2014), teachers with a high perception of self-efficacy work hard even if there are students who resist learning. Teachers with high self-efficacy are committed to teaching. Teachers with high self-efficacy perceptions have confidence in themselves and their students (cited by Kaçar & Beycioğlu, 2017, p. 1755).

The skills and personality roots in all development areas are laid in the preschool period (Uçal, 2003, p. 14); therefore, the child needs a suitable environment and preschool education in which qualified cognitive stimuli, rich language interactions, positive social and emotional experiences are offered (Ministry of National Education of Turkey [MEB], 2013, p. 12). One of the fields that has an important place in this multidimensional preschool education process is children's musical education. The child's musical development is a product of the interaction of heredity and environment (Yıldız, 2002, p. 3). Since this educational process will directly affect the child's knowledge and skills about music, it is an issue that should be carefully considered (Göncü, 2010, p. 356). Such a musical education is only possible with well-trained and equipped preschool teachers (Yıldız, 2017, p. 398). Preschool teachers need high levels of competence and self-efficacy in music education to apply music activities as progressive and intertwined with different disciplines and also by the characteristics of early childhood.

Bartel and Cameron (2002) refer to self-efficacy in music education, stressing that self-efficacy is socially constructed and that music practices and teaching processes are social. They emphasize that individuals’ self-efficacy perceptions in these processes are partially formed through their interactions with other individuals and music (p. 1). According to Russell-Bowie (2010), pre-service preschool teachers' musical backgrounds and experiences improve their musical perceptions and enable them to reach a certain level of self-efficacy in music teaching. Many teachers who do not have a musical background feel inadequate for musical experiences (as cited in Burak, 2019, p. 259). In the study of Akpınar (2021) with preschool teachers, it was found that the music education self-efficacy belief levels of the teachers who took place in seminars or training on music education were higher than those of the preschool teachers who have not (p. 87). The findings of the research conducted by Vannatta-Hall (2010) with preschool teachers also support this finding. The research results reveal a holistic increase in the self-efficacy levels of pre-service preschool teachers who took lessons on music teaching methods for fifteen weeks (p. 151). Considering the literature, the relationship between preschool teachers' music-related experiences and their music education self-efficacy belief levels makes it essential for preschool teachers to take music education as an undergraduate course. Within the scope of 'Early Childhood Music Education and 'Early Childhood Rhythm, Dance and Orff Education courses, which have music and music education-related course contents determined by the Council of Higher Education in Turkey [YÖK] (2018) within preschool education undergraduate program, the following contents are included:

“The importance of music in preschool education, the relationship between music and education,

“Planning, implementing and evaluating musical activities by the preschool education program”

“Playing-singing-listening with the Orff Approach.” All course topics are available in the same program (p. 8,22).

When the competency/skill expressions that constitute the music education self-efficacy beliefs of preschool teachers are examined, it is observed that these skills are closely related to the achievements of music education courses they have taken during their undergraduate education. Some of these music education self-efficacy competency expressions are given below:

...I can plan a musical activity suitable for the child's musical development characteristics,

...I know the musical development characteristics of children... (Yıldız, 2017, p. 406,407),

...I know Orff instruments, I know how to use them, and I can use this information in my professional life... (Öztutgan, 2018, 581).

The successful implementation of qualified music education programs in early childhood mostly depends on teachers' beliefs in music teaching self-efficacy, in other words, their beliefs in their ability to teach music and produce positive results (Vannatta-Hall, 2010, p. 4,5). According to Afacan (2008), there is a relationship between teachers' self-efficacy in teaching music and student success. Afacan (2008) stresses that when teachers are aware of their competencies, are self-confident and believe they can succeed, this situation increases their desire to learn and try and apply methods that will make their students more successful. Afacan emphasizes that there is a relationship between teachers' success and their self-efficacy -who can endear music and themselves and teach knowledge by experiencing it through music, like playing a game (p. 2). Research findings in the study of Akpınar (2021) with preschool teachers also support the views of Afacan (2008). Research findings reveal that the self-efficacy belief levels of preschool teachers who use contemporary teaching methods and approaches while performing music activities are higher than those who do not utilize these methods and approaches (p. 88).

When the literature in Turkey is reviewed, several studies examining the music education self-efficacy belief levels of preschool teachers and pre-service teachers and obtaining different results for different dimensions (Salı, Akkol, & Oğuz, 2013; Koca, 2016; Ersoydan, Şahin, & Çalışandemir, 2018; Öztutgan, 2018). When the international literature is examined, it is observed that the studies on music education self-efficacy beliefs have been mainly carried out with the classroom teachers working at the elementary education level and the pre-service teachers in the field (Bartel & Cameron, 2002; Buckner, 2008; Garvis, 2013); on the other hand, there are carried out few studies carried out with pre-service and in-service preschool teachers (Rajan, 2017; Sušić, 2018).

Özkut and Kaya (2012) examine the effects of the music education that preschool teachers have taken during their undergraduate program on their professional life; they emphasize the importance of music education courses in preschool education departments and also stress that the content knowledge and experience acquired by pre-service preschool teachers in education faculties significantly affects their success in their professional life (p. 170). For this reason, pre-service preschool teachers need to have self-efficacy beliefs towards music education, which can be considered as one of the predictors of being practical and thriving in the process of music education they will carry out throughout their professional life. The research aims to identify music education self-efficacy levels and examine gender and grade variables. Additionally, since there are very few studies examining the perceived self-confidence and competencies of pre-service preschool teachers in music education in the international literature (Vannatta-Hall, 2010, p. 150,151), it is aimed with this research to contribute to the national and international literature.

Research problems in this study include:

1. What is the general level of pre-service preschool teachers' music education self-efficacy?
  - 1.1. Do pre-service preschool teachers' music education self-efficacy levels differ according to gender?
  - 1.2. Do pre-service preschool teachers' music education self-efficacy levels differ according to their grades?

## **METHOD/MATERIALS**

### **Research Model**

This research is survey research which is descriptive by nature to identify participants' music education self-efficacy levels. According to Karasar (2005), survey research is a type of research approach that aims to describe a past or present situation as it is. The event that is the subject of the research is not attempted to be changed or affected in any way. It is only attempted to be defined in its context (p. 77). For this purpose, within the scope of the research, it is aimed to identify music education self-efficacy levels of 1st, 2nd, 3rd and 4th-year undergraduate pre-service teachers studying in the department of preschool education and to examine their self-efficacy levels in terms of gender and grade variable.

### **Study Group**

The study group of the research is selected by the homogeneous sampling method, one of the purposive sampling methods. As a type of purposive sampling method, the purpose of homogeneous sampling is to "identify a distinct subgroup by creating a small homogeneous sample" (Patton, 1987 as cited in Yıldırım & Şimşek, 2016, p. 118,120). For this purpose, the research includes 1st and 2nd 3rd 4th-year undergraduate pre-service teachers studying in the department of preschool education at a state university in the 2021-2022 academic year. Table 1 presents descriptive statistics for the study group:

**Table 1. Descriptives of participants by gender and grade level**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	173	76,5	76,5	76,5
	Male	53	23,5	23,5	100,0
	Total	226	100,0	100,0	
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Freshman	55	24,3	24,3	24,3
	Sophomore	48	21,2	21,2	45,6
	Junior	54	23,9	23,9	69,5
	Senior	69	30,5	30,5	100,0
	Total	226	100,0	100,0	

When Table 1 is reviewed, it is seen that 226 pre-service pre-school teachers at total [173 females and 53 males] are included in the study. Of the pre-service teachers participating in the study, it is seen that 24.3 percent (n=55) include freshmen, 21.2 percent (n=48) include sophomores, 23.9 percent (n=54) include juniors, and 30.5 percent (n=69) include seniors.

### Data Collection Tool

In this study, the "Music Education Self-Efficacy Scale for Pre-school Teacher Candidates" developed by Yıldız (2017) has been used to identify the music education self-efficacy levels of pre-service pre-school teachers. The Cronbach Alpha reliability coefficient of the scale has been found as 0.94 and, this scale has one factor (p. 403,404). Table 2 presents the Cronbach Alpha internal reliability coefficient regarding the reliability of the measurement tool in this study:

**Table 2. The result of the Cronbach's Alpha coefficient for the Measurements**

N	the Cronbach's Alpha coefficient of the original scale	the Cronbach's Alpha coefficient in this scale
33	0.964	0.915

When Table 2 is examined, the value obtained in the original study regarding the internal consistency coefficient is found as ( $\alpha$ )= 0.964. In this study, the internal consistency coefficient of the scale is found to be ( $\alpha$ )= 0.915. Considering that the internal consistency coefficient required to indicate that a scale is reliable is at least 0.70 (as cited in Nunnally, Liu, 2003, p. 211), it is observed that there is a high reliability of the measurements in this study.

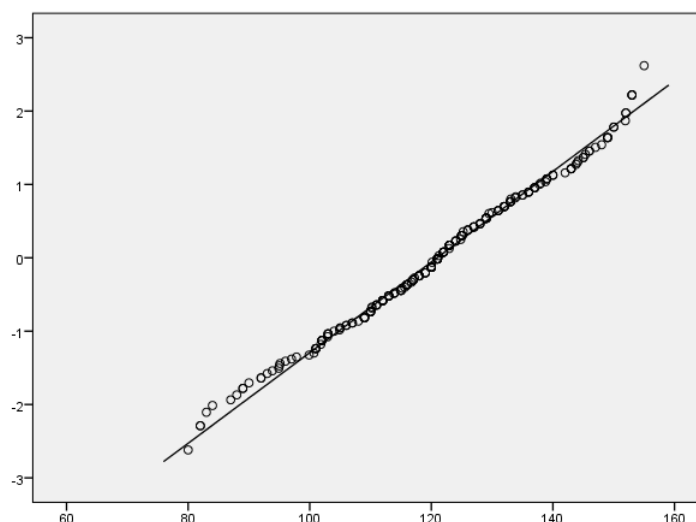
### Data Analysis

This section gives information about the method to analyze the quantitative data collected in order to examine the music education self-efficacy levels of pre-service pre-school teachers. In order to determine the tests to be used in the analysis of the data, it is first examined whether the parametric assumptions are met. In order to use parametric tests, the data must be normally distributed. The Kolmogorov-Smirnov test, one of the normality tests, is used to determine the conformity of the data to the normal distribution, and the Q-Q Plot is also examined. Kolmogorov-Smirnov test results are given in Table 3:

**Table 3. Kolmogorov-Smirnov Test related to normality of the research data**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistics	df	p	Statistics	df	p
Music Education Self-Efficacy	,052	226	,200*	,989	226	,076

When Table 3 is examined, it comes out that the data in this study met the assumption of normality distribution as a result of the Kolmogorov-Smirnov test ( $p>05$ ). The result of the Q-Q plot graph regarding the data of the study is given in Figure 1:



**Figure 1: Q-Q Plot Graph about whether the data of the study are normally distributed**

When Figure 1 is examined, it is observed that there are no extreme values that disrupt normality in the data of the research, and that the data meets the assumption of normality distribution. As the parametric assumptions are met, parametric tests have been preferred namely t-test for independent samples and One-way ANOVA tests.

## FINDINGS

In this section, research problems are attempted to be answered by applying statistical tests. First of all, descriptive statistics such as mean, median and standard deviation are presented in order to identify the music education self-efficacy levels of pre-service pre-school teachers. Then, the results of the parametric tests are given.

**Table 4. Descriptive statistics related to pre-service pre-school teachers' music education self-efficacy levels**

		Statistic	Std. Error	
Music Education Self-Efficacy	$\bar{x}$	120,9311	1,07662	
	95% Confidence Interval	Lower Bound	118,8096	
		Upper Bound	123,0527	
	5% Trimmed Mean	121,1614		
	Median	121,0000		
	Variance	261,960		
	Std. Deviation	16,18517		
	Minimum	80,00		
	Maximum	155,00		
	Range	75,00		
	Interquartile Range	21,78		
	Skewness	-,143	,162	
	Kurtosis	-,227	,322	

When Table 4 is examined, it is revealed that the mean of total scores of pre-service pre-school teachers' music education self-efficacy is  $\bar{x}= 120.93$ . In other words, it is observed that pre-service pre-school teachers have good level of music education self-

efficacy. The lowest self-efficacy score taken from the scale is 80.00; the highest self-efficacy score is 155.00. Independent Samples t-test is conducted to identify whether the pre-service pre-school teachers' music education self-efficacy levels differ in terms of gender variable. Table 5 presents independent samples t-test results related to gender variable:

**Table 5. Mean scores of pre-service pre-school teachers' music education self-efficacy according to gender variable**

	Gender	N	$\bar{x}$	Std. Deviation	Std. Error
Music Education Self-Efficacy Total Scores	Female	173	121,9336	16,05035	1,22029
	Male	53	117,6590	16,34372	2,24498

When Table 5 is examined, it is revealed that the mean of total score of female pre-service preschool teachers' music education self-efficacy is  $\bar{x}= 121.93$ , while the mean of total score of male pre-service pre-school teachers' music education self-efficacy is  $\bar{x}= 117.65$ . When the mean scores are examined, it is observed that the music education self-efficacy levels of female pre-service pre-school teachers are higher. Table 6 presents the independent samples t-test result regarding whether this difference is significant in terms of gender variable:

**Table 6. Independent samples t-test result of pre-service pre-school teachers' music education self-efficacy levels according to gender variable**

		Levene test for equality of variances		t-test						
	Equal variances assumed	F	p	t	df	p	Mean Difference	Std. Error Difference	95% Confidence Interval	
									Lowest	Highest
Music Education Self-Efficacy		,003	,954	1,689	224	,093	4,27463	2,53063	-,71226	9,26153

When Table 6 is examined, it is found out that the music education self-efficacy levels of female pre-service pre-school teachers ( $\bar{x}= 121.93$ ) do not significantly differ compared to male pre-service pre-school teachers ( $\bar{x}=117.65$ ) [ $t(224) = 1.68, p >.05$ ].

Table 7 presents the mean of total score of pre-service pre-school teachers' music education self-efficacy depending on their grade levels:

**Table 7. The mean of total score of pre-service pre-school teachers' music education self-efficacy beliefs depending on their grade levels**

Grade	$\bar{x}$	Standard Error
Freshmen	113,31	1,8966
Sophomores	115,30	2,2139
Juniors	124,00	2,0288
Seniors	128,51	1,8602

When Table 7 is examined, it has been identified that the lowest music education self-efficacy scores belong to the pre-service pre-school teachers studying in the first grade (freshman), and the highest music education self-efficacy scores belong to the pre-service pre-school teachers studying in the fourth grade (senior). It is observed that as the grade level increases, the music education self-efficacy belief levels also increase. One-Way ANOVA test has been performed in order to determine whether these differences between grades are statistically significant. Table 8 presents One-Way ANOVA test result:

**Table 8. One-Way ANOVA test result related to pre-service pre-school teachers' music education self-efficacy levels depending on grade variable**

Music Education Self-Efficacy Levels Depending on Grade Variable					
	Sum of Squares	df	Mean Square	F	p
Within group	9180,848	3	3060,283	13,653	,000
Between groups	49760,120	222	224,145		
Total	58940,968	225			

When Table 8 is examined, the result of One-Way ANOVA test indicates that music education self-efficacy levels of the pre-service pre-school teachers differ significantly according to the grade level [ $F(3,222) = 13.65, p <.05$ ]. Table 9 presents the result of Bonferroni test -one of the post hoc tests- which has been performed to determine between which groups there exists a significant difference:

**Table 9. Bonferroni Post Hoc test result for multiple comparisons**

Bonferroni		Mean Difference (I-J)	Std. Error	p	95% Confidence Interval	
(I) Grade	(J) Grade				The lowest	The highest
Freshman	Sophomore	-1,98481	2,95720	1,000	-9,8572	5,8876
	Junior	-10,68448*	2,86813	,001	-18,3198	-3,0492
	Senior	-15,19182*	2,70626	,000	-22,3962	-7,9875
Sophomore	Freshman	1,98481	2,95720	1,000	-5,8876	9,8572
	Sophomore	-8,69967*	2,96993	,023	-16,6060	-,7934
	Senior	-13,20701*	2,81392	,000	-20,6980	-5,7160
Junior	Freshman	10,68448*	2,86813	,001	3,0492	18,3198
	Sophomore	8,69967*	2,96993	,023	,7934	16,6060
	Senior	-4,50734	2,72017	,594	-11,7487	2,7340
Senior	Freshman	15,19182*	2,70626	,000	7,9875	22,3962
	Sophomore	13,20701*	2,81392	,000	5,7160	20,6980
	Junior	4,50734	2,72017	,594	-2,7340	11,7487

\* p= .05

When Table 9 is examined, as a result of the Bonferroni test, it is revealed that music education self-efficacy levels of the pre-service pre-school teachers studying in the fourth grade are higher than the pre-service pre-school teachers studying in the first-grade [difference of the mean=15.19,  $p < 0.05$ ]. Secondly, it is found that music education self-efficacy levels of the fourth-grade pre-service teachers are higher than the music education self-efficacy levels of the second-grade pre-service teachers [difference of the mean=13.20,  $p < 0.05$ ]. Thirdly, it is found that music education self-efficacy levels of the preschool teachers studying in the third grade are higher than the music education self-efficacy levels of the pre-service pre-school teachers studying in the first-grade [difference of the mean=10.68,  $p < 0.05$ ]. Finally, it is found that music education self-efficacy levels of the pre-service preschool teachers studying in the third grade are higher than music education self-efficacy levels of the pre-service preschool teachers studying in the second grade [difference of the mean=8.69,  $p < 0.05$ ].

## DISCUSSION

Within the scope of the research, it comes out that the mean of total scores of the pre-service preschool teachers' music education self-efficacy is found as  $\bar{x}=120.93$ . This mean score is interpreted as good when evaluated from the highest total score obtained from the scale ( $\bar{x}=165$ ). When the literature is examined, there are studies supporting this finding and others that do not compromise with this finding. In the study conducted by Ersoydan, Şahin, and Çalıřandemir (2018) with 354 pre-service preschool teachers studying in the 3rd and 4th grades of three different public universities in the 2017-2018 academic year, the music education self-efficacy of the pre-service preschool teachers is examined. It is found that their music education self-efficacy levels are above the average value. When examined in detail, research findings indicate that pre-service preschool teachers feel more ready and more competent in transforming the theoretical knowledge of music into a life skill, being willing to use knowledge and skills in music, and having self-confidence in the music education processes.

In contrast, they feel less ready for their ability to practice music education, and they feel less competent (p. 61,63,66). Similarly, in the study conducted by Öztutgan (2018) with 253 pre-service preschool teachers, self-efficacy levels of pre-service preschool teachers regarding music education are examined, and it is interpreted that their self-efficacy levels are high in general. It is observed that pre-service preschool teachers had the highest level of music education self-efficacy in motivating students toward the field of music. In contrast, they had the lowest music self-efficacy level regarding time management in music activities (p. 574, 583). The study conducted by Koca (2013) with 120 pre-service preschool teachers studying at a public university found that the pre-service preschool teachers' music education self-efficacy levels are low (p. 897,898).

When the music education self-efficacy levels of the pre-service preschool teachers are analyzed by gender, there is no significant difference between the scores. The research finding is similar to the findings of the studies carried out by Öztutgan (2018), Koca (2013), Burak (2019) and Ersoydan, Şahin, and Çalıřandemir (2018). In the study conducted by Öztutgan (2018) with

pre-service preschool teachers, when the self-efficacy levels of pre-service preschool teachers are examined according to gender, it is revealed that there is no significant difference between the scores according to gender (p. 584). Similarly, in the study conducted by Ersoydan, Şahin, and Çalışandemir (2018) with 354 pre-service preschool teachers, the music education self-efficacy levels of the pre-service teachers are examined in terms of various variables. The research findings indicate no significant difference between the pre-service preschool teachers' music education self-efficacy perceptions depending on their gender (p. 60,61,67). The sample of research in which the music education self-efficacy levels of pre-service preschool teachers are examined by Koca (2013) consists of 120 pre-service preschool teachers. When the music education self-efficacy levels of the pre-service teachers are examined, it is identified that there is no significant difference between the scores depending on gender (p. 897,898,899). In addition, the research conducted by Burak (2019) has similar findings. The study conducted with 395 pre-service classroom and preschool teachers aimed to examine the effects of factors such as gender, age, years of education, and musical experience on their musical skills and music education self-efficacy. The research findings reveal that there is no significant difference between the scores when the music education self-efficacy levels of the pre-service teachers are examined by gender (p. 257,265).

When the music education self-efficacy levels of the pre-service teachers are analyzed depending on their grades, it is found that the higher the grade level of the pre-service preschool teachers, the higher their self-efficacy levels regarding music education. It has been identified that the lowest music education self-efficacy scores belong to the pre-service preschool teachers studying in the first grade (freshman), and the highest music education self-efficacy scores belong to the pre-service preschool teachers studying in the fourth grade (senior). This conclusion may have been found out because the music-related courses in the curriculum may have had an impact on the music background they had in the 1st grade and they had in the 4th grade. The results of this study show similarities with the research findings of Burak (2019) in some dimensions. In the study by Burak (2019), when the music education self-efficacy scores of the pre-service teachers are examined according to the grade level, it is revealed that there is a significant difference between the scores depending on their grades. The research findings indicate that music education self-efficacy levels vary significantly according to the years of education at the university. It has been identified that as the grade level increases, the music education self-efficacy levels also increase (p. 257,262,266).

Similarly, in the study conducted by Yegül (2014) with pre-service music, classroom, preschool and music teachers, when the music education self-efficacy perceptions of pre-service teachers are examined in terms of grade variable -although it is not statistically significant- it comes out that as the grade level increases, the self-efficacy level in teaching music also increases (p. 587). In the study conducted by Çelenk and Şen (2019) with 361 pre-service teachers studying in the preschool and classroom education departments, the music education self-efficacy perceptions of the pre-service teachers (according to the mean scores of the self-efficacy items) do not significantly vary depending on grade variable (p. 139,146). When the music teaching self-efficacy levels of pre-service preschool teachers are examined in terms of the grade variable, it is observed that different results are obtained in studies conducted with different study groups.

Considering the relationship between the musical experiences of pre-service preschool teachers and their music education self-efficacy levels, it is assumed that the deficiencies in the process of music education of the pre-service preschool teachers are part of the factors affecting the pre-service teachers' self-efficacy levels toward music education. This may create some reasons for the differences in research findings conducted with different study groups. In the study of Vannatta-Hall (2010), there is an increase in self-efficacy levels of pre-service preschool teachers who took lessons on music teaching methods. Vannatta-Hall emphasizes pre-service preschool teachers' experiences in practices such as singing, listening, moving, and integrating music with other disciplines and stresses the importance of being involved in activities and that these practices should be the primary focus of the preschool music education curriculum (p. 151,156). In this context, one dimension of the differences in music education self-efficacy levels may be related to how the pre-service teachers teach the music education courses during their undergraduate curriculum and the physical opportunities-conditions they have. Adequacy of requirements such as having a music classroom, instruments and course materials suitable for activities specific to preschool music education (playing an instrument, listening to music, performing individual and collective playing and singing activities, performing creative movement and dance practices, drama activities, etc.), it is one of the impressive factors in reaching the achievements for music education in preschool teacher training. In addition to the deficiencies of these opportunities and conditions, there may be deficiencies in the target skills to be acquired in music education. In addition, although preschool music education is included in the literature as a field of expertise, there still needs to be a field-specific undergraduate education program (preschool music teaching) in Turkey. For this reason, instructors who are not experts in the field of preschool music education may be teaching undergraduate-level courses for preschool music education, and for this reason, some of the deficiencies appear in reaching course gains.

## CONCLUSION AND RECOMMENDATIONS

To conclude, pre-service pre-school teachers' music education self-efficacy levels are reasonable. There is no statistically significant difference between their music education self-efficacy levels in terms of gender; however, there is a statistically significant difference in music education self-efficacy in terms of grades. As the grade level increases, the level of self-efficacy regarding music education does, too. It comes out that the lowest music education self-efficacy level belongs to the pre-service pre-school teachers studying in the first grade, and the highest music education self-efficacy level belongs to the pre-service pre-school teachers studying in the fourth grade. This study reveals a significant increase in the self-efficacy beliefs of 3rd



and 4th-grade pre-service teachers compared to 1st and 2nd-grade pre-service teachers. Pre-service pre-school teachers must complete the 'Early Childhood Music Education' course in the spring semester of the 2nd year of undergraduate education. As a result of this research and the findings of the primary studies in the literature, it draws attention that there occurs a significant increase in the music education self-efficacy belief levels of the 3rd and 4th grade pre-service pre-school teachers who took 'Early Childhood Music Education.' Additionally, When the literature is examined, it is observed that there are studies supporting the findings of this research and studies with different results.

Considering the results of this research, the following suggestions can be made within the scope of this study;

- A meta-analysis study can be carried out by collecting quantitative studies with different results.
- It can be suggested to examine the music education self-efficacy levels of pre-service pre-school teachers by conducting comprehensive comparison survey studies with pre-service teachers studying at different universities (state and private universities).
- It would be helpful to conduct research with more participants and universities to see the situation in Turkey.
- Pre-service pre-school teachers' music education self-efficacy levels can be examined using qualitative or mixed research methods.
- In Turkey, the pre-school teaching undergraduate program was renewed by the Council of Higher Education in 2018. Experimental studies should be conducted to examine the effects of the new program and the music course and music education course (their content and course hours were also updated) on the music education self-efficacy levels of pre-service pre-school teachers.

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### Statements of publication ethics

I/We hereby declare that the study has not unethical issues and that research and publication ethics have been observed carefully.

### Ethics Committee Approval Information

As of 2020, researchers applying are required to upload the Ethics Committee Approval Document. Such information as institution name, date, number, etc. regarding the "Ethics Committee Approval Document" should be presented here.

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